**Using Teachers' Assignments as an Indicator
of Classroom Practice**

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Abstract

This report describes research developing indicators of classroom practice for monitoring the influence of school reform initiatives on students' learning environments, and supporting the improvement of instructional practice. The work reported here entailed collecting assignments and student work and observing classrooms in schools participating in a large-scale urban effort. Overall the reliability and consistency of the assignment ratings were good. Results also indicate that the quality of the assignments was statistically significantly associated with the quality of observed instruction and student work. It appears that our method shows promise for use in large-scale evaluation settings and identifies important dimensions of practice that could support teacher self-evaluation and reflection.

Since the 1980s there has been a proliferation of reforms intended to improve the quality of student achievement, especially for those students who are at the greatest risk for academic problems. In spite of the adoption of many reform programs in urban schools, however, there has been little change in the academic welfare of poor and minority students, who continue to perform well below state and national norms on standardized tests of achievement. Quality of teaching is the single most important school factor in determining student success (Tharp & Gallimore, 1988). According to the National Commission on Teaching and America's Future (1996), however, many teachers do not have the knowledge and skills needed to significantly improve the quality of the learning environments they create for students. It appears that reform efforts are not "working," in part because teachers are not able to achieve the goals for learning and instruction set out in many programs (see, for example, Cohen & Ball, 1994).

Despite the fact that the effectiveness of school reform efforts for raising student achievement ultimately depends on the quality of instruction, we do not yet have effective and efficient ways to describe classroom practice and directly monitor the influence of reform efforts on students' learning environments. Teacher surveys

frequently have been used to indirectly assess the quality of students' learning environments, though this method has limitations as far as yielding accurate information about the quality of teacher-student interactions and engagement with reform practices (Mayer, 1999). Likewise, analyses of student work provide very important information about student performance but do not directly assess or draw attention to the opportunity that a student has in the classroom to produce high-quality work. Classroom observations are the most direct way to measure instructional quality, but these are expensive and time-consuming to conduct.

The purpose of this report is to present the results so far of work developing a method to describe and assess classroom practice that has high technical quality (reliability and validity), provides relevant and useful information to teachers and school reform program leaders, and is efficient enough to be used in large-scale evaluation settings. This research was developed from the strand of research at CRESST focused on the development of effective educational indicators. Specifically, this report presents data from two years of research investigating the use of teachers' assignments as an indicator of classroom practice in urban schools participating in a large-scale comprehensive reform effort.

Although this method is not intended necessarily to be restricted to a single subject area, our work so far has centered on language arts and student literacy. The first year of this research, led by Pamela Aschbacher, focused on developing and piloting the use of language arts assignments as an indicator of classroom practice. In her report of the findings from the first year of research (Aschbacher, 1999), she specifically addresses the usefulness of the assignment ratings, the relationship between the quality of the assignments and student work, and teacher interview data. She also reports analyses focused on the technical quality of the ratings and the feasibility of the method for use in large-scale settings.

This report presents findings from the second year of the study (Clare, 1999; Clare, Pascal, Steinberg, & Valdés, 2000). The data collection strategy for this strand of research was expanded to include classroom observations. Further analyses regarding the reliability of this method with a larger sample of teachers and assignments are reported. The relationship between the quality of classroom assignments and observed instruction and the relationship between these assignments and the quality of student work are investigated as well. The results of additional generalizability and decision studies also are reported to further investigate the potential feasibility of this method for use in large-scale evaluations.

Importance of the Research

An indicator is a statistic that measures outcomes or important dimensions of a system in comparison with a standard over time (Smith, 1988). The purpose of indicators is to describe the relative functioning of a system and point the way toward improving that system. Developing indicators of classroom practice thus is important for directing attention to dimensions of practice that are germane to student learning, as well as for monitoring and supporting diverse school reform efforts (Linn & Baker, 1998). Because of limitations in available methodologies for measuring classroom practice, the nature and quality of students' learning environments have existed as a "black box" in many large-scale evaluation designs. Reform monies are expended and student outcomes are measured, but little information is collected on a broad scale regarding the quality of instructional practice. It is imperative that indicators of classroom practice be developed that accurately describe the nature of students' learning environments and are sensitive enough to describe different aspects of practice, some of which may be differentially influenced by reform efforts (Spillane & Zeuli, 1999). This is key to providing high-quality formative feedback that helps diverse reform programs focus their efforts so that they more effectively benefit students. This is important as well for providing formative feedback to teachers and administrators on ways to improve the quality of learning and instruction at their schools, and for supporting teachers' reflection on and self-evaluation of their practice (Aschbacher, 1999; Newmann, Lopez, & Byrk, 1998).

Theoretical Perspectives on Defining Quality of Classroom Practice

The framework for defining and measuring the quality of students' learning environments is rooted in sociocultural theory. Sociocultural theory proposes that development is rooted and unfolds in social contexts and that successful instruction hinges on the extent to which novices are given opportunities to engage in meaningful, goal-directed activities that "scaffold" student understanding and build on their funds of knowledge (Rogoff, 1990; Vygotsky, 1978). Research indicates that teachers often have difficulty maintaining high standards for student achievement, as reflected in assignment tasks that do not support the attainment of higher order thinking skills or require students to engage with meaningful content material (Newmann et al., 1998). Students often are not given the opportunity to actively participate in classroom discussions that build on and expand their thinking (Tharp & Gallimore, 1988) and do not receive meaningful feedback about their performance

and participation (Olson, 1990; Olson & Raffeld, 1987; Schunk & Swartz, 1993). Additionally, teachers' curriculum and instruction decisions often appear to be driven by "activity for activity's sake" rather than by clear goals for desired student outcomes (Duffy, 1981). This lack of coherence is further reflected in assessment criteria that are often not aligned with standards or goals for students (Aschbacher, 1994; Aschbacher & Herman, 1991; Aschbacher & Rector, 1996). The quality of classroom practice in this study is thus defined in part by the degree to which students engage in complex thinking and use content knowledge in lessons and assignments, and by the degree to which teachers' goals are focused on student learning and are aligned with tasks and assessment criteria. We also examine students' opportunities to engage in classroom discussions and receive informative instructional feedback.

Research Questions

This report first explores the reliability and independence of the classroom assignment ratings. Evidence of the validity of using classroom assignments as an indicator of classroom practice also is investigated by comparing assignment ratings to ratings of classroom observations and to the quality of students' written work. The feasibility of using classroom assignments as an indicator of classroom practice in large-scale evaluation settings is examined in terms of the number of assignments and raters potentially needed to provide a consistent estimate of quality. The types of assignments that might provide the best estimate of instructional quality also are investigated. The specific research questions addressed in this study are as follows:

1. How reliable are the classroom assignment rating scales?

2. How independent are the classroom assignment rating scales?

3. What is the relationship between classroom assignment ratings and other indicators of instructional quality (i.e., classroom observations and students' written work)?

4. How many assignments and raters are needed to obtain a consistent estimate of the quality of classroom practice?

5. What types of assignments might provide the best estimates of quality of classroom practice?

Methods

Sites and Participants

This research is being conducted in a subsample of urban schools participating in a large-scale school reform initiative. Third-grade teachers (N = 12) and seventh-grade teachers (N = 12) were targeted for study in 4 elementary and 4 middle schools (N = 8 schools). The average number of years teachers had been teaching was approximately 11 years, with a range from 2 to 28 years. Table 1 presents the demographic characteristics for the elementary and middle schools chosen for in-depth study.

Procedures

Classroom assignments and student work. Teachers (N = 24) submitted four language arts assignments. These assignments were "typical" writing, "typical" reading comprehension, content area writing (elementary school only), and a "challenging" major project. Teachers also were asked to complete a one-page information sheet for each assignment and to submit four samples of student work for each assignment that they considered to be of "medium" quality and "high" quality. The teacher assignment materials (notebook, cover sheets, consent forms, etc.) were distributed in the fall and collected in the winter and spring (see Appendix A).

Table 1

Demographics and SAT-9 Scores for Elementary and Middle Schools (N = 8)

	Elementary schools (n = 4)		Middle schools (n = 4)	
	Mean %	% Range	Mean %	% Range
Enrollment by ethnicity				
Asian	7.5	0.3 – 27.0	3.0	0.7 – 7.0
African American	12.0	1.4 – 20.0	18.0	1.4 – 35.5
Latino	63.0	34.0 – 92.1	61.0	41.0 – 92.7
White	14.5	3.8 – 37.3	13.0	3.8 – 31.9
Other	3.0	1.0 – 7.0	5.0	1.3 – 17.0
English language learner	86.8	50.4 – 82.2	40.4	30.0 – 60.2
Free/reduced lunch	89.9	86.7 – 93.8	72.7	56.6 – 80.0
1998-99 SAT-9 scores at or about 50th NPR in reading for Grades 3 and 7	24.0	17.0 – 32.0	24.5	15.0 – 36.0

Observations. These same teachers, plus two additional teachers who did not return the classroom assignment notebooks, were observed twice during the year in fall and winter ($N = 26$). Observations lasted for one class period and were of a "typical" language arts lesson. Before each observation, we contacted principals and asked them to suggest dates and times when we could visit teachers' classrooms. We then contacted teachers to confirm that these dates and times were convenient for them.

Interviews. The third- and seventh-grade teachers ($N = 26$) were briefly interviewed about their lessons at each observation point. These interviews were approximately 15 minutes long and focused on the observed lesson activities (e.g., goals for the lesson, context, specific student needs, etc. (see Appendix B for the observation and interview protocols).

Measures

Classroom assignments. As described in the introduction of this report, our criteria for looking at the quality of classroom assignments (see Appendix C) are based on a sociocultural theoretical framework and embed a standards-based approach to curriculum and teaching. We also based our criteria on research that indicates that teachers do not always maintain high standards for student achievement or hold clear goals for student learning outcomes. Additionally, prior research has found teachers can have difficulty aligning their assessment criteria with standards and goals for students. Based on this research, we used a 4-point scale (1 = *poor,* 4 = *excellent*) to rate the following six dimensions of quality for each assignment (see Clare et al., 2000, pp. 2-3).

- **Cognitive challenge of the task.** This dimension describes the level of thinking required of students to complete the task. Specifically this dimension describes the degree to which students have the opportunity to apply higher order reasoning and engage with academic content material. For example, an assignment given a high score for cognitive challenge might require students to synthesize ideas, analyze cause and effect, and/or analyze a problem and pose reasonable solutions using content-area knowledge (e.g., comparing themes from different books, etc.). An assignment given a low score on this dimension, in contrast, might require students only to recall very basic, factual information (e.g., "What color is

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the car?") or to write on a topic requiring no academic content knowledge (e.g., a fan letter to a movie star).

- **Clarity of the teacher's goals for student learning.** This dimension is intended to describe how clearly a teacher articulates the specific skills, concepts, or content knowledge students are to gain from completing the assignment. The primary purpose of this dimension is to describe the degree to which an assignment could be considered a purposeful, goal-driven activity focused on student learning. An assignment given a high score on this dimension would have goals that were very clear, detailed, and specific as to what students are to learn from completing the assignment. It would also be possible to assess whether or not students had achieved these goals. For example, the goals stated for one elementary school classroom assignment given a high score on this dimension were that students "learn the concepts of life cycle and food chain (e.g., whether an animal is prey, predator, or both; habitat, and the idea that different animals live on different continents)." In contrast, the stated goals for another assignment were that students "delete the information and improve the information needed" on a worksheet. This assignment was given a low score for clarity of teacher's goals since it was not clear what specific concepts or skills students were to learn from completing this task.

- **Clarity of the grading criteria.** The purpose of this dimension is to assess the quality of the grading criteria for the assignment in terms of their specificity and potential for helping students improve their performance. How clearly each aspect of the grading criteria is defined is considered in the rating, as well as how much detail is provided for each of the criteria. An assignment given a high score for this dimension would have grading criteria in which the guidelines for success were clearly detailed and provided a great deal of information to students for what they needed to do to successfully complete the task (e.g., "To have a fully developed incident that tells a story, your writing will include dialogue, movement, gestures, names of people, and sensory details"). An assignment that was given a low score for this dimension, in contrast, would have unclear and nonspecific grading criteria. For example, one assignment scored as such was reported by the teacher to be graded "by looking at story development and creativity—completely subjective."

- **Alignment of learning goals and task.** This dimension focuses on the degree to which a teacher's stated learning goals are reflected in the design of the assignment tasks students are asked to complete. Specifically, this dimension attempts to capture how well the assignment appears to promote the achievement of the teacher's goals for student learning. An assignment given a high score on this dimension would involve tasks and goals that overlapped completely. For example, the learning goals for one such assignment were that students develop summary skills and learn to distinguish between relevant and irrelevant facts and details, and the task called for students to summarize the important points of a story. In contrast, the learning goals for an assignment given a low score on this dimension were that seventh-grade students recall information, develop understanding, and remember important facts. The task, however, only required students to write down facts that were written on the board. This assignment was given a low score for this dimension since copying information does not "match" the learning goals for development of memory skills or understanding.

- **Alignment between the goals and grading criteria.** This dimension is intended to describe the degree to which a teacher's grading criteria support the learning goals. In other words, this dimension focuses on the degree to which a teacher assesses students on the skills and concepts they are intended to learn through the completion of the assignment. Also considered in this rating is whether or not the grading criteria include extraneous dimensions that do not support the learning goals, as well as the appropriateness of the criteria for supporting the learning goals. An assignment given a high score for this dimension would have goals and grading criteria that overlapped completely. An assignment given the lowest score on this dimension, in contrast, would have grading criteria that did not support the learning goals. For example, the learning goals for one such assignment were that students learn to use "proper business language [and] business letter format." In describing the grading criteria, however, the teacher commented that students were not penalized for their use of slang if the letter was a "fun letter to a movie star." While it may be appropriate to use slang in a letter to a movie star, this assignment was given a low score on this dimension since the assessment criteria do not

match the stated goals that students learn to use formal business language and apply a business letter format.

- **Overall quality of the assignment.** This dimension is intended to provide a holistic rating of the quality of the assignment based on its level of cognitive challenge, the specificity and focus of the learning goals, the clarity of the grading criteria, the alignment of the learning goals and the assignment task, and the alignment of the learning goals and the grading criteria (see Appendix C for further description of these dimensions based on the assignments collected in elementary and middle schools).

Each assignment was scored by three independent raters on these dimensions. Raters ($N = 3$) underwent approximately two weeks of training before scoring the assignments. This training included scoring assignments collected from non-sample teachers individually and as a group, and selecting anchor papers by scale point and dimension to calibrate ratings and refine the rubric. Overall exact scale-point agreement for the classroom assignment scales was 84% (see Appendix D).

Student work. We scored student work from the writing assignments (a final writing project with earlier drafts). Student writing was rated by two bilingual raters using three standards-based scales measuring organization, content, and MUGS (i.e., mechanics, language use, grammar, and spelling). These scales were from the Language Arts Project rubric developed by CRESST at UCLA, in partnership with LAUSD and United Teachers-Los Angeles (Higuchi, 1996). Each of these dimensions was rated on a 4-point scale (1 = *poor,* 4 = *excellent*; see Appendix E). Both raters had extensive experience scoring student work using these rating scales. Interrater reliability was assessed by having both raters score a subset of 20% of the assignments chosen at random. Overall exact scale-point agreement for these scales was 81%.

Classroom observations. Observations were conducted by experienced research staff and graduate students. Researchers wrote detailed field notes describing the classroom, lesson activities, and the interactions between the teacher and the students. The length of each activity (measured in number of minutes) and the number of students involved in each of the observed lesson activities also were recorded, and each activity was categorized according to social organization, behavior of the teacher and students, resources in use, and language arts content.

A 4-point scale (1 = *poor,* 4 = *excellent*) was used to describe the overall quality of the observed lesson for the following eight dimensions.

- **Challenge of the lesson activities.** This dimension is intended to describe the level of thinking required of students to participate in the observed lesson activities (e.g., the degree to which students had the opportunity to think critically; predict, analyze, and synthesize information; and engage with substantive content material).

- **Quality of classroom discussions.** The quality of the classroom discussion or instructional conversation also is considered as a critical dimension of classroom practice. This dimension captures the extent to which the teacher provided students with the opportunity to learn through and engage as partners in meaningful classroom discussions. This includes both the nature of a teacher's questions and the degree to which student contributions are extended and built on, as well as the amount of time spent in discussion.

- **Level of student participation in classroom discussions.** This dimension is intended to describe the percentage of students who engaged in classroom discussions.

- **Quality of instructional feedback.** This dimension describes students' opportunity to receive information about their performance and progress toward learning goals and the degree to which this feedback appears to support learning. The accuracy, substance, specificity, and helpfulness of the teacher's feedback are considered in the ratings, as well as the amount of feedback the teacher provided to students during the observed lesson.

- **Level of student engagement in the lesson.** This dimension is intended to capture the level of student engagement in the observed lesson activities. Specifically this dimension describes the percentage of students who appeared to be on task and participating in the lesson activities.

- **Lesson implementation/classroom management.** This dimension is intended to describe the degree to which a teacher effectively carries out the lesson activities. This scale focuses on a teacher's classroom management skills, including the amount of time spent on transitions from one activity to another or procedural tasks, and how disruptive or distracting student behavior was handled.

- **Clarity of the teacher's goals for the lesson.** This dimension is intended to capture the degree to which a teacher is able to articulate the specific skills, concepts, or content knowledge students are to gain from participating in the lesson or lesson activities. This information is obtained from interviewing the teacher prior to observing the lesson. The primary purpose of this dimension is to capture the degree to which lessons could be considered purposeful, goal-driven activities focused on student learning versus "activity for activity's sake." In other words, this dimension attempts to differentiate between teachers who plan their lessons with clear and specific learning goals in mind and those who plan activities with no clearly defined learning objective. The quality of the activities themselves—which the goals may or may not describe—is not considered in this rating.

- **Alignment between goals and the lesson activities.** This dimension attempts to capture the degree to which a teacher's stated goals for the lesson are reflected in the design of the learning activities. Specifically this dimension attempts to capture how well the learning activities promote the achievement of the teacher's goals for student learning (see Appendix F for more detailed description of these rating scales).

Training for observers ($N = 4$) included coding videotapes as a group and observing in pairs in non-sample third- and seventh-grade classrooms at two different points during the year prior to observing in our sample schools. Reliability was assessed by comparing the scores for each possible pair of observers. Overall exact scale-point agreement was 77.5%.

Analyses

Descriptive statistics were used to describe the quality of teacher assignments, classroom observations, and student work. Cohen's kappa coefficients were calculated to investigate the proportion of agreement between raters after chance agreement was removed. Cronbach's alpha coefficients were calculated to estimate the internal consistency of the ratings (Abedi, 1996). Principal components analysis was used to explore the interrelationship of scale items and dimensions of quality practice for teacher assignment and classroom observation ratings, and to reduce the data. Correlation coefficients were computed to examine the relation of teacher assignment ratings to ratings of classroom observations and student work, and to investigate the interrelationship of the rating scales. A generalizability study was

conducted to investigate the consistency of our classroom assignment ratings, and a decision study was conducted to investigate the number of assignments and raters most likely needed to obtain a consistent rating of quality classroom practice.

Results

In this section, we provide a brief description of the quality of the classroom assignments in our sample as a context for our findings. Results then are presented organized around the different research questions. Specifically, we report data based on analyses of teachers' assignments, student work, and classroom observations to explore the technical quality of our method and the feasibility of using teachers' assignments as an indicator of classroom practice in large-scale evaluation settings.

Quality of Classroom Assignments

As illustrated in Table 2 and Table 3, the quality of the different types of teachers' assignments we collected in third- and seventh-grade classrooms ($N = 24$) tended to be fairly basic. This is especially true with regard to the level of cognitive challenge and the alignment of the teachers' goals for student learning with their assessment criteria. While we saw examples of excellent assignments, the majority of the assignments were scored a 2 on the majority of the rating dimensions at both levels of schooling. (See Appendix C for examples of assignments that were given high and low scores for the different dimensions and the frequencies for each scale point for each assignment type.)

Table 2

Description of Elementary School Teacher Assignments ($N = 48$)

	Reading comprehension ($n = 12$) M (SD)	Writing ($n = 12$) M (SD)	Content area writing ($n = 12$) M (SD)	Challenging ($n = 12$) M (SD)
Level of cognitive challenge	1.94 (.65)	1.82 (.43)	1.91 (.34)	2.48 (.50)
Clarity of learning goals	2.15 (.50)	2.03 (.41)	1.76 (.50)	2.21 (.40)
Clarity of grading criteria	1.83 (.79)	2.06 (.83)	1.90 (.57)	2.27 (.98)
Alignment of goals and task	2.00 (.52)	2.12 (.48)	1.97 (.57)	2.33 (.47)
Alignment of goals and grading criteria	1.57 (.75)	1.70 (.46)	1.50 (.59)	1.87 (.74)
Overall quality	1.82 (.60)	1.82 (.50)	1.76 (.45)	2.27 (.47)

Note. Items were scored on a 4-point scale (1 = *poor,* 4 = *excellent*).

Table 3

Description of Middle School Teacher Assignments (*N* = 46)

	Reading comprehension (*n* = 11) *M* (*SD*)	Writing (*n* = 24) *M* (*SD*)	Challenging (*n* = 11) *M* (*SD*)
Level of cognitive challenge	1.97 (.74)	2.14 (.54)	2.39 (.59)
Clarity of learning goals	1.82 (.38)	2.00 (.50)	2.12 (.65)
Clarity of grading criteria	1.64 (.50)	2.00 (.78)	2.10 (.59)
Alignment of goals and task	2.00 (.42)	2.12 (.50)	2.06 (.59)
Alignment of goals and grading criteria	1.48 (.48)	1.80 (.74)	1.77 (.39)
Overall quality	1.76 (.42)	1.97 (.54)	2.21 (.54)

Note. Items were scored on a 4-point scale (1 = *poor,* 4 = *excellent*).

How Reliable Are the Classroom Assignment Rating Scales?

As part of our investigation of the technical quality of our indicator system, we looked at interrater reliability for the evaluative scales—the degree to which different people can independently look at the same phenomenon (in this case teachers' assignments) and agree on a score. We also investigated the internal consistency of the classroom assignment scales. As illustrated in Table 4, kappa coefficients for each dimension for each assignment type were statistically

Table 4

Reliability of Classroom Assignment Rating Scales Across Assignment Types (*N* = 37 Teachers)

Scale	Kappa[a]	Alpha	% of exact scale-point agreement[b]
Challenge of the task	.45 - .56	.80 - .86	85.3
Clarity of the teacher's goals for student learning	.34 - .56	.74 - .85	86.1
Quality of assessment criteria	.42 - .59	.84 - .91	84.0
Alignment of goal and task	.27 - .47	.68 - .84	80.1
Alignment of goal and assessment criteria	.43 - .53	.84 - .90	82.7
Overall quality of task	.38 - .54	.73 - .85	86.4

Note. These analyses include 6 additional elementary school teachers and 7 additional middle school teachers from the first year of the study. Their parallel assignments were re-scored by the same pool of raters to reduce coding bias and to measure the clarity of teachers' goals for student learning (a new scale that had been added to the rubric).

[a] Kappa coefficients for each assignment are significant at $p < 0.01$ and $p < 0.001$.

[b] Calculated as percent of exact scale-point agreement between two raters.

significant (κ = .35, p < .01 to κ = .59, p < .001). Alpha coefficients for each dimension for each assignment type also were acceptable (α = .68 to .91), though somewhat low for the alignment of goal and task for the reading comprehension assignment (α = .68). Percent of exact scale-point agreement between at least two raters also was acceptable for each dimension and ranged from 80.1% for the alignment of goal and task to 86.4% for the overall quality of the assignment task. We concluded from these analyses that our ratings of classroom assignments demonstrated an acceptable level of reliability.

How Independent Are the Classroom Assignment Rating Scales?

In this section we explore the interrelationship of the classroom assignment rating scales. Evaluating large-scale reform efforts can be quite costly, and so it is imperative that measurement tools be as efficient and streamlined as possible. The purpose of examining the interrelationship of the rating scales is to reduce redundancy in our rating scheme by investigating whether certain scales may be so highly correlated with one another that some scales could be eliminated.

As illustrated in Table 5 the correlation matrix for the combined assignments indicates that most of the scales are statistically significantly associated with one another. This is especially true for the scale measuring the overall quality of the assignments (r = .43, p < 0.001 to r = .72, p < 0.001), which makes sense given that this scale is intended to represent a holistic indicator of quality. This suggests that it might be possible to holistically rate assignment quality. At this stage in our research, however, we are reluctant to draw definitive conclusions about which

Table 5

Interrcorrelation of Classroom Assignment Ratings Across Assignment Types

	Cognitive challenge	Clarity of goals	Grading criteria	Alignment goals/task	Alignment goals/grade	Overall
Cognitive challenge	1.0					
Clarity of goals	0.25**	1.0				
Grading criteria	0.35***	0.16	1.0			
Alignment of goals/ task	0.34***	0.36***	0.42***	1.0		
Alignment of goals/ grade	0.34***	0.28***	0.68***	0.59***	1.0	
Overall	0.72***	0.43***	0.53***	0.57***	0.52***	1.0

**p < 0.01.   ***p < 0.001.

scale(s) to eliminate. It would be important to conduct analyses with coders who are less familiar with the instrument in order to determine whether the other scales continue to be associated with the one scale measuring the overall quality of the assignment (see Appendix G for additional tables measuring the interrcorrelation of ratings by assignment types[1]). Additionally, retaining the different subscales might also be important in terms of helping to communicate the different dimensions that are important to look at when assessing the quality of classroom assignments, and could help provide more specific feedback to teachers and school reform programs.

What Is the Relationship Between the Classroom Assignment Ratings and Other Indicators of Instructional Quality (i.e., Classroom Observations and Student Work)?

In this section we look for evidence of the construct validity of our method by comparing our ratings of the assignments to other indicators of instructional quality. The purpose of this is to assess the degree to which the classroom assignment ratings provide us with meaningful and appropriate information about students' learning environments that is commensurate with other measures of quality practice. We first investigate the pattern of relationships between the quality of classroom assignments and the quality of instruction observed in teachers' classrooms. We then investigate the relationship between the classroom assignment rating scales and the quality of student work.

To investigate the relationship between the quality of classroom assignments and observed instruction, we first conducted exploratory factor analyses to reduce the data and to examine the underlying dimensions of the ratings scales. These analyses revealed two underlying dimensions in the classroom observation data. The first factor based on the classroom observation ratings included variables that measure aspects of constructivist-type practice—the quality of the instructional conversation, student participation in the instructional conversation, the challenge of the lesson, and quality of the teacher's instructional feedback to students. The second factor measured how well the lesson was implemented in terms of classroom management, student engagement in the lesson, focus of the teacher's goals on student learning, and alignment between the teacher's goals and lesson activities. Factor analysis with teacher assignment data, in contrast, revealed a single factor for

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[1] We also investigated the interrcorrelation of the classroom assignment ratings by level of schooling. These analyses did not show a unique pattern of results separate from assignment type.

the rating scales which is not surprising given how highly correlated these scales were with one another (see Table 6 and Table 7).

After the data had been reduced into factors, ratings from the observed lessons from winter 1999 (the lesson closest to when the assignments were given to students) were correlated with the teacher assignment ratings (from spring 1999). These analyses revealed that the first classroom observation factor measuring elements of constructivist practice was significantly associated with the quality of teachers' assignments ($r = .57$, $p < 0.01$). The second observation factor, in contrast, measuring the quality of the lesson implementation, was not significantly

Table 6

Exploratory Factor Analysis of Classroom Observation Variables ($N = 26$ Teachers)

Variables	Factor 1: Constructivist practices	Factor 2: Lesson implementation
Quality of instructional conversation	**.93**	-.09
Challenge of the lesson	**.82**	.07
Student participation in instructional conversation	**.76**	.02
Quality of instructional feedback	**.38**	.34
Student engagement in lesson activity	-.09	**.88**
Quality of classroom management	-.09	**.87**
Clarity and focus of the teacher's goals on student learning	.15	**.73**
Alignment of goals and activity	.26	**.57**
Eigenvalue	4.06	1.08
Percent of variance explained	50.8	13.5

Note. Boldface type indicates the variables that comprise each factor.

Table 7

Exploratory Factor Analysis of Teacher Assignments ($N = 24$ Teachers)

Variables	Factor 1: Teacher assignments
Overall quality of task	**.93**
Alignment of goal and task	**.90**
Alignment of goal and assessment criteria	**.88**
Quality of assessment criteria	**.81**
Challenge of the task	**.78**
Clarity of teacher's goals for the task	**.69**
Eigenvalue	4.19
Percent of variance explained	69.9

associated with teachers' assignments ($r = .03$). The relationship of the observation factors to each other also was investigated. This analysis revealed that these factors were significantly associated with each other ($r = .50$, $p < 0.01$).

Our analyses indicate that ratings of classroom assignments yield similar estimates of quality obtained from classroom observations with specific regard to elements of constructivist practice (i.e., challenge of the lesson activities, level in instructional discourse, and quality of teachers' feedback to students during the lesson).

To further look for evidence of the validity of using teachers' assignments as an indicator of classroom practice, we examined the relationship between the quality of classroom assignments and the quality of student work. To do this we correlated the different dimensions of the teacher assignment scales to the quality of student work. This analysis revealed that the quality of teachers' assignments was associated with the quality of student writing as assessed by the scales measuring writing content and organization. The teacher assignment rating scales also were for the most part significantly associated with students' command of writing mechanics (MUGS), though the strength of this relationship tended to be weaker overall (see Table 8). It appears that the quality of classroom assignments is statistically significantly associated with the quality of student work, though it is important to note that our analysis does not directly test for direction of influence—or a causal relationship—between quality of assignments and quality of student work. Other factors, such as the quality of supporting instruction around assignments, are certainly important in terms of fostering high-quality student work.

Table 8

Relationship of Classroom Writing Assignments and Student Writing in the 1998-99 Evaluation Year ($N = 24$ Teachers)

	Student writing scales		
	Content	Organization	MUGS
Challenge of the task	.30***	.34***	.27**
Clarity and focus of teacher's goals	.22*	.28**	.15
Quality of assessment criteria	.29***	.29**	.19*
Alignment of goal and task	.28**	.33***	.17
Alignment of goal and assessment criteria	.30***	.36***	.22*
Overall quality of task	.31***	.34***	.18(*)

*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

How Many Assignments and Raters Are Needed to Obtain a Consistent Estimate of the Quality of Classroom Practice?

In this section we explore the number of raters and assignments needed to obtain a stable estimate of quality. To explore this issue we first conducted a generalizability study to investigate the quality of design in terms of yielding consistent estimates of classroom practice. This analysis revealed a G-coefficient of .91 and .87 for our design that used three raters to rate four assignments collected in elementary and middle schools respectively. Looking at the estimated variance components of the teacher assignment ratings, we found (as hoped) that most of the variation in the ratings was accounted for by differences across teachers and not by differences across raters. Interestingly, we also found that there was little variation across the different types of assignments collected from teachers (see Table 9).

To further explore this issue we conducted a decision study in order to estimate generalizability coefficients for varying numbers of assignments and raters. As illustrated in Table 10, the decision study conducted with our current data estimated that the minimum number of assignments and raters needed to yield a consistent measure of quality was 2 each at both the elementary (G = .87) and middle school (G = .82) levels.

Table 9

Estimated Variance Components and Percent of Variance Explained by Teacher, Assignment Type, and Rater ($N = 37$ Teachers)

	Elementary school ($n = 18$)		Middle school ($n = 19$)	
	Variance components	% of variance	Variance components	% of variance
Teacher	.1757	.7426	.1748	.6356
Assignment type	.0049	.0207	.0098	.0356
Rater	.0025	.0102	.0117	.0425
Teacher by assignment type	.0000	.0000	.0000	.0000
Teacher by rater	.0535	.2261	.0782	.2844
Assignment type by rater	.0000	.0000	.0005	—
Teacher by assignment type by rater	.0000	.0000	.0000	.0000

Note. These analyses include 6 additional elementary school teachers and 7 additional middle school teachers from the first year of the study. Their parallel assignments were re-scored by the same pool of raters to reduce coding bias and to measure the clarity of teachers' goals for student learning (a new scale that had been added to the rubric).

Table 10

Estimated G-Coefficients Based on the Number of Assignments and Raters ($N = 48$)

Number of assignments	Number of raters	G-coefficient: Elementary school	G-coefficient: Middle school
4	3	.91	.87
2	2	.87	.82
2	1	.77	.69

What Types of Assignments Might Provide the Best Estimates of Quality of Classroom Practice?

Ultimately the question of which assignments are best to collect depends on the purpose and focus of the individual evaluation or research project. For our purposes, however, our concern is centered on figuring out which assignments might provide the best estimates of the quality of students' learning environments. To investigate this we examined the relationship between the different assignment types and classroom observations. This revealed that the typical reading comprehension assignments ($r = .56$, $p < 0.01$) and typical writing assignments ($r = .68$, $p < 0.001$) were statistically significantly associated with the quality of observed instructional practice with regard to constructivist practices. The typical reading comprehension assignment also was associated with the variables measuring the quality of lesson implementation ($r = .41$, $p < 0.05$). The content area writing assignment (given at the elementary school level only) and the challenging assignment in contrast were not associated with the quality of observed instruction (see Table 11). We concluded from this analysis that everyday or typical reading comprehension and writing assignments likely provide the best view on the quality of students' learning environments or classroom practice.

Table 11

Correlation of Assignment Types to Observed Instruction ($N = 24$ teachers)

Assignment type	Observation factor 1: Constructivist practices	Observation factor 2: Implementation
Typical reading comprehension	0.56**	0.41*
Typical writing	0.68***	-0.02
Content area writing (elementary schools only)	0.10	-0.06
Challenging	0.26	-0.19

*$p < 0.05$. * *$p < 0.01$. ***$p < 0.001$.

Summary of Findings and Limitations of the Research

The results of our study indicate that we had good reliability for the classroom assignment ratings. These results suggest that it is possible for raters to agree on and consistently rate the quality of assignments using our dimensions. We looked for evidence of the construct validity of our method by examining the relationship between the classroom assignment ratings and other indicators of quality instructional practice. We found that ratings of classroom assignments yielded estimates of quality similar to ratings obtained from classroom observations. Specifically we found that the quality of classroom assignments was significantly associated with elements of constructivist practice observed during the lesson (i.e., challenge of the lesson activities, level in instructional discourse, and quality of teachers' feedback to students).

Commensurate with findings from the first year of the study, our analyses also revealed that the quality of classroom assignments was statistically significantly associated with the quality of student work (see Aschbacher, 1999). The results of this analysis, which replicate findings from the first year of the study with additional teachers and assignments, provide additional support for using teachers' assignments as an indicator of classroom practice. As mentioned before, however, it is important to bear in mind that we did not directly test for direction of influence—or a causal relationship—between the quality of assignments and the quality of student work in our analyses. In other words, we cannot conclude that being exposed to high-quality assignments guarantees that students will be able to produce high-quality work themselves. Students also need supportive classroom instruction and feedback in order to learn the skills and concepts required to complete high-quality assignments. We therefore regard classroom assignment quality to be a "necessary though not sufficient condition" for student success (Newmann et al., 1998, p. 30). More research is necessary to determine the specific contribution high-quality assignments make to increased student academic achievement, independent of classroom instruction.

Finally, we continued to investigate the feasibility of our method for use in large-scale evaluation settings. Also commensurate with the decision study conducted during the first year of the study (see Aschbacher, 1999), our results showed that our design collecting four assignments from teachers and using three raters yielded a consistent estimate of quality. Additional work that should be undertaken in the area includes training additional raters and monitoring their

scores as a way to explore the amount and type of training necessary to reliably score assignments. This is an important piece of information with regard to the feasibility and cost-effectiveness of using this method to evaluate a large number of classrooms. In this vein we also investigated the minimum number of raters and assignments needed to obtain a consistent estimate of quality. Our analyses estimated that two assignments from teachers and two raters could yield a consistent estimate of quality at both the elementary and middle school levels.

We then examined the relationship between the type of assignment collected and the quality of observed instruction in order to determine which assignments might yield the best estimate of quality classroom practice. We found that the typical writing assignment and the typical reading comprehension assignment were significantly statistically associated with the quality of observed instruction. We concluded from this that these assignments might provide the best view on the quality of students' classroom learning environments. Additional research is necessary to further investigate whether a design of two assignments and two raters would in actuality yield a consistent estimate of quality and whether typical writing and reading comprehension assignments continue to be associated with the quality of observed language arts instruction.

As a final caveat, across the board our findings are limited by the fact that we had a small sample size. More than this, however, the power and generalizability of our analyses potentially are limited by a restriction in range in our sample in terms of classroom learning environments. All of the schools in our present sample are in urban areas and serve primarily poor and minority students. This raises the question of whether the same patterns of results would hold if the sample included other types of schools (e.g., schools serving more privileged students). These limitations aside, however, the results of our research to date indicate that our method shows considerable promise as a measure of quality classroom practice in terms of technical quality, usefulness, and potential for use on a large-scale basis. We will be continuing our investigation of this method during the 1999-2000 academic year (our third and final year of data collection in these sites) and will report the results of this work in a future CRESST report.

Next Steps and Directions for Future Work

Building on the results of analyses presented here, we recommend the following steps and directions for future research.

- Increase the number of teachers in the sample.

- Expand the sample to include a more diverse range of schools.

- Use both quantitative and qualitative methods to better assess change over time in the quality of assignments with a larger sample of teachers.

- Expand the pool of raters in order to investigate the amount and type of training it takes to reliably and consistently score assignments.

- Develop more refined scoring guides and anchor papers to facilitate the use of this method.

In conclusion, in addition to creating a useful and effective measure of classroom practice, we hope as well that our framework will be useful to teachers in terms of reflecting on assignments with colleagues in grade-level or subject-level meetings or in the context of other professional development activities. Specifically, we hope that our framework might contribute to the improvement of teachers' instructional practices by helping teachers think about the kinds of skills their assignments promote, how well their assignments promote their learning goals, the clarity and specificity of their grading criteria, and the match between their grading criteria and their learning goals. We therefore suggest that future research include piloting the scoring framework with teachers in collaborative professional development settings (e.g., Critical Friends Groups), in order to explore their perspectives on how useful the dimensions are for reflecting on the quality of their assignments.

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APPENDIX A

Teacher Assignment Materials

Directions for Collecting Assignments and Student Work
Step-By-Step Process

<div style="border: 2px solid black; display: inline-block; padding: 10px;">

Due: February 1999

</div>

Overview:

Please collect 4 assignments with 4 samples of student work for each assignment. You will be asked to fill out a cover sheet for each assignment. Detailed instructions are given below. We want to describe the nature of the language arts tasks that students do, what's expected of them, what feedback they are given, and how grades are assigned. Our descriptions depend on what you tell us, so please be explicit and detailed so we can be as accurate as possible. Thanks.

1. **COLLECT THE FOLLOWING 4 ASSIGNMENTS.**
   Between now and February, collect **4** of the assignments you give your third grade students, with selected examples of student work. Use assignments which ask students to do some individual written work. <u>Do not create new assignments specifically for this study</u>. Please collect the following types of assignments:

   - **3** typical in-class assignments with a written response (<u>one of each</u> of the following):

     - 1 reading comprehension or reading response assignment

     - <u>For 3rd grade:</u> 1 writing assignment in a content area such as social studies or science
       <u>For 7th grade:</u> 1 writing assignment of any type typical for your class

     - 1 writing assignment that includes a rough draft and final draft, with any written feedback given by peers or teachers (writers' workshop activities are fine)

   - **1** very challenging assignment or project with a written component

     Pick one of the most rigorous assignments involving language arts that you will give students any time between now and February of this school year. The assignment should elicit some high-level thinking and include some writing. It may include reading, oral report, or other activities. If this assignment has multiple steps, please submit only the written portion of the student work.

If you are in doubt about what assignments are appropriate, just call us to discuss it.

(continued)

2. **FOR <u>EACH</u> OF THE 4 ASSIGNMENTS COPY 4 SAMPLES OF STUDENT WORK.**

    - **Choose two middle quality and two high quality pieces of student work from the same class.**
      It is fine to choose different students' papers for the different assignments. We just need two middle and two high for each assignment. If there were no students who did high quality work on an assignment, attach a note explaining why you are not including any "High" pieces of student work.

    - Copy the four pieces of student work for each assignment.

    - Place an ID sticker over each student's name. (We prefer to receive student work without their names so as to protect their privacy). Please do not cover up any part of the student's work, your feedback, or grade. It is important for us to see the feedback comments or grades. If there is no clear area for the label, put it on the <u>back</u> of the work and cross out/white out the student's name.

        - Note: The student ID labels for Assignment #1 are stapled to the pocket for Assignment #1, and so forth.

    - Place an **M (Middle) or H (High)** sticker on each student paper accordingly. These stickers are in the plastic sleeve immediately preceding the pockets for student work.

    - We would prefer to see student work from 3rd and 7th graders where possible. However, if you have students of another grade in your class and cannot find high or middle level work from your 3rd or 7th graders, record the grade level at the top of the student work if it is from a student who is <u>not</u> in 3rd or 7th grade (e.g., write "grade 2" at the top if you cannot find high level work from a 3rd grader and instead submit a high level work sample from a second grader in your 2/3 combination class). Call us if you are unsure.

3. **FILL OUT A COVER SHEET FOR EACH OF THE 4 ASSIGNMENTS.**

Fill out the enclosed Cover Sheets for Teacher Assignments in the pockets in this binder. There is a different cover sheet for each type of assignment, each on a different color of paper.

- **Please attach whatever will help us understand** the assignment and accompanying student work, such as the following:
    – copy of the directions given to students (**please be as explicit as possible**),
    – grading rubric or guidelines, and
    – outline of the unit.

- Place the cover sheet with attached papers and the 4 pieces of student work in the appropriate pockets in this binder.

General Information Form
3rd Grade Teachers

Please answer the following questions in January 1999.

1. What grade level(s) are your students? Check all that apply.   [ ] 2nd   [ ] 3rd   [ ] 4th

2. How many years have you been teaching? _____ years

   a. How many years have you taught 3rd grade? _____ years

3. How many students are enrolled in your class? _____

4. Approximately what percentage of your students have been in your class since the beginning of the school year? _____ %

5. Please circle any of the following which describe your class:

   a. full bilingual   b. modified bilingual   c. SDAIE or sheltered English
   d. English only   e. other (explain)_____

6. Approximately what percent of your students are LEP (Limited English Proficient)? _____ %

   a. In what language(s) do your LEP students receive language arts instruction? (Circle as many as apply)

      English   Spanish   Other _____

   b. Approximately what percent of your students have recently (within the past six months) been redesignated as Fluent English Proficient (RFEP)? _____ %

7. a. What is the range in reading level among your students? _____ grade to _____ grade

   b. At what grade level are <u>most</u> of your students currently reading? _____ grade

8. How similar is the language arts curriculum and instruction in your class to that of other teachers at your grade level in your school? (circle your answer)

Not at all similar		Somewhat similar		Very similar
1	2	3	4	5

9. Is there anything else about your language arts class we should know when looking at the assignments and student work?

Thanks so much!

Cover Sheet for Typical Reading Comprehension Assignment

If you need more room to answer the questions, please use the back of this form or attach sheets as necessary.

1. **Describe the assignment below in detail or attach a copy of the assignment directions to this sheet. Be sure to tell us exactly what directions were given to students.**
    Specify the title and type (e.g., poem, novel, textbook, etc.) and grade level of the reading material. If students are working in reading groups, specify which group was given this assignment.

    _____

    _____

    _____

2. **What concepts, skills, and/or processes did you expect the students to acquire from this assignment? i.e., what were your learning goals for the students?**

    _____

    _____

    _____

3. **How does the assignment fit in with your unit or what you are teaching in your language arts class this month or this year?** Is this an end-of-unit assessment? [ ] yes [ ] no   How long did the task take? ____

    _____

    _____

    _____

4. **What type of help, if any, did students receive to complete the assignment?** (Check all that apply.)
    Students received help or formative feedback from a   [ ] teacher   [ ] teacher's aide   [ ] other students
    [ ] parents   (e.g., help = substantive revision feedback from teacher or peers). Please explain:

    _____

    _____

    _____

5. **How was this assignment assessed?** If there is a rubric, student reflection, etc., please attach it.
    If you are not attaching a rubric, please explain your criteria for grading the work (if graded).
    Did you share these criteria with students? [ ] yes   [ ] no

    _____

    _____

    _____

6.   **What criteria did you use to decide which papers are "M" middle papers and which are "H" high?**
    (especially if work was not graded originally or if different from #5 above)

    _____

    _____

7. **Approximately what percent of students performed at the following levels on this assignment:**

    ____% = good–excellent   ____% = adequate   ____% = not yet adequate

Cover Sheet for Typical Writing Assignment: Final and Rough Drafts

If you need more room to answer the questions, please use the back of this form or attach sheets as necessary.

1. **Describe the assignment below in detail or attach a copy of the assignment directions to this sheet. Be sure to tell us exactly what directions were given to students.**
   Specify the title and type (e.g., poem, novel, textbook, etc.) and grade level of any reading material. If students are working in reading groups, specify which group was given this assignment.

   _____

   _____

   _____

2. **What concepts, skills, and/or processes did you expect the students to acquire from this assignment? i.e., what were your learning goals for the students?**

   _____

   _____

   _____

3. **How does the assignment fit in with your unit or what you are teaching in your language arts class this month or this year?** Is this an end-of-unit assessment? [ ] yes [ ] no   How long did the task take? ____

   _____

   _____

   _____

4. **What type of help, if any, did students receive to complete the assignment?** (Check all that apply.)
   Students received help or formative feedback from a [ ] teacher   [ ] teacher's aide   [ ] other students
   [ ] parents   (e.g., help = substantive revision feedback from teacher or peers). Please explain:

   _____

   _____

   _____

5. **How was this assignment assessed?**   If there is a rubric, student reflection, etc., please attach it.
   If you are not attaching a rubric, please explain your criteria for grading the work (if graded).
   Did you share these criteria with students? [ ] yes   [ ] no

   _____

   _____

   _____

6. **What criteria did you use to decide which papers are "M" middle papers and which are "H" high?**
   (especially if work was not graded originally or if different from #5 above)

   _____

   _____

7. **Approximately what percent of students performed at the following levels on this assignment:**

   ____% = good–excellent   ____% = adequate   ____% = not yet adequate

Cover Sheet for Typical Content Area Writing Assignment (Elementary School Only)

Please check one: ☐ science   ☐ social studies   ☐ math

If you need more room to answer the questions, please use the back of this form or attach sheets as necessary.

1. **Describe the assignment below in detail or attach a copy of the assignment directions to this sheet. Be sure to tell us exactly what directions were given to students.**
   Specify the title and type (e.g., poem, novel, textbook, etc.) and grade level of any reading material. If students are working in reading groups, specify which group was given this assignment.

   _____

   _____

   _____

2. **What concepts, skills, and/or processes did you expect the students to acquire from this assignment? i.e., what were your learning goals for the students?**

   _____

   _____

   _____

3. **How does the assignment fit in with your unit or what you are teaching in your language arts class this month or this year?** Is this an end-of-unit assessment? [ ] yes [ ] no   How long did the task take? ____

   _____

   _____

   _____

4. **What type of help, if any, did students receive to complete the assignment?** (Check all that apply.)
   Students received help or formative feedback from a   [ ] teacher   [ ] teacher's aide   [ ] other students
   [ ] parents   (e.g., help = substantive revision feedback from teacher or peers). Please explain:

   _____

   _____

   _____

5. **How was this assignment assessed?** If there is a rubric, student reflection, etc., please attach it.
   If you are not attaching a rubric, please explain your criteria for grading the work (if graded).
   Did you share these criteria with students? [ ] yes   [ ] no

   _____

   _____

   _____

6. **What criteria did you use to decide which papers are "M" middle papers and which are "H" high?**
   (especially if work was not graded originally or if different from #5 above)

   _____

   _____

7. **Approximately what percent of students performed at the following levels on this assignment:**

   ____% = good–excellent   ____% = adequate   ____% = not yet adequate

Cover Sheet for Very Challenging Assignment or Project: Written Component

If you need more room to answer the questions, please use the back of this form or attach sheets as necessary.

1. **Describe the assignment below in detail or attach a copy of the assignment directions to this sheet. Be sure to tell us exactly what directions were given to students.**
Specify the title and type (e.g., poem, novel, textbook, etc.) and grade level of any reading material. If students are working in reading groups, specify which group was given this assignment.

2. **What concepts, skills, and/or processes did you expect the students to acquire from this assignment? i.e., what were your learning goals for the students?**

3. **How does the assignment fit in with your unit or what you are teaching in your language arts class this month or this year?** Is this an end-of-unit assessment? [ ] yes [ ] no   How long did the task take? ____

4. **What type of help, if any, did students receive to complete the assignment?** (Check all that apply.)
Students received help or formative feedback from a   [ ] teacher   [ ] teacher's aide   [ ] other students
[ ] parents   (e.g., help = substantive revision feedback from teacher or peers). Please explain:

5. **How was this assignment assessed?**   If there is a rubric, student reflection, etc., please attach it.
If you are not attaching a rubric, please explain your criteria for grading the work (if graded).
Did you share these criteria with students? [ ] yes   [ ] no

6. **What criteria did you use to decide which papers are "M" middle papers and which are "H" high?**
(especially if work was not graded originally or if different from #5 above)

7. **Approximately what percent of students performed at the following levels on this assignment:**

____% = good–excellent   ____% = adequate   ____% = not yet adequate

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APPENDIX B

Classroom Observation Protocol and Observation Interview

LAAMP Classroom Pre-Observation Interview

Researcher   Teacher First Name   Teacher Last Name   Grade

_____   _____   _____

Date   School   Lang Arts Focus

_____   _____   ○ Reading   ○ Writing   ○ Both

NOTE: If time is limited, go directly to question #3, then ask remaining questions at another time.

1. Briefly describe the students in your class, including those with special needs.

     Are there any LEP students in this class?   ○ Yes   ○ No

     If so, approximately what percentage of the students are LEP?   _____

     What languages other than English do students speak? _____

2. What should I expect to see during the observation?

3. What are your goals or objectives for the lesson I will be observing? What skills, concepts, or facts do you want the students to learn as a result of this lesson? (e.g., 3rd grade: learning the different parts of a story, learning how to peer edit, developing reading strategies such as predicting; 7th grade: learning the structure of a five-paragraph essay; increasing vocabulary skills, etc.)

4. In what way are these goals suitable for this group of students?

5. Are these goals based on a specific set of standards?   ○ Yes   ○ No
    If so, which standards (e.g., district standards, state Challenge standards, etc.)?
    How do your goals for this lesson support these standards?

6. Do you have a formal way of assessing what students have learned in this lesson? (e.g., rubrics, etc.)

7. Did you plan the lesson we will be observing with other teachers?   ○ Yes   ○ No

Notes

Classroom Information

Researcher
....

Teacher First Name .... Teacher Last Name ....

Grade ....

Date ....

School ....

Lang Arts Focus
○ Reading   ○ Writing   ○ Both

Total no. of minutes observed [..........]

TEACHER AND STUDENT INFORMATION

No. of students observed [..........]   No. of Boys [..........]   No. of Girls [..........]

Teacher	**2nd Teacher (in a team-taught classroom)**	**TA**	**2nd TA**
Ethnicity	Ethnicity	Ethnicity	Ethnicity
Sex ○ Male ○ Female	Sex ○ Male ○ Female	Sex ○ Male ○ Female	Sex ○ Male ○ Female

Please indicate the number of students who belong to the following ethnic groups. If there is no way to tell, please write "missing data" for this section.

African-Amer. [..........]   Asian [..........]   Latino/a [..........]   White [..........]   Other [..........]

BILINGUAL CLASSROOM INFORMATION (You can mark more than one.)

1. Number of students given instruction in a second language: [..........]

2. Language(s) used by the *teacher* during the observation: ☐ English ☐ Spanish ☐ Other…

2a. Percentage of time teacher used English: [..........]

3. Language(s) used by the *TA* during the observation: ☐ English ☐ Spanish ☐ Other…

3a. Percentage of time TA used English: [..........]

4. Language(s) used by the majority of the *students* during the obs.: ☐ English ☐ Spanish ☐ Other…

4a. Percentage of time students used English: [..........]

Activity Boxes

Description of Lesson Activities That Occur During the Observation Period

Please code each activity observed, and record the number of minutes for each activity. For classrooms in which simultaneous activities are occuring code the group with the teacher, and the group which has the largest number of students. The remaining activities should be coded together in a third activity box. Label these activities 1a, 1b, 1c; 2a, 2b, 2c, etc. Code teachers giving procedural information as a separate activity if it exceeds 1 minute, and transition periods as separate activities if they exceed 3 minutes.

ivity ber

oe: on
- [ ] Teacher-led whole class
- [ ] Teacher-led small group
- [ ] Small groups working independently
- [ ] Teacher and students 1-on-1
- [ ] Students work in pairs
- [ ] Students working individually
- [ ] Other (fill in)

Time in.)

ity
- [ ] Lectures/Gives lesson
- [ ] Leads a discussion
- [ ] Provides procedural info
- [ ] Conferences
- [ ] Reads aloud
- [ ] Gives a test
- [ ] Not present
- [ ] Monitors student behavior
- [ ] Provides help individually
- [ ] Other (fill in)

ity
- [ ] Pre-writing
- [ ] Revising/Editing
- [ ] Writing a draft
- [ ] Publishing
- [ ] Presenting
- [ ] Reading out loud
- [ ] Reading silently
- [ ] Answering questions (short response)
- [ ] Participating in discussion (extended response)
- [ ] Completing worksheets
- [ ] Listening
- [ ] Other (fill in)

l se
- [ ] Basal reader (title/author/date)
- [ ] Literature (title/author/date)
- [ ] Reference book (t/a/d)
- [ ] Style manual (t/a/d)
- [ ] Textbooks (t/a/d)
- [ ] Dictionaries/thesaurus
- [ ] Newspapers/magazines
- [ ] Visuals (e.g. phonics chart)
- [ ] Overhead projector
- [ ] Computers (model/software)
- [ ] Worksheet/workbook
- [ ] Students' own writing
- [ ] Other (fill in)

. of tents

nt gus
- [ ] Reading strategies (e.g. decoding, phonics)
- [ ] Reading comprehension
- [ ] WRITING BASICS [ ] grammar, [ ] spelling, [ ] vocabulary, [ ] handwriting Please specify
- [ ] WRITING other—Please specify:
- [ ] Other (fill in)

Activity Number ___

Time (min.) ___

No. of Students ___

Social Organization
- [ ] Teacher-led whole class
- [ ] Teacher-led small group
- [ ] Small groups working independently
- [ ] Teacher and students 1-on-1
- [ ] Students work in pairs
- [ ] Students working individually
- [ ] Other (fill in)

ity
- [ ] Lectures/Gives lesson
- [ ] Leads a discussion
- [ ] Provides procedural info
- [ ] Conferences
- [ ] Reads aloud
- [ ] Gives a test
- [ ] Not present
- [ ] Monitors student behavior
- [ ] Provides help individually
- [ ] Other (fill in)

ity
- [ ] Pre-writing
- [ ] Revising/Editing
- [ ] Writing a draft
- [ ] Publishing
- [ ] Presenting
- [ ] Reading out loud
- [ ] Reading silently
- [ ] Answering questions (short response)
- [ ] Participating in discussion (extended response)
- [ ] Completing worksheets
- [ ] Listening
- [ ] Other (fill in)

Use
- [ ] Basal reader (title/author/date)
- [ ] Literature (title/author/date)
- [ ] Reference book (t/a/d)
- [ ] Style manual (t/a/d)
- [ ] Textbooks (t/a/d)
- [ ] Dictionaries/thesaurus
- [ ] Newspapers/magazines
- [ ] Visuals (e.g. phonics chart)
- [ ] Overhead projector
- [ ] Computers (model/software)
- [ ] Worksheet/workbook
- [ ] Students' own writing
- [ ] Other (fill in)

Language Arts Content
- [ ] Reading strategies (e.g. decoding, phonics)
- [ ] Reading comprehension
- [ ] WRITING BASICS [ ] grammar, [ ] spelling, [ ] vocabulary, [ ] handwriting Please specify:
- [ ] WRITING other—Please specify:
- [ ] Other (fill in)

Lesson Description

Please describe the lesson and sequence of learning activities. Remember to include enough details so that a person who was not present during the lesson could get a clear picture of what the lesson entailed and how it unfolded. Please describe: the different types of groupings (e.g., teacher-fronted, small-group with aide, etc.), the use of different types of instructional materials in these groups (e.g., computers, books, worksheets), and what students were doing in these activities and what for (e.g., participating in a discussion, writing in a workbook, etc.). <u>If computer technology was used please describe:</u> the make/model of computers, how many there were in the classroom, how many students were using them, what the students were doing (e.g., word processing, graphics programs), and purpose for using the computer (e.g., publishing school newspaper, typing out writing assignment, etc.).

Classroom Ratings

1. Stated Goals

In this section rate the clarity and specificity of the teacher's stated goals for the lesson. Do not rate the learning activities.

Clarity of Stated Goals for the Lesson	○ 1	○ 2	○ 3	○ 4
	Goals are not clear in terms of what students are to learn from the assignment OR all goals may be stated as activities with no definable objective ("activity for activity's sake").	Goals are somewhat clear and explicit in terms of what students are to learn from the assignment OR goals may be a combination of goals and activities with no definable objective.	Most goals are clear and explicit in terms of what students are to learn from the assignment OR some goals may be stated as activities with no definable objective.	All the goals are very clear and explicit in terms of what students are to learn from the assignment OR all goals are elaborated, framed in terms of student learning.

Please write a paragraph providing evidence for your rating of the clarity and specificity of the teacher's goals for this lesson. Be as specific as possible and remember to include concrete examples.

2. Learning Activities

In this section rate the degree to which the teacher's stated goals for the lesson were reflected in the design of the learning activities. Specifically rate how well the activity supported achievement of the teacher's goals. Also rate the overall challenge of the learning activities. Additionally, rate the degree to which the lesson was effectively implemented, and the degree of student engagement in the activities.

Coherence between Goals and Learning Activities (e.g. how well the activity promoted achievement of the teacher's goals)	○ 1 Learning activities do not support or are unsuitable to instructional goals (e.g. activity for activity's sake).	○ 2 Learning activities are somewhat suitable to instructional goals.	○ 3 Learning activities are mostly suitable to instructional goals.	○ 4 Learning activities are highly relevant to instructional goals. Additionally, they may build on each other to provide a coherent whole.

Challenge of Learning Activities	○ 1 Learning activities involve students in tasks that do not require any degree of complex thinking. Students may be asked to recall only very basic information, and/or do not engage with relevant content material. Activities may be inappropriate to students in terms of age. (E.g. a 7th-grade teacher reads a story to class and asks class to recall very basic facts about the stories; a 7th-grade teacher asks students to define very basic vocabulary terms.)	○ 2 Learning activities involve students in tasks that require moderately complex thinking. Students may be asked to summarize straightforward information, infer simple main ideas, or understand the basic format for a given genre of writing (e.g. learning to apply the format for a letter). Limited understanding of content is required. (E.g. a 7th-grade teacher asks students to describe the beginning, middle, and end of a grade-level book.)	○ 3 At least some of the learning activities require strongly complex thinking as a major focus of the lesson, and understanding of content material is required. Students may be asked to synthesize ideas, analyze cause and effect, identify a problem and pose reasonable solutions, hypothesize, speculate giving details or justification, defend opinions or argue a position with evidence, evaluate, analyze (distinguish important or relevant from unimportant or irrelevant), determine bias, values, intent. (E.g. a 3rd-grade teacher asks students to analyze a character from a book they read.)	○ 4 Much or all of the learning activities require strongly complex thinking as a major focus of the lesson. Students also engage in substantive content material. Students may be asked to analyze cause and effect, identify a problem and pose reasonable solutions, speculate giving details or justification, defend opinions or argue a position with evidence to a great extent.

Implementation of the Learning Activities (include classroom management)	○ 1 The learning activity is not effectively implemented (e.g. the class may be disorganized, the teacher may lack control).	○ 2 The learning activity is somewhat effectively implemented.	○ 3 The learning activity is effectively implemented (e.g. transitions are orderly, teacher has control of class).	○ 4 The learning activity is exceptionally well implemented (e.g. transitions are seamless, almost no class time is wasted).

Proportion of Students 'On-Task'	O 1 Less than half of the students appear to be on-task.	O 2 Approximately half the students appear to be on-task.	O 3 Approximately 85% of the students appear to be on-task.	O 4 All students are engaged in the activities. Students may also initiate or adapt activities and projects to enhance understanding.

Please provide evidence for your rating of the coherence and perceived level of challenge of the learning activities/lesson.

Describe the rigor and grade-level appropriateness of the activities and resources used (e.g., did the activities or lesson support students' development of HOT, or meaningful content area knowledge).

Comment on reasons for why some students and not others may have appeared to be on-task.

Comment as well on the degree to which students appeared to be interested and engaged in the lesson/activities.

Include concrete examples to support your ratings.

Provide the titles and authors of the texts used in the classroom.

3. Classroom Discussion

In this section rate students' opportunity to learn through and engage as partners in meaningful classroom discussions. This includes both the nature of the teacher's questions and the amount of time spent in discussion. This also includes the level of student participation.

Opportunity to Participate in Classroom Discussions	**O 1** Interaction between teacher and students is predominantly recitation style, with teacher mediating all questions and answers (i.e., teacher's questions are close-ended). OR discussion does not take place at all (e.g., students are working individually revising drafts, etc.).	**O 2** Teacher makes some attempt to engage students in true discussion, with uneven results. Some of the teacher's questions are open-ended.	**O 3** Most of teacher's questions are of high quality. Adequate time is available for students to respond and teacher activity solicits student input (e.g., "Tell me why you think that...," "Can you tell me a little more about that..."). Teacher builds on student contributions.	**O 4** Classroom interaction represents true discussion. Students initiate topics and make unsolicited, on-topic contributions. Students formulate many questions. Teacher's questions are uniformly high quality, with adequate time for students to respond. Teacher builds on students' contributions, and students build on each other's contributions.

Student Participation in the Classroom Interactions	**O 1** Teacher involves only a few students in the discussion. OR no discussion takes place.	**O 2** Teacher attempts to involve all students in the discussion, but with only limited success.	**O 3** Teacher involves many of the students in the discussion.	**O 4** Teacher involves nearly all students in the discussion.

Please provide justification for your ratings. Remember to include all of the following:

Examples of teacher's questions, student responses, and techniques the teacher used to include students in the discussion.

Whether certain groups of students were participating or not in the classroom discourse (e.g., were these LEP students, etc.).

The degree to which complex language and vocabulary were used by the teacher and modeled for/presented to the students <u>AND</u> the extent to which the teacher facilitated student use of more complex language (e.g. did the teacher explain unfamiliar words, did the teacher rephrase students' questions and statements using more complex language, etc.).

The context and extent of discussion with attention to why discussion may not have been happening (e.g., students were reading silently or reading aloud).

4. Instructional Feedback

In this section rate the opportunity students have to receive information about their performance and progress toward learning goals, and the degree to which this feedback supports learning. Focus on the following components of feedback quality: <u>accuracy, substance, specificity, and helpfulness</u>.

Quality of Feedback	○ 1	○ 2	○ 3	○ 4
	Feedback is either not provided or is of uniformly poor quality. Feedback may be inappropriate (e.g., humiliating, punitive). Feedback does not support instructional goals.	Feedback is inconsistent in quality: Some elements of high quality are present; others are not. Feedback only somewhat supports the instructional goals.	Feedback is mostly high quality (e.g. expectations are made explicit to students; students are shown examples of good work). Feedback mostly supports the instructional goals.	Feedback is uniformly high quality. Provision is made for students to use feedback in their learning. Feedback fully supports the attainment of the instructional goals.

Please provide justification for your rating. Remember to provide concrete examples of the type of feedback the teacher gave to students.

Describe how this feedback did or did not support the instructional goals and the assessment criteria (i.e., how the criteria the teacher had in mind for knowing whether or not the instructional goals had been met by the students).

APPENDIX C

Language Arts Assignments

In the following sections we describe each dimension, and then we present examples of practice (basic and high quality) for each level of schooling in order to clearly illustrate our framework for describing the quality of students' learning environments. Specifically we describe the cognitive challenge of the assignments, clarity of the goals for student learning, clarity of the grading criteria, alignment of learning goals and task, alignment of learning goals and grading criteria, and the overall quality of the assignment. We also present the frequencies for each of the scale points for the different assignments collected at both levels of schooling in Tables C1 to C4.

Cognitive Challenge of the Assignments

The first dimension of quality of classroom assignments describes the level of thinking required of students to complete the assignment tasks. Specifically, the degree to which students have the opportunity to think critically, predict, analyze, and synthesize information, as well as engage with substantive content material is examined. Teachers' assignments for this sample of schools typically required students to use a limited degree of moderately complex thinking. For example, students were typically asked to summarize straightforward information, infer a simple main idea, or simply apply an appropriate format for a given genre without substantive engagement with content material (e.g., write a business letter to a movie star or an essay listing suggestions for improving the schools, etc.).

The following assignment was considered to be of basic quality for the level of cognitive challenge observed in classrooms and is typical of what we collected from our sample of urban third-grade classrooms. For this writing assignment, students were asked to write a story with a beginning, middle, and end using the following new vocabulary words: abominable, snow-covered forest, and snowman. Students were provided a story starter: *Oh no! I was lost! I turned and saw. . .* This assignment was scored a 2 for the level of cognitive challenge since students were not asked to employ the steps of the writing process and were not asked to elaborate, provide details, or provide more than one event description. In short, this writing assignment seemed to essentially be a version of the standard vocabulary assignment of writing new vocabulary words in sentences. The following is a

sample of student work considered by the teacher to be of "average" quality for the class[1]:

The Abominable Snowman

Oh no! I was lost! I turned and saw an Abominable snowman. I ran as fast as I could to my mother's cabin. The snowman was big and scary. He had legs that made him run very fast. He had a stick in his hand. I was running then he tripped me with the stick and I fell. This story happend in snowfall forest and suddenly the sun came up. It melted him and I was saved by the sun.

For a reading comprehension assignment similarly scored for the level of cognitive challenge in seventh-grade classrooms, students read a few short stories and were asked to answer questions about these stories at the end of each section. The following are examples of the types of questions asked of students for this assignment.

Why didn't the gods want humans to have fire? How did Prometheus plan to steal fire? What happened to Prometheus after he stole the fire?

This assignment was considered to be of basic quality for this dimension because most of the questions asked students to recall only basic facts. Only one question required students to use complex thinking and give a justification for their response: "Which theory do you think best explains the formation of the moon? Why?" The following is an example of student work considered by the teacher to be average for the class.

Seventh-Grade Student Work Sample

1) Why didn't the gods want humans to have fire?

They did no want humans to have fire because the though that the humans would have more power than them and be powerful

2) How did Prometheus plan to steal fire?

He plan by making them believe he left and hiding in the rocks and waiting for them to go to sleep and them he would steal the fire.

3) What happened to Prometheus after he stole the fire?

The gods punished Prometheus by changing him to a rock on the mountain.

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[1] All student work samples show actual student responses. Original errors have been retained.

Assignments considered to be of high quality for this dimension, in contrast, required strongly complex thinking as an extensive, major focus of the task and also required students to engage with substantive content material. Students may have been asked to synthesize ideas, analyze cause and effect, identify a problem and pose reasonable solutions, hypothesize, speculate with details or justification, defend opinions or argue a position with evidence, evaluate, analyze by distinguishing between the important or relevant from the unimportant or irrelevant, and determine bias, values, and intent.

The following assignment, which we considered to be cognitively demanding, required students to analyze quotes taken from the book *By The Great Horn Spoon* (Fleischman, 1963), which the teacher and students had read together as part of a unit learning about the Gold Rush. Students responded in writing after participating in small group discussions. One of the tasks in which students were asked to explain quotes from the book is this:

> On p. 97, Praiseworthy made a list of the names of the gold mining camps, such as Grizzly Flats, Bedbug, Whiskey Flat and Hangtown. He says, "They sound like dreadful places to take a growing boy." But then the author writes "they sounded glorious to Jack."
>
> What does Praiseworthy mean? What does Jack mean?

This assignment was rated high for cognitive challenge because it required students to think deeply about the story and the characters. The book is on a fourth-grade level and was used in a combination third- and fourth-grade class. Students had to interpret the quotes in light of what they understood about the characters, the period of history, and the plot. It is important to note, however, that students were not always able to successfully interpret the quotes, thus underscoring an earlier point we made that quality of assignments is a necessary but insufficient condition for ensuring quality student work. This is illustrated in the following sample of student work considered by the teacher to be of average quality for this class.

> *Praiseworthy means that Jack cant go there because they are like dedfuls places. And he is to yung to go in does places, but they have to chose a place to go and I think that they choes the town. I think that Jack says that he is supris about that. But I think that he is scared about that and I say he dosent want to go there because he thinks that is dedful to.*

The following assignment, also given a high score for the level of cognitive challenge, required seventh-grade students to create a newspaper based on their readings of American war novels. The newspaper had to include several types of writing: a "cause and effect" essay, a novelty article (such as a dance advertisement or a recruitment poster), and two of the following: a first-hand biography, an observation, or an evaluation. This assignment was rated high for level of cognitive demand because it required that students bring together and analyze different types of information as demonstrated in their cause-and-effect essays and evaluation. In addition to engaging with substantive content area knowledge (history), this assignment is also exceptional in that it required students to write in different styles (creatively, analytically, biographically, etc.), thus giving them experience writing in (and differentiating between) different genres. An excerpt of student work considered by the teacher to be average for the class is shown below.

December 9   5 cents   Honolulu, Hawaii

The Corps Correspondence

The Japanese Bomb Pearl Harbor

The Japanese Armed Services attacked the United States Island Naval base at Pearl Harbor, Honolulu, Hawaii. The Japanese flew in and attached the famed battleship row. The attack destroyed many of the battleships along with many other American ships of the Pacific fleet.

An Insiders First Hand Account of the Attack of Pearl Harbor As Seen By Lt. Kenneth McCoy

Japanese bombs littered the sky above un unsuspecting Pearl Harbor on December 7th, 1941. When I arrived on the Island most of the attack was already over, but there were still fires burning and ammo lockers exploding in the ships and on shore.

As the sea plane I was a passenger on came in for its final approach, we were fired upon by a group of nervous American anti-aircraft batteries. When I stepped out of the plane I saw a normally calm vacation site now was a place full of death and destruction. I saw the majestic skeletons of the once powerful pacific fleet. All around was a feeling of remorse and fear. It was apparent that a few moments can change the course of history

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Clarity of Assessment Criteria

In addition to collecting their assignments, we also asked teachers to provide us with a copy of their grading criteria (e.g., their scoring rubric) for assessing their students' work. We then examined the quality of the teachers' grading criteria in terms of their specificity and potential for helping students improve their performance. How clearly the teacher defined each aspect of the grading criteria was considered, as well as the amount of detail provided for each dimension.

Overall we found that teachers' criteria for grading student work tended to be only moderately clear and explicit. Teachers frequently used a very general or rudimentary rubric to score student work or provided us with a list of scoring dimensions such as "style, creativity, and organization." For example, in one third-grade assignment considered to be of basic quality for this dimension, students were required to write a retelling of the story "My Great Aunt Arizona" after listening to it read aloud.[2] The teacher's grading criteria for this assignment were quite broadly stated. In her words:

> Did they understand what was read? Can they write a beginning, middle, and end?

The clarity and specificity of her criteria were considered fairly basic because it was not clear what a student needed to do to show that he/she understood what was read (for example, how much detail the teacher expected students to include in their stories). The teacher also did not specify her criteria for what constituted a relatively high- or low-quality part of a story (i.e., beginning, middle, and ending).

Assignments that received a high score for this dimension, in contrast, had assessment criteria that were very clear and detailed. Additionally the teacher may have shared the criteria with students ahead of time and/or provided students with a model of excellent work. For example, this third-grade assignment considered to be of excellent quality for the clarity of the assessment criteria required students to write a story using the "writing process including drafting, editing, revising, and publishing." To assess the stories the teacher used a rubric which was both clear and elaborated. The teacher's rubric for scoring this assignment is shown below.

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[2] This assignment was described as well in Aschbacher (1999).

1	2	3	4
does not use descriptive words or details	uses few descriptive words and/or details	uses some descriptive words and details	uses many descriptive words, details and transition words
no paragraph structure	little knowledge of paragraph form	some understanding of paragraph form	uses correct paragraph form (indenting, topic, supporting and concluding sentences)
one sentence	contains few sentences	contains minimum of 5 sentences	contains more than 5 sentences
unrelated sentences or not on topic	some sentences not about topic or sentences are randomly sequenced	writing stays on topic most of the time—some sentences out of sequence	writing stays on topic and follows logical sequence
no sentence structure	repeated or simple sentence structure	all sentences are complete with some variation in length	all sentences are complete and of varying lengths
frequent use of "and"	inappropriate uses of "and"	some evidence of sentence combining and use of commas in a series	evidence of sentence combining and use of commas in a series
primarily inventive spelling—random letters or numbers	predominantly appropriate inventive spelling—some high frequency words spelled correctly	most high-frequency words spelled correctly. Evidence of ability to use various resources to aid spelling.	correct spelling used most of the time (high frequency all correct) uses a variety of resources to spell difficult words correctly
little correct punctuation, capitalization, or grammar	some correct punctuation, capitalization, and grammar	correct punctuation, capitalization, and grammar used most of the time	correct punctuation, capitalization, and grammar used almost all of the time
no spacing between words and sentences	some errors in spacing between words and sentences	correct spacing between all words and sentences	correct spacing between all words and sentences
illegible or hard to read	parts of writing are illegible or difficult to read	neatly written and easy to read	neatly written and easy to read

At the seventh-grade level, the following assignment was also scored a 4 for the clarity of the assessment criteria. For this assignment, students were required to write a review of a book of their choice following a detailed outline provided by the teacher. This assignment received a high score for the clarity of the teacher's grading criteria because students were given a very detailed list of what they needed to include in their papers and the criteria upon which their work would be assessed. Additionally, the teacher provided a model of excellent work for the students. The teacher's outline for this assignment is shown below.

I. Introduction
   A. Opening statement: Try to describe the book as best you can in one clear sentence. Include the title and author. (example: <u>Pacific Crossing</u>, by Gary Soto, is the story of one boy's experience during a summer spent in Japan.
   B. Explain the setting and give a little more detail on the story.
   C. Mention three important episodes from this story that you will talk about in the next three paragraphs.

II. First episode
   A. Explain the beginning of the episode and give any background info needed to understand the episode.
   B. Summarize what happens and how the episode turns out.
   C. Tell what your main character learned from the events you describe.

III. Second episode
   Follow instructions for paragraph II.

IV. Third episode
   Follow instructions for paragraph II.

V. Conclusion
   A. Say something about the book overall that connects this paragraph with the three that came before it.
   B. Explain what you think the important meaning of the book was, or what is valuable to learn from your book.
   C. Make a recommendation and give at least two reasons to support your recommendation. You can make a negative recommendation if you wish, just be sure you have two good reasons to support it. ("Dumb" or "boring" are not good reasons—you need to say why it is dumb or boring.)

Alignment of Goals and Grading Criteria

We also examined the degree to which teachers assessed students on the explicit skills and concepts mentioned as learning goals for the assignment. Typically we found that teachers' assignments demonstrated only some degree of alignment between the teacher's stated learning goals and the grading criteria; or, the teacher's goals and assessment criteria were so vague that alignment occurred only at a very general level. For example, in one third-grade writing assignment considered to be of basic quality for this dimension, students were asked to write a report about a topic of their choice. The teacher's learning goals for this assignment were "Brainstorming, drafting, learning to write report of information, and putting meaning to text." The teacher then assessed students' work according to "content and written expression." The alignment between the task and learning goals was considered to be somewhat low since the assessment criteria were vaguely stated and seemed to reflect only part of the goals.[3]

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[3] This assignment also was described in Aschbacher (1999).

To receive the highest score for this dimension, an assignment would need to have goals and assessment criteria that overlapped completely. In other words, the teacher would have had to clearly consider and plan for a way to assess the degree to which students had achieved each of the assignment's learning goals. This is illustrated in the following seventh-grade writing assignment scored a 4 for this dimension. Here the teacher asked students to "produce a research paper on an inventor, artist, writer, composer, scientist, or musician in which they focus on his/her creative accomplishments, identify the person's most creative works, summarize the person's life history, and show how they reflected the times in which they lived." Specifically, students were to address the following questions:

1. *What is creativity?*

2. *In what ways are people creative?*

3. *Why are the arts important to human life?*

4. *In what ways do inventors, scientists and artists reflect the time in which they live?*

The teacher's stated learning goals for the assignment were the following:

I WANT MY STUDENTS TO KNOW . . .

1. *Creativity comes in many forms*

2. *Students are capable of creativity and creative responses*

3. *Creativity is not only in product but in process as well*

4. *The difference between inventors and discoverers (scientists and doctors)*

5. *How to do formal research*

I WANT MY STUDENTS TO BE ABLE TO . . .

1. *Outline prior to writing*

2. *Use resources effectively, i.e., encyclopedia, newspapers, books, magazines, CD encyclopedias to gather pertinent information*

3. *Use quotation marks correctly and paraphrase correctly*

4. *Summarize gathered information*

5. *Write a research report with a clear focus*

6. *Organize writing coherently*

7. *Elaborate statements with facts, examples, details*

8. *Word process*

9. *Revise for clarity*

An excerpt from the teacher's assessment criteria is provided below.

An "A" paper had to present or contain:

1. *An overview of the person's life, including the important moments*

2. *Important achievements*

3. *What prompted the person to do what s/he did*

4. *How the poem reflected his/her times*

5. *A conclusion which stated the writer's feeling about the subject of the report*

6. *A bibliography*

This assignment was given a high score for this dimension because both the goals and the grading criteria were clearly stated and elaborated. Furthermore, there was a direct correspondence between what the teacher wanted students to know and be able to do and what the teacher looked for when scoring the papers. For example, the goal for students to "write a research report with a clear focus" corresponds to the point in the rubric that says, "focused on topic with a clear thesis aimed at describing the person's life, creative accomplishments, and why the person was important."

Tables C1 to C4 illustrate the frequencies for each of the scale points for the different assignments collected at both levels of schooling.

Table C1

Scale Percentages for Reading Comprehension Assignments in Elementary and Middle School
(*N* = 24 Teachers)

	Elementary schools				Middle schools			
	1	2	3	4	1	2	3	4
Level of cognitive challenge	25.0	58.3	16.7	—	27.3	54.5	18.2	—
Clarity of learning goals	8.3	75.0	16.7	—	18.2	81.8	—	—
Clarity of grading criteria	27.3	54.5	9.1	9.1	45.5	54.5	—	—
Alignment of goals and task	16.7	66.7	16.7	—	9.1	72.7	18.2	—
Alignment of goals and grading criteria	45.5	45.5	9.1	—	54.5	45.5	—	—
Overall quality	25.0	58.3	16.7	—	27.3	72.7	—	—

Table C2

Scale Percentages for Writing Assignments in Elementary and Middle School (*N* = 24 Teachers)

	Elementary schools				Middle schools			
	1	2	3	4	1	2	3	4
Level of cognitive challenge	16.7	75.0	8.3	—	8.3	66.7	25.0	—
Clarity of learning goals	8.3	83.3	8.3	—	17.4	69.6	13.0	—
Clarity of grading criteria	33.3	41.7	16.7	8.3	30.4	47.8	13.0	8.7
Alignment of goals and task	16.7	58.3	25.0	—	8.7	69.6	21.7	—
Alignment of goals and grading criteria	16.7	75.0	8.3	—	40.9	40.9	18.2	—
Overall quality	25.0	66.7	8.3	—	16.7	62.5	20.8	—

Table C3

Scale Percentages for Content Area Writing Assignments in Elementary
School (*N* = 12 Teachers)

	Score point			
	1	2	3	4
Level of cognitive challenge	8.3	91.7	—	—
Clarity of learning goals	41.7	58.3	—	—
Clarity of grading criteria	27.3	63.6	9.1	—
Alignment of goals and task	16.7	75.0	8.3	—
Alignment of goals and grading criteria	54.5	36.4	9.1	—
Overall quality	25.0	75.0	—	—

Table C4

Scale Percentages for Challenging Major Project Assignments in Elementary and Middle School
($N = 24$ Teachers)

	Elementary schools				Middle schools			
	1	2	3	4	1	2	3	4
Level of cognitive challenge	—	58.3	41.7	—	9.1	45.5	45.5	—
Clarity of learning goals	—	83.3	16.7	—	27.3	54.5	18.2	—
Clarity of grading criteria	18.2	45.5	18.2	18.2	10.0	60.0	30.0	—
Alignment of goals and task	—	58.3	41.7	—	18.2	63.6	18.2	—
Alignment of goals and grading criteria	27.3	54.5	18.2	—	20.0	80.0	—	—
Overall quality	—	75.0	25.0	—	9.1	54.5	36.4	—

APPENDIX D: Rubric for Scoring Teachers' Language Arts Assignments
Language Arts Assignment Rubric - Draft

	4	3	2	1
COGNITIVE DEMANDS	Task requires strongly complex thinking as an extensive, major focus of task. Student also engages with substantive content material.	Task requires complex thinking. Student may also engage with substantive content material.	Task requires some moderately complex thinking. Students may also engage with some substantive content material.	Task does not require any degree of complex thinking and/or does not engage students with substantive content material.
FOCUS OF THE GOALS ON STUDENT LEARNING	Goals are very focused on student learning. Goals are very clear and explicit in terms of what students are to learn from the assignment. Additionally, all the goals are elaborated.	Goals are mostly focused on student learning. Goals are mostly clear and explicit in terms of what students are to learn from the assignment.	Goals are somewhat focused on student learning. Goals are somewhat clear and explicit in terms of what students are to learn from the assignment. Goals may be very broadly stated. Or there may be a combination of learning goals and activities.	Goals are not focused on student learning and are not clear and explicit in terms of what students are to learn from the assignment, OR all goals may be stated as activities with no definable objective.
CLARITY OF THE GRADING CRITERIA	Teacher s grading criteria are very clear, explicit, and elaborated.	Teacher s grading criteria are mostly clear and explicit.	Teacher s grading criteria are somewhat clear and explicit.	Teacher does not specify grading criteria, OR it is not possible to determine the grading criteria from the teacher s documents.
ALIGNMENT OF LEARNING GOALS AND TASK	There is exact alignment between teacher s stated learning goals for students and what the task requires students to do. The task fully supports instructional goals. The task and goals overlap completely neither one calls for something not included in the other.	There is good alignment between teacher s stated learning goals and what the task requires students to do. The task supports the instructional goals.	There is only some alignment between teacher s stated goals and what the task requires students to do. The task only somewhat supports the instructional goals. Or the goal may be so broadly stated that the task and goal are aligned only at a very general level.	There is very little or no alignment between teacher s stated goals and what the task requires students to do. The task does not support the instructional goals.
ALIGNMENT OF LEARNING GOALS AND GRADING CRITERIA	There is exact alignment between the teacher s stated learning goals for students and the stated grading criteria.	There is good alignment between the teacher s stated learning goals and the stated grading criteria.	There is only some alignment between the teacher s stated learning goals and the stated grading criteria.	There is very little or no alignment between the teacher s stated learning goals and the stated grading criteria.
OVERALL TASK QUALITY	Excellent quality in terms of level of cognitive challenge, clarity and application of learning goals, and grading criteria.	Good quality in terms of level of cognitive challenge, clarity and application of learning goals, and grading criteria.	Limited quality in terms of level of cognitive challenge, clarity and application of learning goals, and grading criteria.	Poor quality in terms of level of cognitive challenge, clarity and application of learning goals, and grading criteria.

Language Arts Project
Generic Rubric: Reading, Writing, and Literature Analysis, 4-Point

LEVEL	Content	Organization	Style	MUGS
4	A "4" paper fully achieves the purpose of the assignment, clearly expresses the ideas to an intended audience, and conveys a distinct point of view. It *fully* and *elaborately* develops and integrates appropriate ideas with supporting details from the text.	A "4" paper follows the form required. It adheres to the topic and makes logical and explicit connections; is organized in paragraphs; and has a *clear* sense of beginning, middle and end.	A "4" paper contains a quality of uniqueness that enriches its meaning and readability. It exhibits various techniques such as vivid images, descriptive and expressive phrases, variation in sentence patterns, and appropriate tone.	A "4" paper demonstrates superior command of mechanics, usage, grammar, and spelling (MUGS). It is free of errors that interfere with the writer's meaning.
3	A "3" paper develops purpose, audience, and point of view. It *sufficiently* provides as much information *as called for* and develops and integrates appropriate ideas with supporting details from the text. It may contain *a* minor inaccuracy.	A "3" paper follows the form required. It adheres to a topic; makes logical connections among most of the ideas; and has a sense of beginning, middle, and end.	A "3" paper may exhibit techniques such as vivid images, descriptive and expressive phrases, variation in sentence patterns, and appropriate tone.	A "3" paper may contain a number of minor errors, but demonstrates a considerable command of most of the elements of MUGS. It may have an error such as *an* unclear sentence that somewhat interferes with the writer's meaning.
2	A "2" paper contains limited evidence of purpose, audience, and point of view. It may make limited use of the text and may show limited development of that information. It may have obvious factual errors and omissions.	A "2" paper has serious organizational problems: it may not adhere to a topic; may have unclear passages; may make limited connections between ideas; and has a limited sense of beginning, middle, and end. Digressions may significantly interfere with the writer's meaning.	A "2" paper has limited command of the elements of style. It may be mechanical and almost robotic. It typically shows less control of the use of language. There is limited evidence of various techniques such as vivid images, descriptive and expressive phrases, variation in sentence patterns, and appropriate tone.	A "2" paper contains frequent errors that may or may not distract or interfere with the writer's meaning.
1	A "1" paper may contain little or no evidence of purpose, audience, point of view, or a relevant topic. It may contain few or *no* details from the text and show little or *no* development of that information. It may consist mainly of sentences copied from a text. It may have *serious* factual errors and omissions.	A "1" paper has little or no order. It may be a rambling collection of thoughts. It has severe organizational problems: little or no connection among ideas; no sense of beginning, middle, and end; and many digressions.	A "1" paper has little or no command of the elements of style. There is no consistency. It may *only* consist of a string of words conveying little or no meaning.	A "1" paper demonstrates little or no command of MUGS. Errors appear in all, or nearly all, sentences and interfere with the writer's meaning.

Examples of Instructional Practices From Classroom Observations

In this section we report data from field notes to illustrate our ratings for key dimensions of quality observed in our sample elementary and middle schools. First we describe the dimension, and then we present two examples of practice (basic and high quality) for that aspect of quality practice. We pay special attention to the level of cognitive challenge of the lesson activities, instructional conversation (classroom discussions), instructional feedback to students, the alignment of learning goals and lesson activities, and lesson implementation (classroom management). The purpose of this is to illustrate the range of observed practice in these schools as well as to illustrate clearly our framework for describing the quality of students' learning environments.

Table F1 presents the mean ratings for the different dimensions of quality observed in our sample elementary and middle school classrooms (1 = *poor*, 4 = *excellent*; N = 26 teachers). Commensurate with the quality of assignments, we found that the level of cognitive challenge of the lesson activities we observed tended to be somewhat low overall (M = 2.19 and 1.92 in elementary and middle schools, respectively). This was true as well for the quality of instructional conversations in classrooms (M = 1.54). In contrast, student engagement and the quality of lesson implementation (classroom management skills) tended to be better on the whole, notably in the elementary school classrooms (M = 2.96).

Table F1

Quality of Observed Language Arts Lessons (N = 26 Teachers)

	Elementary school lessons (N = 26) M (SD)	Middle school lessons (N = 26) M (SD)
Challenge of lesson activities	2.19 (0.75)	1.92 (0.80)
Quality of classroom discussions	1.54 (0.65)	1.54 (0.71)
Level of student participation in classroom discussions	1.85 (1.01)	1.69 (0.84)
Quality of instructional feedback to students	1.85 (0.83)	1.96 (0.82)
Level of student engagement in the lesson	3.00 (0.63)	2.62 (0.75)
Quality of lesson implementation (classroom management)	2.96 (0.87)	2.27 (1.08)
Clarity of the teachers' goals for the lesson	2.65 (0.80)	2.19 (1.02)
Alignment of learning goals and lesson activities	2.42 (0.70)	2.50 (0.95)

Note. Items were scored on a 4-point scale (1 = *poor*, 4 = *excellent*).

Cognitive Challenge of the Lesson Activities

An important part of our classroom observations was looking at the level of thinking required of students to participate in the lesson activities. For example, we documented the degree to which students had the opportunity to think critically, predict, analyze, and synthesize information, as well as engage with substantive content material.

On average, we found that the level of cognitive challenge of the lesson activities observed in classrooms was fairly basic. For example, the type of thinking typically required of students in the third-grade classrooms generally included answering low-level comprehension questions in reading groups (e.g., "What color was the frog?") and completing worksheets. In the seventh-grade classrooms we observed, the type of thinking typically required of students included summarizing straightforward information, inferring simple main ideas, and understanding the basic format for a given genre of writing (e.g., learning to apply the format for a letter).

The following illustrates a typical language arts lesson we observed with regard to the cognitive challenge dimension. In this seventh-grade classroom the teacher gave students a Venn diagram worksheet with three circles titled "Character Comparison." Students were asked to describe two characters in the novel using physical traits, some basic personality traits, and behavior. This lesson was considered to require some degree of higher order thinking skills since the activity and supporting discussion for the most part centered on recalling descriptive characteristics about the characters most of which were explicit in the text. This is illustrated in the following exchange between the teacher and the students:

T: *Let's describe Omri. Is she stocky or lanky?*

Students give different answers.

T: *Let's go to the book. On the bottom of page 3, we learn that Omri has blonde hair and Ellen has dark hair. How old were each of these girls?*

S: *Ten.*

T: *They were friends and were 10 years old. I think if I remember correctly that Ellen was stocky and Omri was lanky. So you could put that down for their physical traits. What else could you say about Omri?*

S: *She had a sister.*

T: *You will have far more to put down in these circles than you will have lines for. What could you say about their personality? What did Omri exhibit?*

S: *Courage.*

T: *What was Ellen in this story?*

S: *Afraid.*

T: *Yes, she was afraid. Was she brave? When did she exhibit bravery?*

The following illustrates two lessons from the third and seventh grades that we considered to be of high quality with regard to the level of cognitive challenge. In this third-grade lesson, the teacher led guided reading groups while the rest of the students wrote in their writing journals or read silently. The teacher skillfully led each reading group, guiding students to use effective reading strategies such as making predictions and using contextual clues to help extract meaning from the text. For example, when the students in one group were first given their books, she suggested they go ahead and read the summary of the book on the back cover and the chapter titles and look at the pictures for information about the characters and the plot. As illustrated in the following example, the teacher pushed and probed to get students to learn as much as they could before beginning to read the first chapter:

T: *When you get a new book, what is the first thing you want to do?*

S: *Read the back.*

T: *Read the back and see what it is about and see if you think you will like it.*

T: *Who do you think the characters might be?*

S: *Mom.*

T: *Where does it take place? What is the setting?*

Students answer various things.

T: *Who is Amber Brown?*

T: *How old do you think she is? What kind of a girl do you think she is? What grade do you think she is in?*

Students answer these questions.

T: *What are you basing that on? Does it say somewhere?*

T: *Do you think she is in first grade?*

S: *She looks like she is older.*

T: *What do you think the title means?*

S: *She wants advice.*

T: *What do you think the plot is? The main idea?*

S: *Amber Brown wants extra credit because she does all the work.*

T: *Okay. Look at the very first sentence of the summary. "Amber Brown is in deep trouble." What do you think the problem of the story will be about?*

S: *She's fighting with a boy.*

T: *Based on what you read, not a wild guess.*

S: *She is in trouble.*

T: *Do you think she will get out of trouble?*

T: *Your job this morning is to read chapters one and two. You have until tomorrow to read also, with a partner or silently.*

This lesson was rated high, in part because the teacher required the students to use available evidence for predicting the future events in the story and actively engaged students in a discussion based on this evidence. Additionally, the teacher modeled for the students how to read for meaning and presented them with various reading comprehension strategies for doing so (e.g., looking at the cover, reading the back of the book, reflecting on the title). Other students who were not part of the reading group read silently or with a partner or wrote in their journals. All of the students appeared to be engaged in these activities.

The following is an example of a seventh-grade language arts classroom that received a high score for the level of cognitive challenge. The class began with students doing a "quick-write" predicting what would happen in the next few chapters of the novel they were currently reading about the Salem witch trials. This exercise was done to prepare them to meet in small groups to discuss their book. The teacher then led the class in a discussion based on the themes of freedom and courage. In this discussion the teacher made references back to other books the class had read. This is illustrated in the following exchange:

S: *It seems like the Dark Ages.*

T: *Why is that?*

S: *Because everyone was scared and uncertain about things during the Dark Ages.*

T: *Does anyone recall what books we have read where freedom and fear were underlying themes?*

Ss: Pride and Prejudice.

After a substantial discussion, the teacher's aide handed out an article from *The Los Angeles Times* on gangs. The teacher spoke with the students about the concept of persecution and asked students to compare the persecution of gang members with the persecution of a character in the novel they are reading based on the Salem witch trials. Students then broke into groups to discuss their novel. This language arts class was considered to be of high quality for the level of cognitive challenge because there was a sophisticated discussion of the themes of personal choice, persecution, etc. that went beyond one book and time period (Salem witch trials) to connect across historical periods and genres.

The Quality of Classroom Discussions

In observing classrooms we also examined the extent to which students had the opportunity to learn through and engage as partners in meaningful classroom discussions during the lesson activities. We specifically focused on the nature of teachers' questions (e.g., degree of open-endedness) and the degree to which teachers built on and extended student contributions.

This dimension of practice tended to be the weakest overall, and we do not have an example of a high-quality discussion to report for this section. In general we found that while teachers often solicited student contribution during the lesson activities (e.g., asked a few open-ended questions), this did not often turn into a high-quality classroom discussion. This is illustrated in one third-grade classroom where the teacher asked some open-ended questions during the lesson but was largely unsuccessful in getting students to respond. Furthermore, when the students did respond, the teacher would frequently not follow up on their contributions. The following is an example of the classroom discussion during the observed lesson.

T: *I want us to do a word wall for this book.* [The teacher sends a child to get a marker and poster.] *Who wants to write it? Okay, Juan, you write it. On a word wall, you don't have to just write words. For example, I like this part. My favorite phrase besides "dusk" is "trees glittering." Look through your reading and pick out a part you really like.*

S: "Drifted."

T: *How does it make you feel? What does it make you think?*

No answer.

T: *Can't think of it? Look through your books and find words you really like.*

The students hesitate and then begin opening their books.

T: *I'm going to add my words. [She takes the poster and begins writing "trees glittering."] I don't know how to write it–g, l, i, t. [She tries to get help from the students, but gets no response.]*

S: [Reading from what he wrote on the wall.] *"Snow drifted through the streets."*

T: *What does snow drifting through the streets look like to you?*

S: *Like white snow blowing in the wind.*

S: [A different student reads his phrase.] *"Steaming tamales."*

S: [A different student reads his phrase.] *"Cheerfully."*

T: *What does cheerfully look like?*

No answer.

Quality of Instructional Feedback

In addition to looking at students' opportunity to participate in high-quality instructional conversations, we also examined their opportunity to receive information about their performance and progress toward learning goals. Specifically, we focused on the accuracy, substance, specificity, and helpfulness of the teacher's feedback to students, as well as the amount of feedback the teacher provided to students during the observed lesson activities.

We found that, in general, teachers' feedback to the students tended to be inconsistent in quality. By this we mean that students either did not receive much instructional feedback during the lesson, or the quality of the feedback they received was limited. This latter situation is illustrated in the following lesson. For a large portion of the observed class period the teacher met with students to review sentences they had written. During this time the teacher showed students the sentences they had written that contained mistakes. She did not often provide them with guidance for understanding why they had made the mistake, however, and

what they needed to do to improve their writing generally. The following are examples of the exchanges between this teacher and her students:

> A student comes up to have her sentences checked.

> T: Okay, "I was cautiously" what? Okay, and this doesn't make sense either, "I was cautiously and careful." Go back and fix those.

> A student shows his work to the teacher.

> T: "My dad was dignified in his business field in a proper way"? Can you fix that please.

> A student shows her sentences to the teacher.

> T: "I was cautiously and careful with my mom's dishes." That doesn't make sense. Go fix 2 and 4.

We rated lessons high on this dimension if teachers not only provided students with correct answers but also modeled strategies to students to figure out answers. We also looked to see whether the teacher provided consistent, detailed, and specific information to students about their performance, and whether students had many opportunities to show what they knew.

In one third-grade class rated high on this dimension, the teacher's feedback to the students was consistently of high quality and appeared to help the students learn and progress toward the goals she had set for them. The teacher constantly assessed students' understanding and used the information to modify instruction, give feedback, and help individual students. This is illustrated in the following third-grade lesson.

While the class read the morning message aloud, some students read *night* for the written word *evening*. The teacher used that as an opportunity to have the students look carefully at the first letter and asked the class, "If the word was night, what would be the first letter?" Most of the teacher's questions and comments also seemed designed to steer the students to read for meaning. She suggested reading strategies to a student who misread an important word, not only so he would read the word correctly, but so he could learn an effective reading strategy. For example, when the student came to a word he did not recognize—*surrounded*—the teacher asked, "Do you see part of a word you know?" The student immediately said the word correctly.

During this seventh-grade lesson rated high for the quality of instructional feedback, the teacher gave students many chances to share their writing with the

class and took advantage of this to give students plenty of focused feedback. The following is one example:

> T: *Raise your hands if you have a good metaphor you'd like to share with the class.*
>
> S: *Summer camp is a vacation away from my family.*
>
> T: [Writes it on the overhead.] *She is saying summer camp is a vacation. Now, these two are similar, so it's kind of stretching the idea that this is a metaphor. But we can still work with it. Now, she definitely has the idea that a metaphor uses <u>is a</u> and not <u>is like a</u>, so very good, Lisa.*

Later in the class period the teacher provided the students with examples of good and bad writing and solicited from them their ideas about what made the writing good or bad and how to improve the writing. During this time the teacher was careful to follow up a student's suggestion with feedback about what was good and bad about a specific example. A few times, the teacher only said, "Very good, thank you," after a student's suggestion. For the most part, however, she pointed out something specifically right or wrong with students' suggestions.

Alignment Between Goals and the Lesson Activities

We also considered the degree to which the lesson activities appeared to further the teachers' goals for student learning. We found that teachers' stated learning goals and lesson activities were typically only somewhat aligned in most classrooms. This is illustrated in the following seventh-grade lesson considered typical for this dimension. Here the teacher's stated goal for the lesson was that the students learn how to use a Venn diagram to help them organize their thoughts as part of the prewriting process. The class spent only 14 minutes on the Venn diagram activity, however. The rest of the 50-minute class period was spent having students fill out their reading logs, review words from the vocabulary cards, and read aloud the beginning of a story. The teacher did not mention these other activities when stating her goals for the class period, so it is not clear how she intended these other activities to further student learning. For this reason we considered this lesson to be somewhat low for this aspect of quality practice.

The lessons that rated high on this dimension had goals and activities that overlapped completely. Every activity had a goal for student learning attached to it, and the activities appeared to further the attainment of the goal. For example, every one of this third-grade teacher's goals was addressed during one observed lesson.

Furthermore, the activities all appeared to effectively further the teacher's goals—for example, journal writing to get students to write independently, morning message to teach phonics, reading lesson to teach story structure, and Writer's Workshop (including Author's Chair) to teach the writing process. Additionally, all of these activities were tied together. For example, the teacher used student-created "Excitement Graphs" to show that every story builds up to a climax and then asked the students to apply this in their own writing during the Writer's Workshop.

Similarly, all of this seventh-grade teacher's goals for student learning were addressed during the observed lesson, and every activity had a learning goal attached to it. For example, the teacher had the students read an article based on their own interest to learn to read for pleasure, write on a personal topic to learn how to be more descriptive, become familiar with good reading habits through reviewing a text together on that subject, and improve their listening skills by hearing her read a story out loud to them. Additionally, most of the teacher's goals were geared toward improving reading comprehension; thus smaller goals and individual activities together appeared to build on each other during the observed lesson to create a coherent whole.

Lesson Implementation/Classroom Management

In addition to the challenge and design of the observed lesson activities and the quality of the verbal interactions between the teacher and students, we also examined teachers' classroom management skills during our observations. Specifically, we noted how difficult or off-task behavior on the part of students was handled (e.g., how effectively student behavior was dealt with, how positive the teacher was toward the students, etc.) and the amount of time spent transitioning from different activities.

In the elementary school classrooms, the quality of classroom management tended to be good overall. Classrooms were generally well organized, and considerably less time was spent in transitions from activity to activity in comparison with the seventh-grade classrooms. An example of the type of management skills we typically observed in third-grade classrooms is illustrated in the following third-grade lesson. Here the teacher set up the activities and the class to make it possible for students to continuously work while she met with three different guided reading groups. It took some time for the teacher to get organized (e.g., remembering how many pages the students were to have read) and begin each

group. For the most part, however, the teacher was positive toward the students, the class ran smoothly, and there was little wasted learning time.

In contrast to the elementary schools, the classrooms tended to be less well managed in the middle schools. This is perhaps due in part to the fact that the classes were much larger in middle schools than in elementary schools (an average of 32 versus 20 students respectively). Additionally, there were more difficult or disruptive behaviors on the part of students, which were not always effectively handled by teachers. For example, in one typical seventh-grade classroom the teacher continually kept saying "Shh!" to the students, though this did little to quiet the room. For the most part, this teacher ignored the students' talking and disruptive behavior.

In classrooms given the highest rating for this dimension, the transitions between activities were seamless and the teacher handled off-task or disruptive behavior in an effective and positive manner. For example, in one third-grade classroom rated a 4 for the quality of the lesson implementation, the students talked to each other during parts of the lesson, but most of this talk was on task and appropriate. When these discussions were not on task, the teacher handled it in a very nice way, not embarrassing anyone. This was illustrated during "Shared Reading" time when the teacher asked the class what they liked about the book the teacher was reading. Two boys were talking inappropriately when a soft-spoken girl answered the question. The teacher nicely said, "Boys, I can't hear Sherry." The boys stopped talking, and everyone listened as Sherry gave her answer.

In a seventh-grade classroom also given the highest rating for this dimension, the teacher was respectful to students and appeared to be respected in return. For example, all of the students stayed quietly in their seats after the bell rang, waiting to be dismissed. Additionally, little instructional time was wasted. For example, the teacher had students work on a writing task while she took 5 minutes to take roll instead of wasting learning time on a (necessary) procedural task. The transitions from whole class to small groups were also very efficient. The teacher also gave very clear directions to the students in a nice way, and most students appeared to know what to do and what was expected of them during the lesson.

APPENDIX G

Intercorrelation of Ratings for Individual Assignment Types

Table G1

Interrcorrelation of Ratings for the Reading Comprehension Assignments ($N = 36$)

	Cognitive challenge	Clarity of goals	Grading criteria	Alignment goals/task	Alignment goals/grade	Overall
Cognitive challenge	1.0					
Clarity of goals	0.24	1.0				
Grading criteria	0.15	0.15	1.0			
Alignment of goals/task	0.11	0.11	0.37*	1.0		
Alignment of goals/grade	0.16	0.15	0.48**	0.48**	1.0	
Overall	0.74***	0.37*	0.37*	0.32	0.41*	1.0

*$p < 0.05$.   **$p < 0.01$.   ***$p < 0.001$.

Table G2

Interrcorrelation of Ratings for the Writing Assignments ($N = 42$)

	Cognitive challenge	Clarity of goals	Grading criteria	Alignment goals/task	Alignment goals/grade	Overall
Cognitive challenge	1.0					
Clarity of goals	0.17	1.0				
Grading criteria	0.41**	0.01	1.0			
Alignment of goals/task	0.41**	0.35*	0.39*	1.0		
Alignment of goals/grade	0.35*	0.17	0.65***	0.56***	1.0	
Overall	0.77***	0.24	0.63***	0.63***	0.52***	1.0

*$p < 0.05$.   **$p < 0.01$.   ***$p < 0.001$.

Table G3

Interrcorrelation of Ratings for the Content Writing Assignments ($N = 18$)

	Cognitive challenge	Clarity of goals	Grading criteria	Alignment goals/task	Alignment goals/grade	Overall
Cognitive challenge	1.00					
Clarity of goals	0.34	1.00				
Grading criteria	0.28	-0.23	1.00			
Alignment of goals/task	0.16	0.47*	0.18	1.00		
Alignment of goals/grade	0.19	0.37	0.63**	0.65**	1.00	
Overall	0.55*	0.64**	0.11	0.42	0.26	1.00

*$p < 0.05$.   **$p < 0.01$.

Table G4

Interrcorrelation of Ratings for the Challenging Major Project Assignments ($N = 50$)

	Cognitive challenge	Clarity of goals	Grading criteria	Alignment goals/task	Alignment goals/grade	Overall
Cognitive challenge	1.00					
Clarity of goals	0.27	1.00				
Grading criteria	0.37*	0.32*	1.00			
Alignment of goals/task	0.51***	0.46**	0.52***	1.00		
Alignment of goals/grade	0.44**	0.41**	0.79***	0.67***	1.00	
Overall	0.69***	0.52***	0.58***	0.69***	0.60***	1.00

*$p < 0.05$.   **$p < 0.01$.   ***$p < 0.001$.