

Classroom Instruction in Achievers Grantee High Schools

A Baseline Report

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Prepared for the Bill & Melinda Gates Foundation
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Acknowledgments

We must acknowledge the contributions of all of the teachers who opened their classrooms for our observation visits. Without their cooperation, no such research project could be conducted. We also want to acknowledge the hard work and contributions of Amy Rojan and Susan Gilbert, who, under the leadership of Carol Brown, conducted the observations in classrooms all over Washington State.

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INTRODUCTION: THE CREATION OF HIGH ACHIEVEMENT SCHOOLS

In the year 2001 sixteen high schools in Washington State received grants from the Bill & Melinda Gates Foundation as part of the Achievers High Schools Initiative. Educators in these schools are charged with creating smaller learning communities that reflect specific school and classroom *attributes*. These attributes include *Common Focus, High Expectations, Personalized, Respect and Responsibility, Time to Collaborate, Performance Based, and Technology as a Tool*. In addition, the schools are charged with improving classroom instruction through the implementation of “powerful teaching” characterized by *Active Inquiry, In-Depth Learning, and Performance Assessment*. These “essential components” of powerful teaching have been adapted from *How People Learn: Brain, Mind, Experience, and School* (Bransford, Brown, & Cocking, 1999) and *How People Learn: Bridging Research and Practice* (Donovan, Bransford, & Pellegrino, 1999) and are shown in Table 1.

This emphasis on classroom instruction is part of a larger theory of change model for school reinvention that has been described in the first year Achievers High Schools evaluation results (see Fouts, Baker, Gratama, Bachtler, & Stroh, 2003). This theory of change model for a “standards-based technology-enabled environment” explains the grant program’s activities and resources in relation to the intermediate outcomes and ultimate program goals. The evaluation model for the grants uses a multi-level evaluation strategy at the school, classroom and student levels. Baseline assessments of the school practices (attributes) and student outcomes were conducted during the 2001-2002 school year. Additional assessments continue through each year of the grant.

The ultimate goal of the initiative is to positively affect student outcomes, primarily in the areas of student learning, high school completion, and college attendance. These outcomes are thought to be most directly influenced by the quality of the classroom instruction that students experience on a daily basis. Therefore, while schools are expected to change their practices as institutions, they are also expected to facilitate changes in classroom instruction to promote “powerful teaching and learning” characterized by *Active Inquiry, In-Depth Learning, and Performance Assessment*. As part of the Year 1 evaluation activities, the teachers completed the *Teacher Perspectives Questionnaire*. Numerous items asked the teachers about the nature of the classroom instruction at the school and the degree to which *Active Inquiry, In-Depth Learning, and Performance Assessment* are used in that instruction. The classroom observations

conducted in these schools are part of this baseline assessment of grantee classroom instructional practices.

Table 1. Essential Components of Powerful Teaching

Teachers Focused on Improving Teaching and Learning

The foundation’s education grant programs are predicated on three essential components of powerful teaching and learning (adapted from *How People Learn: Bridging Research and Practice*, National Research Council, 1999) in a standards-based technology-enabled environment:

- **Active Inquiry:** Students are engaged in active participation, exploration, and research; activities draw out perceptions and develop understanding; students are encouraged to make decisions about their learning; and teachers utilize the diverse experiences of students to build effective learning experiences.
 - **In-Depth Learning:** The focus is competence, not coverage. Students struggle with complex problems, explore core concepts to develop deep understanding; and apply knowledge in real world contexts.
 - **Performance Assessment:** Clear expectations define what students should know and be able to do; students produce quality work products and present to real audiences; student work shows evidence of understanding, not just recall; assessment tasks allow students to exhibit higher-order thinking; and teachers and students set learning goals and monitor progress.
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DESIGN OF THE STUDY

The Teaching Attributes Observation Protocol

The Teaching Attributes Observation Protocol (TAOP) was developed in 2001 as part of the evaluation activities for the foundation's Model District and Model Schools Initiatives. A brief summary of the instrument is provided here. A thorough description of the TAOP, including the development process and technical information, is available in *Classroom Instruction in Gates Grantee Schools: A Baseline Report* (Fouts, Brown, & Thieman, 2002). A copy of the TAOP is provided in Appendix A.

The TAOP consists of 7 lesson components and a number of indicators under each component. These 7 components and indicators reflect a theory of instruction that has been labeled "constructivism" by many. However, the evaluators of the national projects for the Bill & Melinda Gates Foundation have identified various names for this approach, including "authentic instruction, teaching for understanding, student-centered instruction, and constructivist teaching. Underlying these innovations is the notion of students as active learners and the teachers as guides, or coaches in the learning process" (American Institutes of Research/SRI International, 2002, p.13). They summarize the essential components of constructivism this way.

The theory of constructivism is based on the idea that people learn better by actively constructing knowledge and by reconciling new information with previous knowledge. The theory rests on several assumptions: 1) some of our notions of what constitutes "knowledge" may be culturally constructed, rather than truth or fact; 2) knowledge is distributed among group members and the knowledge of the group is greater than the sum of the knowledge of individuals; and 3) learning is an active, rather than passive, process of knowledge construction (Conley, 1993). Like current definitions of instruction, constructivism has two components: 1) in the method of delivery (i.e., teaching methods) and 2) in its content (i.e., intellectual quality). (pp. 13-14)

The 7 components and 27 attributes of the TAOP shown in Table 2 were designed to reflect these ideas on teaching and learning.

Content validity of the TAOP was shown by aligning the components and indicators with the main ideas of a small sample of authors from the literature review and with the elements of several existing constructivist observation protocols. In addition, the results of the classroom observations using the TAOP correlated significantly with teacher self-reported constructivist teaching practices. Reliability of the instrument is dependent on extensive field testing and on-going observer training. Reliability results are reported in both the percentage of inter-rater agreement and reliability estimates.

Table 2. TAOP 7 Components and 27 Indicators of Powerful Teaching

I. STUDENT WORK SHOWS EVIDENCE OF CONCEPTUAL UNDERSTANDING, NOT JUST RECALL

- 1. Students use appropriate methods and tools of the subject area to acquire and represent information.**
text analysis, creative or expository writing, discussion, oral presentation, reading, interviews, desktop publishing, manipulatives, models, maps, timelines, calculators, primary sources, drawing, graphs, symbols.
- 2. Students develop conceptual understanding.**
organizing information, applying information, considering alternatives, interpreting or evaluating, predicting, comparing, contrasting, analyzing cause & effect, hypothesizing, sequencing, developing a model, simulation, or original creation.
- 3. Students demonstrate thinking by using vocabulary and fundamental concepts of subject area.**
literary genres, cause and effect, chemical properties, number theory, probability & statistics.
- 4. Students construct knowledge by manipulating information and ideas to solve complex problems, discover new meaning, and/or develop understanding.**
analyzing a story, discussing a public issue, using historical evidence or current data to support an opinion, analyzing an environmental problem, using symbolic representation, theory building where appropriate.
- 5. Students communicate conceptual understanding through elaborated writing, speaking, modeling, diagramming or demonstrating.**
poetry, essays, journals, research papers, letters, response logs, lab reports, dialogue, debate, skit, presentation.

II. STUDENTS ARE ENGAGED IN ACTIVITIES TO DEVELOP UNDERSTANDING AND CREATE PERSONAL MEANING THROUGH REFLECTION

- 6. Students use an appropriate learning strategy to gain meaning.**
graphic organizer, mapping, drawing pictures, outlining, creating a model, journaling, discussion, reference to text.
- 7. Students rethink (revise) work based on data, self-evaluation and/or constructive feedback from peers/teacher.**
- 8. Students consider alternatives and/or multiple ways to investigate and problem solve.**
- 9. Students intentionally reflect on their own learning (metacognition).**
text to self, other texts, world connections, examining own bias or opinion, critique science lab procedures, math reasoning.
- 10. Teacher provides focused feedback and questions to students that probe students' conceptual understanding and lead to sense making.**
- 11. Students and/or students and teacher engage in substantive conversation which builds knowledge and develops critical thinking.**
literature circle, readers' theatre, discuss writing process, simulation, town meeting, debate, generate hypotheses, share and compare results discuss conclusions, math reasoning.

III. APPLY KNOWLEDGE IN REAL WORLD CONTEXTS

- 12. Teacher or Student connects knowledge to relevant personal experiences.**

13. Teacher or Student connects knowledge within or across disciplines or to a real world problem.

14. Instruction uses community resources or data.

guest speakers, materials.

15. Students produce a product or performance for an audience beyond the class.

persuasive essay, speech, play, posting student work to a website, letter to the editor, pen pals, brochure, community survey.

16. Students interact with world outside school via field-based experiences or technology.

IV. STUDENTS ARE ENGAGED IN ACTIVE PARTICIPATION, EXPLORATION AND RESEARCH

17. Students work collaboratively to share knowledge, complete projects, and/or critique their work.
writing, response partners, reading groups, research groups, lab groups, math problem solving groups.

18. Students generate their own ideas, questions, or hypotheses.

19. Students plan and/or carry out independent research.

choose research topic, information sources, design lab procedures and search for math patterns.

20. Students independently access/use print media, equipment or technology.

books, newspapers, maps, graphs, charts.

V. TEACHER USES DIVERSE EXPERIENCES OF STUDENTS TO BUILD EFFECTIVE LEARNING

21. Teacher activates and accesses prior knowledge of students.

22. Student needs and strengths are accommodated through differentiated learning.

23. Lesson builds on diverse cultural traditions, student interests and experiences.

writing connected to student experience and knowledge, diverse literature; interview family members, lab activities incorporate personal experience, multiple perspectives on numeric.

VI. STUDENTS ARE PRESENTED WITH A CHALLENGING CURRICULUM DESIGNED TO DEVELOP DEPTH OF UNDERSTANDING

24. Lesson presented emphasizes conceptual understanding, not just recall or superficial understanding.

comprehension, analysis of literature, support thesis with data, (re) discover theory, math problem solving.

25. Central ideas and concepts of the subject are covered in depth.

comprehension, continuity/ change, compare/contrast, cause/effect, number theory, measurement, probability, matter, properties, interdependence

VII. SUMMATIVE ASSESSMENT ALLOWS STUDENTS TO EXHIBIT HIGHER ORDER THINKING AND CONSTRUCT KNOWLEDGE

26. Assessment requires Students to communicate learning through elaborated writing, speaking, modeling, diagramming, or demonstrating.

27. Assessment criteria focus on demonstration of knowledge and conceptual understanding of core concepts.

The TAOP was designed as a research instrument to measure the degree to which constructivist teaching and learning ideas are being employed and/or are present during any given period of observation time in a classroom. The scoring of the TAOP generally consists of three steps. The first step involves general observation of student and teacher activities, the nature of student work, and the intellectual demands being placed on students. An important procedure for the TAOP is for the observer to *only consider what was actually observed during that period of time* and to not record or score the lesson based on what the observer was told preceded or followed the observation period.

The second step is the numerical scoring of the 27 indicators (Table 2) of constructivist teaching and learning. At the conclusion of the observation period observers rate the lesson on each indicator on a 0 to 4 scale for the degree to which the indicator was descriptive of the lesson. The numerical scores represent “never occurred,” “occurred very little,” “occurred somewhat,” “occurred quite often,” and “very descriptive.” If the observation period did not contain a summative assessment activity, indicators 26 and 27 are given an N/A (not applicable). If the observation period was primarily a summative assessment activity, *only* indicators 26 and 27 receive a rating.

The third step of the scoring is giving a holistic rating to the observation period. Observers are asked to respond to the following prompt:

Overall Conclusion: How constructivist was this Lesson?
Not at all Very Little Somewhat Very

In addition, for this study observers completed an item on the degree to which technology was incorporated into the lesson.

An important scoring characteristic of the TAOP is that a strong constructivist lesson will seldom, if ever, score high on all of the 27 individual indicators, and would also seldom, if ever, score high on all seven of the major components of the protocol, particularly Component Seven—Summative Assessment. This is because there simply is not adequate time in a thirty minute observation period for all of the components of “powerful teaching” to be utilized. Also, for any given lesson, not all of the components are necessarily needed or appropriate. Therefore, a strong constructivist lesson might be scored low on several of the 27 indicators, but still receive a high holistic score.

A second scoring characteristic is that teacher lecture and discussion approaches to teaching can still provide relatively high scores on the constructivist scale, even though active participation, group work, and projects are many times seen as important components of what is thought of as constructivist teaching. Conversely, teachers’ attempts to use group work or project-based learning are not guarantees of high observation ratings on the protocol components or the holistic rating. What is most important is the nature of the intellectual demands placed on the students. *Attempting* to use constructivist principles does not ensure “powerful teaching” and, therefore, does not ensure a high score on the protocol. Conversely, the use of more “traditional”

instructional techniques does not preclude the lesson from receiving a high score if a number of the constructivist elements are present.

Observer Training

The observation team consisted of three individuals, each of whom had participated in the initial classroom observation study of Gates grantee schools in the previous year. All were former K-12 classroom teachers, and two had considerable experience teaching in university schools of education. Observer training for this high school study was conducted over four days in early October. As with the previous year's training, the goals of these sessions were: (1) to review the principles of constructivist teaching and learning, ensuring a common understanding of constructivist practice; and (2) to document satisfactory inter-rater agreement and reliability when using the protocol.

The first day of training was spent reviewing and discussing the fundamental precepts of constructivist teaching and learning as well as the related ideas of "powerful teaching and learning" proposed by the foundation. The protocol itself remained unchanged with the exception of one added item. Members of the research and evaluation team agreed that given the influx of technology in schools, the number of teachers using technology for teaching and learning in the schools, and the emphasis of the Bill & Melinda Gates Foundation on the judicious use of technology, it would be informative to document technology practices in the Achievers High Schools. For these reasons, one item was added to the protocol and scored in all classroom observations. However, this item was not considered in the overall scoring calculations to maintain consistency from the previous year.

The second and third days of training were devoted to watching and scoring video taped lessons. These were the same lessons used during the previous year's training sessions and included language arts, math, science and social studies lessons. Team members then had in-depth discussions of each specific item as well as their overall reactions to the lesson. Any confusing items or disagreements about scoring were discussed until team members agreed on the underlying construct and a rating for that construct.

A limitation of the training was the inability of researchers to measure rater drift, a type of reliability that ensures consistency over time. Although the same observers rated the same lessons for training purposes, calculating reliability across years was not deemed appropriate because of the substantive changes made to the protocol during the initial, first-year training sessions. While the overall meaning of the items remained the same, specific changes in language during the first year's training limited the degree to which year-to-year comparisons could properly be made. Likewise, original observations were conducted in 45-minute blocks. Discussions revealed that seldom, if ever, was anything gained in the last 15 minutes of an observation that significantly altered what was learned during a 30-minute observation. Because of these formative changes to the protocol, researchers did not analyze cross-year data.

The final day of observer training was spent conducting observations in a local high school. This provided observers with one final opportunity to confer about the protocol, to clarify any problematic scoring issues, and to document reliability. Four classes were observed including AP English, Algebra I, Chemistry and Contemporary World Problems. All three researchers observed each of the four lessons. While formal training for observers ended at this point, reliability checks were conducted throughout the study, and observers had ongoing discussions about the lessons they rated.

Selection of Schools and Classrooms

All 16 Achievers High Schools and one high school from the Connecting Schools and Communities initiative participated in this study. The purpose of the study was to create an overall assessment of the instruction at the school by observing in a representative number of classes. The observations were conducted in the required core academic courses or elective academic courses in the language arts, mathematics, science, or social studies areas. Required and elective academic courses, as well as Advanced Placement, International Baccalaureate, and “regular” education classes were visited, as were integrated classes. In addition, a small number of core subject special education classes were observed.

A letter outlining the nature of the observation study was sent to each school’s principal and evaluation coordinator. This letter explained the purpose of the study and summarized the ways in which the data would be used. Each school was asked to provide a master schedule, which was used in designing an observation plan. All schools, regardless of size, were scheduled for two days of observations. In larger schools classes were selected randomly and represented as closely as possible the proportion of core subjects offered. In smaller schools, all core classes were visited at least once. Every attempt was made to avoid “unusual” days, such as Fridays before holidays, Mondays after a vacation, and end of term grading periods. Principals, evaluation coordinators, and teachers were generally very helpful in working with the research team to organize and facilitate observation days. In only a handful of cases did teachers refuse to let observers into their classrooms. The breakdown of the schools and subject matter classes observed is provided in Appendix B.

General Procedures

The TAOP was designed as a research instrument to measure the degree to which constructivist teaching and learning ideas are being employed and/or are present during any given period of observation time in a classroom. This makes the instrument somewhat different than observation tools used for instructional evaluation and improvement for a given teacher. For this use, observers are generally interested in being able to place the observational results in a larger context of a longer instructional unit to get a more complete picture of a single teacher’s instructional approach or expertise. In contrast, the intent of the TAOP is to measure what is going on in a given period of time for generalizing not to a single teacher, which would take more or longer observations, but to the school in the aggregate. Therefore, sampling a larger number of classes

becomes more important than spending longer periods of time in fewer classes. For this reason, the observer is not concerned with what preceded the observation period or what may happen after the observer leaves. The observer only records and scores the nature of the classroom activities during the period of time she/he is in the classroom. Although the instrument may be used over longer periods of observation time, it may also be used for shorter periods, and in this study observation periods were 30 minutes. This shorter period of time increased the possible number of observations in a school on which to base a general view of the school's instructional practices.

In most cases, two or three observers visited each school for two days, depending on the size of the school. The classroom observations were conducted by one observer in each classroom, with approximately every twelfth classroom observed by two or more observers for inter-rater reliability checks. Grade level, subject area, and time of day were noted, as were specific activities, curricular materials, student groupings and the like. At the end of 30 minutes, observers scored all 27 items and calculated an average score for each of the seven components of the protocol. Scores were assigned based only the events that occurred during the 30 minute time period. The class session was also given a holistic score of 1 to 4. Provisions for inter-rater agreement and reliability estimates followed the model used in the previous evaluation study for the foundation's districts and schools.

RESULTS

Inter-rater Agreement and Reliability Estimates¹

During the months of October through January, a total of 621 classrooms from the 17 schools were observed. In 47 of these classrooms two observers were present and scored the classes independently. Inter-rater agreement and reliability estimates from these observations were then calculated.

The Teaching Attributes Observation Protocol uses a five-point scale on six of the seven components (0 = Never Occurred to 4 = Very Descriptive). The scoring for the seventh component (Summative Assessment) has an “NA” (Not Applicable) option rather than a “0” (Never Occurred) option, to allow for situations where a summative assessment was not part of the observed lesson. Calculations of inter-rater agreement were based on the percentage of items on which observers agreed. “Agreement” was defined as ratings that were within one point of each other. Thus, a lesson on which observers agreed on 26 of 27 items received an agreement score of 96%. In the few instances where agreement fell below an acceptable level of 85%, observers discussed differences until they concurred on the scoring. These instances provided the opportunity to “correct” a particular observation’s score but, equally important, provided the opportunity for on-going discussions about the scoring procedures throughout the research period. The *overall* inter-rater agreement calculations were based on the original agreement percentage and not on the re-score. The average inter-rater agreement estimate for all 47 classroom observations was 97%. The results for all of the paired classroom observation inter-rater agreement calculations are shown in Appendix C.

In addition to the percent agreement, 43 separate reliability coefficients were calculated for 26 of the 28 indicator ratings given each of the joint observations. Classes in which summative assessment was the main activity received ratings only on indicators 26 and 27, which is insufficient for reliability calculations. The median and mean inter-rater reliability coefficients were both .83. The estimated score reliability for the rest of the classroom observations is .71.

Total Sample Scores and Frequencies on the TAOP

The means and standard deviations for the 27 indicators of powerful teaching and learning used on the TAOP for the entire sample of 621 classrooms are shown in

¹ For a more detailed discussion of inter-rater agreement and reliabilities, percent agreement, and inter-rater agreement estimates for single observations, see Fouts, Brown, and Thieman (2002). As in the initial study, in this report we have included both the inter-rater agreement and reliability indices. For the inter-rater agreement percentage provided in this section we have again used the percentage of observation scores within one category as “agreement.” However, in Appendix C we have also provided the absolute agreement for all of the joint observations.

Table 3. The means and standard deviations for the 7 lesson components and holistic rating of the TAOP for the 621 classrooms are shown in Table 4. The seven component and holistic rating scores were rounded to the nearest whole number, and the frequency of these rounded scores are shown in Figures 1 through 8.

Table 3. Rank Order by Means of the 27 Indicators for Observations in 621 Classrooms

TAOP Indicator	TAOP Item/Indicator	N	Mean	SD
27.	Assessment criteria focus on demonstration of knowledge and conceptual understanding of core concepts.	50	2.6	1.0
1.	Students use appropriate methods and tools of the subject area to acquire and represent information	589	2.6	.9
6.	Students use an appropriate learning strategy to gain meaning	589	2.5	1.0
26.	Assessment requires students to communicate learning through elaborated writing, speaking, modeling, diagramming, or demonstrating.	51	2.2	1.0
24.	Lesson presented emphasizes conceptual understanding, not just recall or superficial understanding.	589	2.2	1.1
25.	Central ideas and concepts of the subject are covered in depth.	589	2.1	1.1
2.	Students develop conceptual understanding	589	2.1	1.1
4.	Students construct knowledge by manipulating information and ideas to solve complex problems, discover new meaning, and/or develop understanding	589	1.8	1.2
5.	Students communicate conceptual understanding through elaborated writing, speaking, modeling, diagramming, or demonstrating	589	1.4	1.3
11.	Students and/or students and teacher engage in substantive conversation which builds knowledge and develops critical thinking.	589	1.3	1.2
10.	Teacher provides focused feedback and questions to students which probe students' conceptual understanding and lead to sense making.	589	1.3	1.1
3.	Students demonstrate thinking by using vocabulary and fundamental concepts of subject area	589	1.1	1.2
13.	Teacher or student connects knowledge to relevant personal experiences.	589	1.0	1.4
7.	Students rethink (revise) work based on data, self-evaluation and/or constructive feedback from peers/teacher	589	1.0	1.1
17.	Students work collaboratively to share knowledge, complete projects, and/or critique their work.	589	1.0	1.4
18.	Students generate their own ideas, questions, or hypotheses.	589	.8	1.2
12.	Teacher or student connects knowledge to relevant personal experiences	589	.8	1.2

TAOP Indicator	TAOP Item/Indicator	N	Mean	SD
21.	Teacher activates and accesses prior knowledge of students.	589	.7	1.0
23.	Lesson builds on diverse cultural traditions, student interests and experiences.	589	.7	1.3
9.	Students intentionally reflect on their own learning (metacognition).	589	.6	1.1
8.	Students consider alternatives and/or multiple ways to investigate and problem solve	589	.6	1.0
19.	Students plan and/or carry out independent research.	589	.2	.7
22.	Student needs and strengths are accommodated through differentiated learning.	589	.1	.7
20.	Students independently access/use print media, equipment, or technology.	589	.1	.6
16.	Students interact with the world outside the school via field-based experiences or technology.	589	.1	.6
14.	Instruction uses community resources or data.	589	.1	.6
15.	Students produce a product or performance for an audience beyond the classroom.	589	.1	.5

Table 4. Rank Order by Means of the Seven Lesson Components of the TAOP for Observations in 621 Classrooms and the Holistic Rating Score

Component	Lesson Component	N	Mean	SD
7	Summative Assessment allows student to exhibit higher order thinking and construct knowledge.	50	2.4	1.1
6	Students are presented with a challenging curriculum designed to develop depth of understanding.	588	2.1	1.1
1	Student work shows evidence of conceptual understanding, not just recall.	589	1.77	.94
2	Students are engaged in activities to develop understanding and create personal meaning through reflection.	589	1.2	.79
5	Teacher uses diverse experiences of students to build effective learning.	589	.51	.63
4	Students are engaged in active participation, exploration and research.	589	.51	.71
3	Apply knowledge in real world contexts.	589	.47	.56
Holistic Rating	Overall Conclusion: How constructivist was this lesson?	620	2.3	.95

Figure 1. Frequencies of Scores for Lesson Component 1 for 621 Classroom Observations

Student Work Shows Evidence of Conceptual Understanding, Not Just Recall

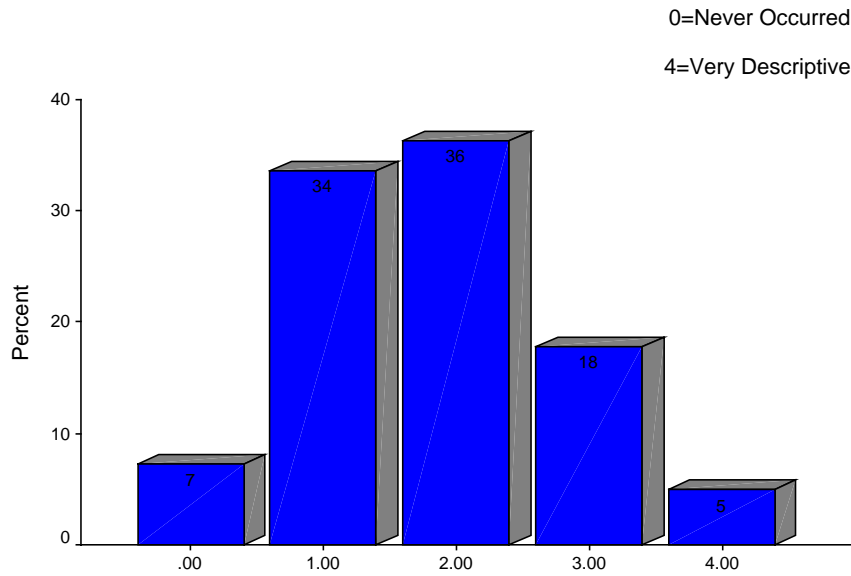


Figure 2. Frequencies of Scores for Lesson Component 2 for 621 Classroom Observations

Students are Engaged in Activities to Develop Understanding and Create Personal Meaning Through Reflection

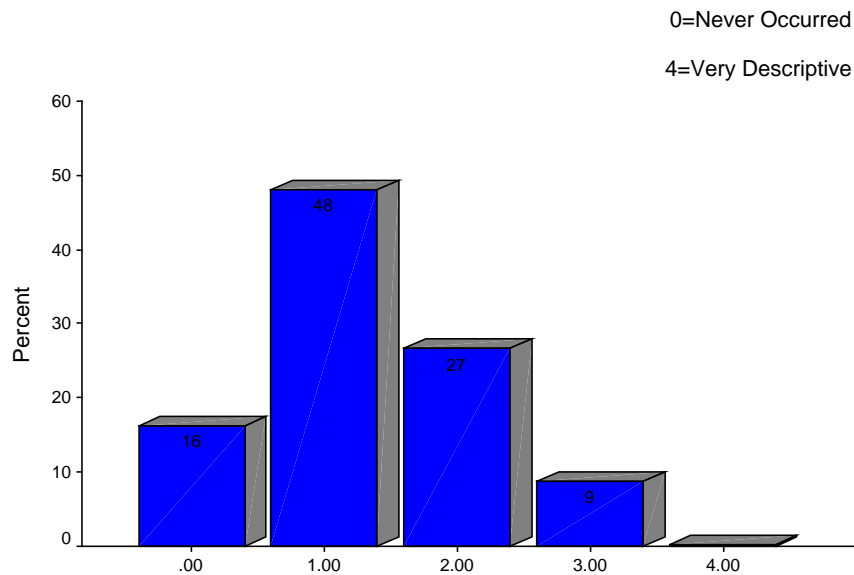


Figure 3. Frequencies of Scores for Lesson Component 3 for 621 Classroom Observations

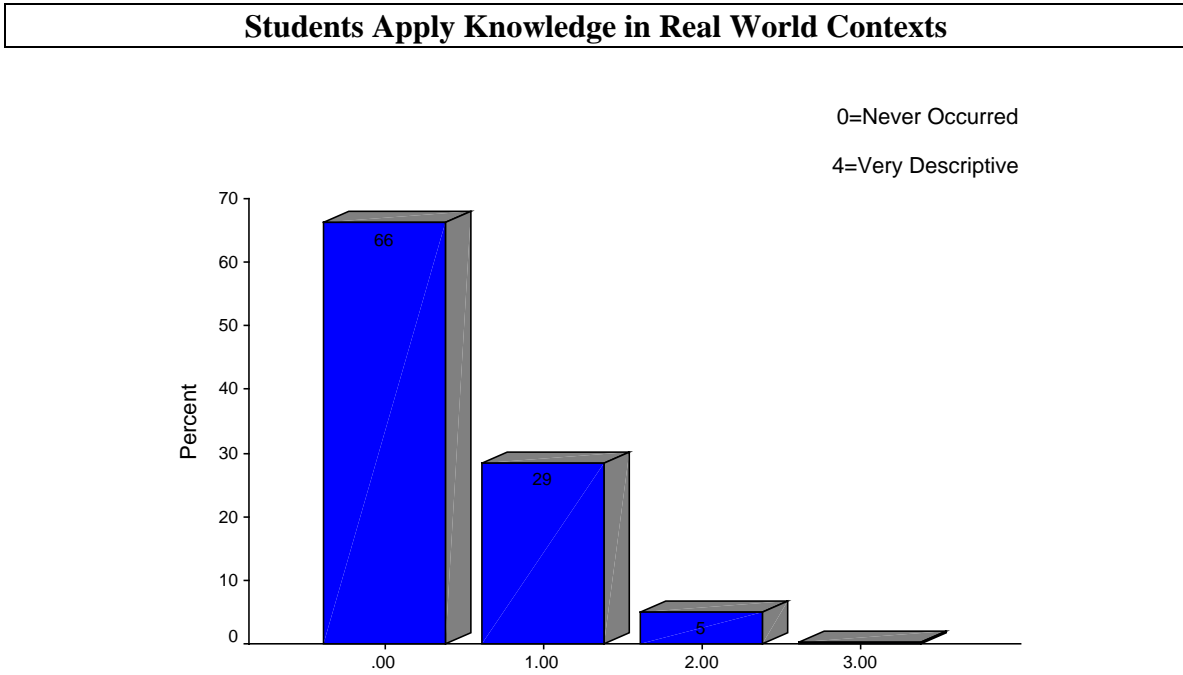


Figure 4. Frequencies of Scores for Lesson Component 4 for 621 Classroom Observations

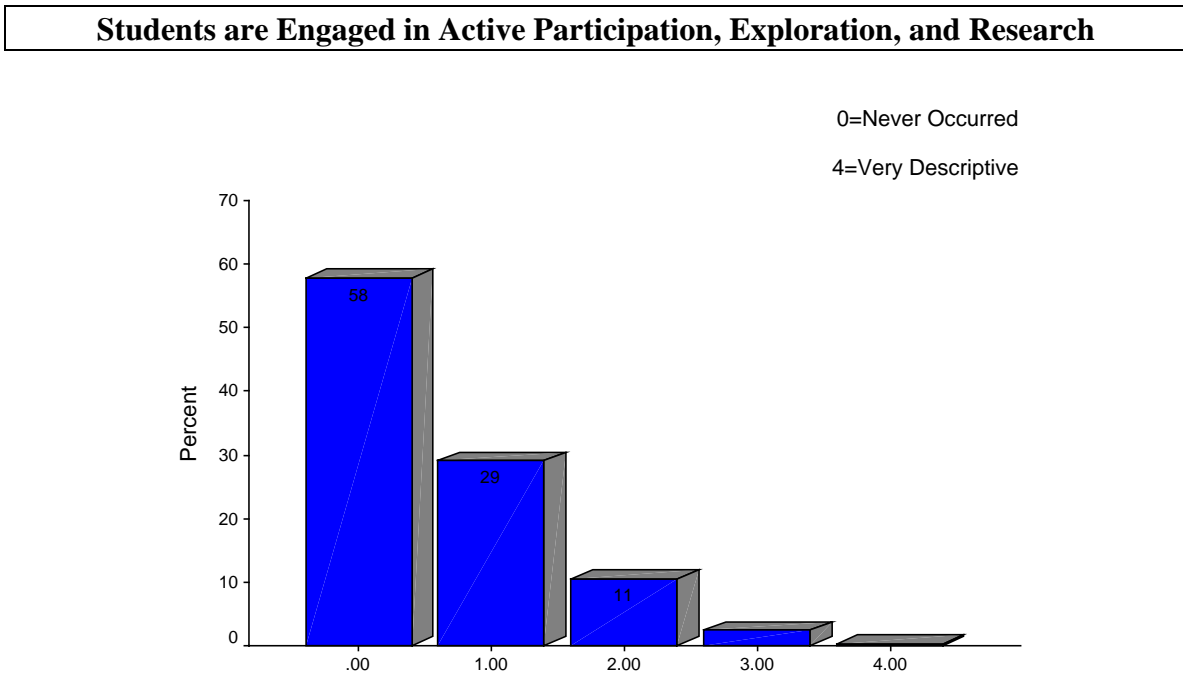


Figure 5. Frequencies of Scores for Lesson Component 5 for 621 Classroom Observations

Teachers Use Diverse Experiences of Students to Build Effective Learning

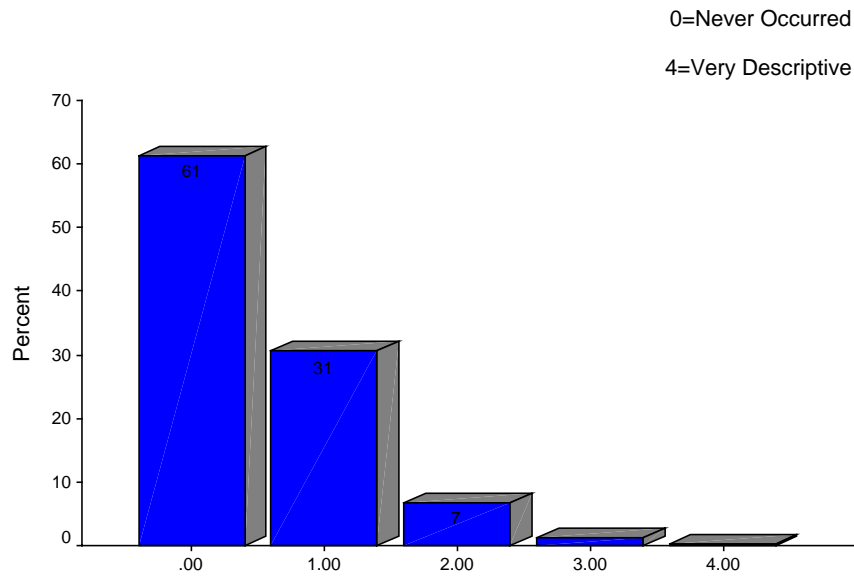


Figure 6. Frequencies of Scores for Lesson Component 6 for 621 Classroom Observations

Students are Presented with a Challenging Curriculum Designed to Develop Depth of Understanding

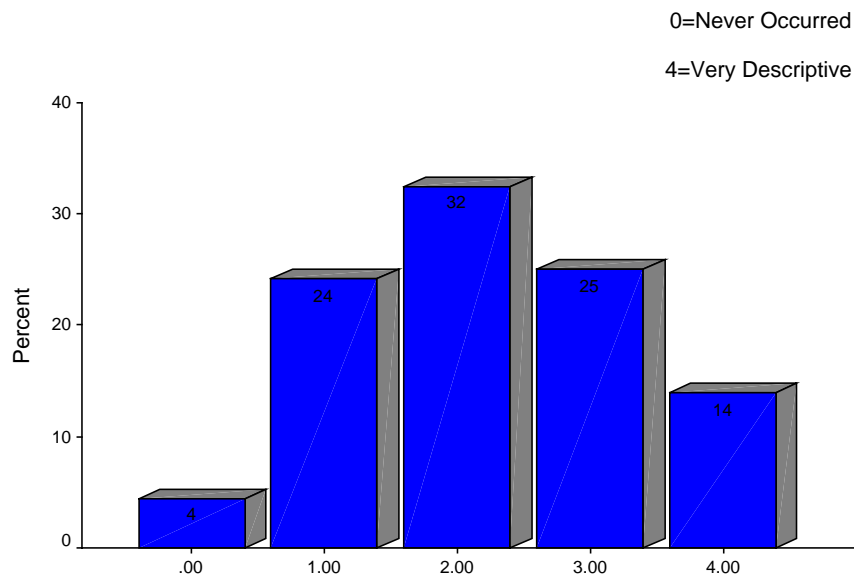


Figure 7. Frequencies of Scores for Lesson Component 7 for 50 Classroom Observations

Summative Assessment Allows Student To Exhibit Higher Order Thinking and Construct Knowledge.

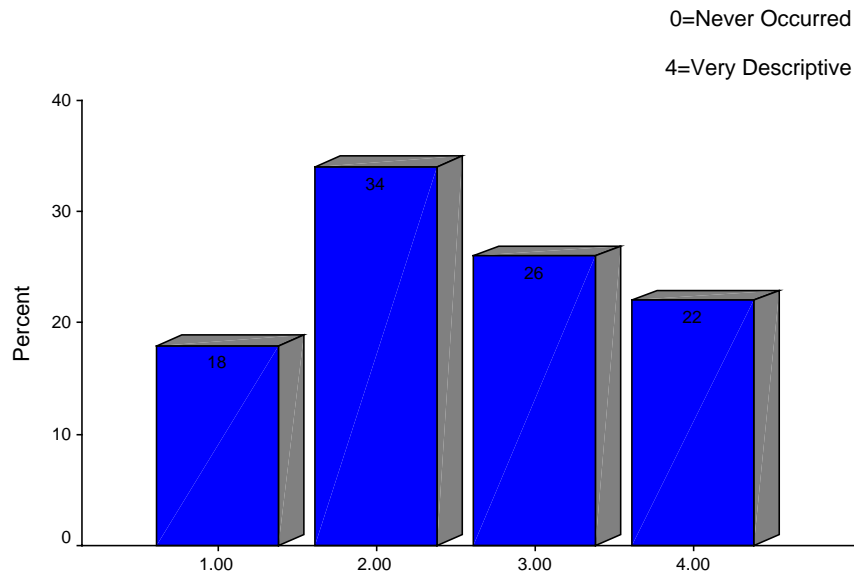
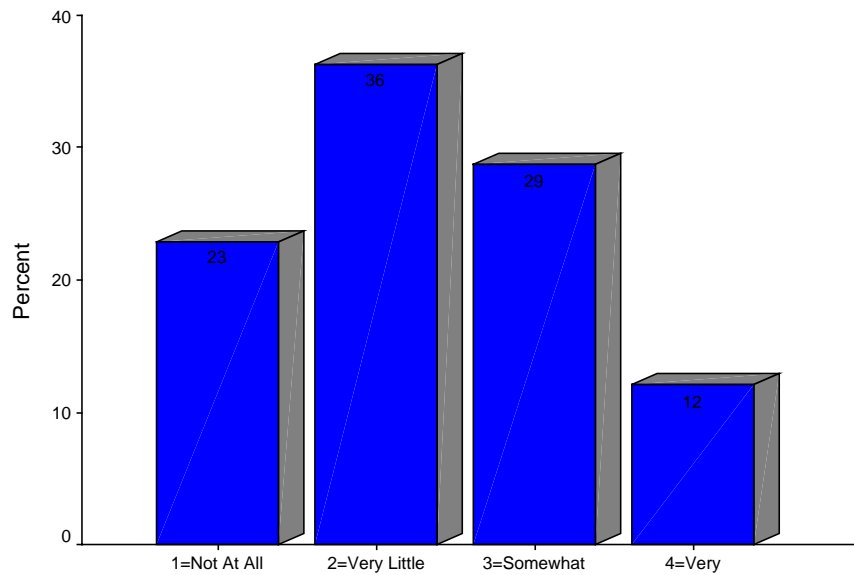


Figure 8. Frequencies of Scores for Holistic Rating for 620 Classroom Observations

Overall, How Constructivist was this Lesson?



The highest component rating was for the 50 lessons employing summative assessments (Table 4). In about one half of these assessments students were asked to exhibit higher order thinking and to construct knowledge (Figure 7). The data in Figures 1 and 6 show that students are being presented with a challenging curriculum in about 40% of their lessons, but in less than one half of their lessons did their work, if there was any, show evidence of conceptual understanding. The constructivist principles reflected in components 3 (Students Apply Knowledge in Real World Contexts), 4 (Students are Engaged in Active Participation, Exploration, and Research) and 5 (Teacher Use Diverse Experiences of Students to Build Effective Learning) were used less than 10% of the time during the lessons.

The data presented in Figure 8 show that in only about 12% of the classrooms were teachers engaging students in lessons that the observers could label as “very constructivist.” The observers labeled the lessons as “somewhat constructivist” in an additional 29% of the classes. The observers saw few constructivist principles being used in the remaining 59% of the classes. The findings from the additional technology question added to the TAOP for this study (Item 28) showed that successful or appropriate technology integration into the lesson was almost non-existent. This distribution is shown in Figure 9. Pearson r intercorrelations among the 7 lesson component scores and the holistic rating scores of the TAOP are shown in Table 5.

Figure 9. Frequencies of Scores for Technology Use in 621 Classroom Observations

**Interactive Use of Technology by Students Enhances Conceptual Development
and/or Strengthens Skills**

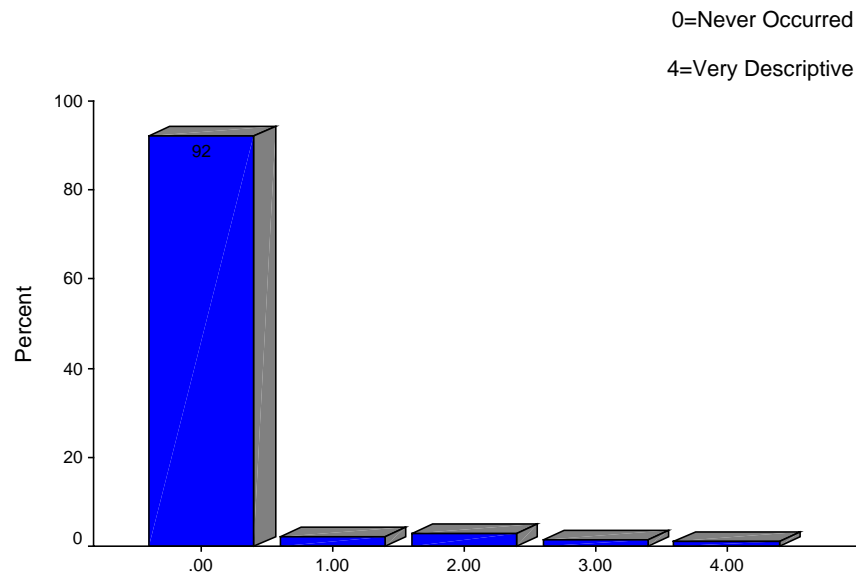


Table 5. Intercorrelations of the Seven Lesson Component Scores and Holistic Training Score of the TAOP

TAOP Component	1	2	3	4	5	6	7	Holistic Rating
1								
2	.80**							
3	.35**	.40**						
4	.62**	.61**	.40**					
5	.27**	.39**	.56**	.30**				
6	.87**	.79**	.36**	.54**	.27**			
7	.75**	.48	.77**	.82**	.38	.71**		
Holistic Rating	.85**	.81**	.50**	.70**	.38**	.85**	.79**	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

TAOP Scores by Subject Matter

Means and standard deviations for Components 1-6 and the holistic score on the TAOP were calculated for groups of classrooms based on the subject matter of the lesson. Component 7, summative assessment, was excluded because of the limited number of cases with scores on that variable. These data are shown in Table 6. The data were analyzed using the SPSS General Linear Model (Multivariate) to determine if significant differences existed based on the subject matter of the class. The Wilks' Lambda and three of the between-subject univariate tests were significant at the .05 level. However, the only pattern of differences discernable in the Tamhane or LSD *post hoc* results was overall lower scores for math on Component 3 (Students apply knowledge in real world contexts) and Component 5 (Teacher uses diverse experiences of students to build effective learning).

Table 6. TAOP Component and Holistic Rating Scores Aggregated by Class Subject Matter

Subject		Comp 1	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6	Holistic Rating
English	m	1.78	1.30	.51	.59	.62	2.17	2.41
	sd	.98	.83	.61	.77	.70	1.16	1.00
	n	174	174	174	174	174	174	182
Math	m	1.85	1.24	.14	.39	.37	2.17	2.16
	sd	.86	.75	.27	.51	.46	1.01	.89
	n	132	132	132	132	132	132	140
Science	m	1.89	1.21	.43	.57	.40	2.20	2.28
	sd	1.01	.77	.56	.82	.47	1.07	.99
	n	127	127	127	127	127	127	135
Social Studies	m	1.58	1.02	.49	.46	.52	1.92	2.24
	sd	.86	.73	.58	.64	.69	1.05	.89
	n	122	122	122	122	122	121	127
Integrated	m	1.67	1.21	.74	.56	.89	2.12	2.34
	sd	.97	.89	.70	.77	.88	1.05	1.00
	n	33	33	33	33	33	33	35
Total	m	1.77	1.20	.42	.51	.51	2.12	2.29
	sd	.94	.79	.56	.71	.63	1.08	.95
	n	588	588	588	588	588	587	619

DISCUSSION

At the conclusion of last year's report we made a number of observations about our experiences in visiting over 600 classrooms. These were not "scientific observations," but rather the collective impressions of educators who had the unique experience of watching several hundred teachers instructing students. There was a general consensus among the researchers in a number of areas about what they saw in the classrooms. These are discussed in more detail in last year's report, and we will simply list a few of those areas here. First, it was apparent that alternative secondary and technical schools provided a constructivist learning environment for students to a greater degree than did other schools. Second, curricular materials, both elementary and secondary levels, were often thoughtful and included impressive critical-thinking elements. In some cases, the curriculum was actually superior to the actual teacher instruction. Third, teachers have a wide range of expectations for their students, and the level of classroom instruction reflects these expectations. Finally, a wide range of teaching strategies are used by teachers, but many of them are used ineffectively. Having had the opportunity this past year to observe in another 600 classrooms, we again offer several reflections on teaching and learning in schools across Washington State.

This year researchers found the size and impersonal nature of some of the schools overwhelming. While smaller schools did not necessarily exhibit more constructivist teaching and learning practices, the atmospheres were, without question, more personal and community-centered. Teachers were more apt to know students by name and to talk to them about their schoolwork, their extracurricular activities, and even their beyond-school interests. It also appeared that in smaller schools students were more willing to ask questions and that the tone in individual classrooms was more informal and relationship-oriented.

Observers also agreed that teaching and learning differed based on the level of a class. In general, discussions had more depth, assignments were more rigorous and expectations were higher in Advanced Placement classes. Seldom did they sense that AP students were bored. On the other hand, it was not unusual to see students in "regular" classes sleeping, listening to CDs, doing make-up, or looking at magazines. Occasionally, a student would ask what the point of a lesson was, but more often they just appeared to be tuned out. More disturbing, however, were the observations of special education classes. While too few in number to draw firm conclusions, these experiences were, nevertheless, upsetting and surprising. We hope they are *not* representative of high school special education programs because expectations were minimal and the observers often got the feeling that these students had already been written off as hopeless.

This year researchers had several opportunities to observe the same lesson taught by different teachers. These lessons often produced drastically different scores depending on the teacher's interpretation, planning, and presentation. The same lesson on prejudice

taught by two different teachers provides a useful example. In one 10th grade English/Contemporary Problems class, students were working together as a group to create a web around the idea of prejudice. The teacher had explained the Latin roots of the word (prejudice) and asked students to think of general examples. Their list included stereotyping, racism, slander, and generalizations. The goal of the lesson evolved into the differentiation of stereotyping and racism. First, students were asked to define stereotype. After studying the Latin root of the word, they determined that stereotyping is an idea or opinion that endures, but that has not been evaluated in a concrete way. The students were then asked to work in groups to create their own lists of stereotypes. When the students regrouped to share their examples, the teacher guided them through the process, teasing out racist opinion from stereotyping, admittedly a subtle difference, and emphasizing that none of these opinions are based on fact. This was a precursor to the reading of *Black Boy* by Richard Wright. The teacher encouraged students' opinions and was actively seeking to create disequilibrium.

A second teacher handled the lesson much differently in a senior Contemporary World Problems class. The teacher began by talking about his favorite politician, Strom Thurmond. Students were handed a worksheet with 10 statements to complete, such as:

All athletes are _____
All people on welfare are _____
Drugs are used by _____

When they had completed the activity, the teacher asked students for their responses, which were predictable. There was no discussion of the responses, although the teacher suggested this was something to think about before moving on to another activity. When the observers looked for specific constructivist learning principals, such as work showing conceptual understanding, activities to develop understanding and create personal meaning through reflection, the application of knowledge in real world contexts, the use of diverse experience of students, and the presentation of a challenging curriculum to develop depth of understanding, these two lessons received substantially different scores even though they addressed the same topic.

A second example of the different ways in which teachers approach a topic was found in one school district that had adopted a (potentially) constructivist math curriculum. One of the researchers was able to observe the same lesson in two different classrooms over the course of one day. In the first case the lesson was rated "4" (highly constructivist) because of the way in which the teacher addressed the topic. The questions posed by the teacher and the way in which he facilitated student discussion was instrumental in developing conceptual understanding, encouraging reflection, and challenging students in their thinking. Conversely, the same lesson in another classroom received a "2" rating. The teacher handed out an assignment sheet and simply told students to do the assignment. There was no discussion about the concepts, the purpose, or the expectations of the assignment, although the activities from the text were constructivist in nature. For whatever reason (perhaps amount of planning or pedagogical

understanding and skill), one teacher incorporated powerful constructivist learning principles into the lesson, and the other did not.

This year the observers noted the degree to which technology was an important tool or component of the lesson. They were not surprised to find considerable amounts of technology in these schools. They *were* surprised, however, to see how little it was used (see Figure 9). In some cases computers were not hooked up, while in other classrooms they were piled on top of cupboards or on back tables. On the relatively rare occasions that computers *were* being used, it was most often for word processing or Internet searches. Beyond that, our observations suggest that the potential of technology is largely untapped.

Finally, we reflected on the components of the TAOP and what each component told us about the status of teaching in these high schools. Below is a short summary.

Component 1 (Student work shows evidence of conceptual understanding)

The use of appropriate methods and the construction of knowledge by manipulating information were generally the most highly rated items in this section. Development and communication of conceptual understanding was inconsistent. Student use of relevant vocabulary was typically the lowest item in this section. Only in AP classes did it appear that students regularly used relevant vocabulary. In most other classes it was primarily teachers who used the relevant subject-area vocabulary.

Component 2 (Students develop understanding and personal meaning through reflection)

Generally, the highest item in this section was the student use of appropriate strategies to gain meaning (outlines, guidelines, syllabi, etc). Occasionally, students revised their thinking or their work based on constructive feedback or questioning by the teacher. Rarely did they have the opportunity to learn and explore in ways others than those prescribed by the teacher; nor was it common for teachers to ask their students to intentionally reflect on anything.

Component 3 (Apply knowledge in real world contexts)

This component of teaching and learning was consistently one of the lowest. The infrequency with which lessons were connected to anything real was surprising and discouraging. Occasionally a student would ask directly or indirectly, “Why are we doing this?” There were times when the observers wondered the same thing.

Component 4 (Students engaged in active participation, exploration and research)

Similar to last year, it was not unusual to see cooperative groups and/or “active involvement” on the part of students. It *was* unusual to see students involved in appropriately structured, focused cooperative activities where the goals were understood and the directions were clear. It appears that many teachers use cooperative groups and hands-on activities without seriously reflecting on the reasons for doing so. Rather, group activities are used because “cooperative learning” is an accepted (and in some instances misunderstood) teaching and learning methodology. The occasions for students to plan or

carry out independent research were virtually non-existent. Likewise, it was rare that observers saw students doing independent research. Generally, lessons and projects were outlined by the teacher and had specific parameters, offering little opportunity for student independence.

Component 5 (Use of diverse experiences of students to build effective learning)

When a teacher activated prior learning it was typically a low-level review of “what we did yesterday/last week.” Seldom did teachers activate prior *knowledge*, experiential or otherwise. Rarely, if ever, did teachers provide accommodations for differing levels of ability. More often, a lesson would address or encompass different cultural traditions or student interests.

Component 6 (Challenging curriculum to develop deep understanding)

There is a wealth of challenging curricular materials in the schools. Too often, however, students were presented with recall-level tasks and projects that kept them busy, rather than developing conceptual knowledge and understanding.

Component 7 (Assessment allows students to exhibit higher order thinking and to construct knowledge)

There is a wide range of assessment tasks being used in these schools. Not surprisingly, many we saw were low-level assessments that required little of the student beyond memorization. On the other hand, observers also saw examples of rigorous and meaningful assessments, clearly designed to measure conceptual understanding and higher-order thinking.

Component 8 (Use of technology enhances conceptual development)

There is considerable technology out there. Surprisingly, we saw much of it going unused. On the rare occasions that technology was used in a lesson, it was typically for word processing and Internet searches. Very seldom was the potential of technology being realized.

Lesson and Scoring Vignettes

Last year’s report included four vignettes for lessons given holistic scores of 1 (Not at All), 2 (Very Little), 3 (Somewhat), and 4 (Very). Grantees reported that those vignettes were very valuable in helping them understand the essence of powerful teaching and learning and how the lessons were scored using the TAOP. In this report we have included 17 additional vignettes covering at least four lessons from each of the content areas of English, math, science and social studies and at each scoring level. Those vignettes are in Appendix D.

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**Appendix A The Teaching Attributes Observation Protocol
(TAOP)**

Teaching Attributes Observation Protocol

November 2001

School: _____ Date: _____ Time: _____

Grade: _____ Subject: _____

Teacher (code) _____ Observer: _____

Contextual Background and Activities: In your own words briefly describe the lesson, the classroom setting, classroom environment, resources, content or skills taught, teacher and student activities, student work displayed. If possible, look at assignments, project directions, or assessments in which students are involved during your observation.

(Note: If the teacher gives you a whole unit or project materials spanning several days, focus on that part you are seeing in class during that observation.)

Use the following space for recording Student and Teacher activity during the Observation session, as well as any helpful notes on resources, etc.

Teacher Activity	Student Activity

The next six sections contain items to be rated. Space is provided below each major section for making notes during the observation. After the lesson, use your notes to complete the ratings. Each item should be rated from 0 to 4. Indicate "0" if the item did not occur at all during the lesson. Choose between 1, 2, 3, or 4 depending on whether the item occurred very little, somewhat, quite often, or was very descriptive.

STUDENT WORK SHOWS EVIDENCE OF CONCEPTUAL UNDERSTANDING, NOT JUST RECALL

	Never Occurred		Very Descriptive		
1. Students use appropriate methods and tools of the subject area to acquire and represent information. text analysis, creative or expository writing. discussion, oral presentation, reading, interviews. desktop publishing, manipulatives, models, maps, timelines. calculators, primary sources, drawing, graphs, symbols,	0	1	2	3	4
2. Students develop conceptual understanding. organizing information, applying information, considering alternatives, interpreting or evaluating, predicting, comparing, contrasting, analyzing cause & effect, hypothesizing, sequencing, developing a model, simulation, or original creation	0	1	2	3	4
3. Students demonstrate thinking by using vocabulary and fundamental concepts of subject area. literary genres, cause and effect, chemical properties, number theory, probability & statistics	0	1	2	3	4
4. Students construct knowledge by manipulating information and ideas to solve complex problems, discover new meaning, and/or develop understanding. analyzing a story, discussing a public issue using historical evidence or current data to support an opinion analyzing an environmental problem, using symbolic representation theory building where appropriate.	0	1	2	3	4
5. Students communicate conceptual understanding through elaborated writing, speaking, modeling, diagramming or demonstrating. poetry, essays, journals, research papers, letters, response logs, lab reports, dialogue, debate, skit, presentation,	0	1	2	3	4

Comments:

STUDENTS ARE ENGAGED IN ACTIVITIES TO DEVELOP UNDERSTANDING AND CREATE PERSONAL MEANING THROUGH REFLECTION

	Never Occurred			Very Descriptive	
6. Students use an appropriate learning strategy to gain meaning. graphic organizer, mapping, drawing pictures outlining, creating a model, journaling discussion, reference to text	0	1	2	3	4
7. Students rethink (revise) work based on data, self-evaluation and/or constructive feedback from peers/teacher.	0	1	2	3	4
8. Students consider alternatives and/or multiple ways to investigate and problem solve.	0	1	2	3	4
9. Students intentionally reflect on their own learning (metacognition). text to self, other texts, world connections; examining own bias or opinion, critique science lab procedures, math reasoning	0	1	2	3	4
10. Teacher provides focused feedback and questions to students that probe students' conceptual understanding and lead to sense making.	0	1	2	3	4
11. Students and/or students and teacher engage in substantive conversation that builds knowledge and develops critical thinking. literature circle, readers' theatre, discuss writing process, simulation, town meeting, debate, generate hypotheses, share and compare results, discuss conclusions, math reasoning	0	1	2	3	4

Comments:

APPLY KNOWLEDGE IN REAL WORLD CONTEXTS

	Never Occurred			Very Descriptive	
12. Teacher or student connects knowledge to relevant personal experiences.	0	1	2	3	4

13. Teacher or student connects knowledge within or across disciplines *or* to a real world problem. 0 1 2 3 4

14. Instruction uses community resources or data. 0 1 2 3 4
guest speakers, materials

15. Students produce a product or performance for an audience beyond the class. 0 1 2 3 4
persuasive essay, speech, play,
posting student work to a website,
letter to the editor, pen pals,
brochure, community survey

16. Students interact with world outside school via field-based experiences or technology. 0 1 2 3 4

Comments:

STUDENTS ARE ENGAGED IN ACTIVE PARTICIPATION, EXPLORATION AND RESEARCH

	Never Occurred			Very Descriptive	
17. Students work collaboratively to share knowledge, complete projects, and/or critique their work.	0	1	2	3	4
writing, response partners, reading groups, research groups, lab groups, math problem solving groups					

18. Students generate their own ideas, questions, or hypotheses. 0 1 2 3 4

19. Students plan and/or carry out independent research. 0 1 2 3 4
choose research topic, information sources,
design lab procedures and search for math patterns

20. Students independently access/use print media, equipment or technology. 0 1 2 3 4
books, newspapers, maps, graphs, charts

Comments:

TEACHER USES DIVERSE EXPERIENCES OF STUDENTS TO BUILD EFFECTIVE LEARNING

	Never Occurred			Very Descriptive	
21. Teacher activates and accesses prior knowledge of students.	0	1	2	3	4

22. Student needs and strengths are

accommodated through differentiated learning. 0 1 2 3 4

23. Lesson builds on diverse cultural traditions, student interests and experiences. 0 1 2 3 4
 writing connected to student experience and knowledge, diverse literature, interview family members, lab activities incorporate personal experience, multiple perspectives on numeracy.

Comments:

STUDENTS ARE PRESENTED WITH A CHALLENGING CURRICULUM DESIGNED TO DEVELOP DEPTH OF UNDERSTANDING

24. Lesson presented emphasizes conceptual understanding, not just recall or superficial understanding. Never Occurred Very Descriptive
 0 1 2 3 4
 comprehension, analysis of literature, support thesis with data, (re)discover theory, math problem solving

25. Central ideas and concepts of the subject are covered in depth. 0 1 2 3 4
 comprehension, continuity/ change, compare/contrast, cause/effect, number theory, measurement, probability, matter, properties, interdependence

Comments:

SUMMATIVE ASSESSMENT ALLOWS STUDENTS TO EXHIBIT HIGHER ORDER THINKING AND CONSTRUCT KNOWLEDGE (Choose NA if there was no summative assessment)

26. Assessment requires students to communicate learning through elaborated writing, speaking, modeling, diagramming, or demonstrating. Very Little Very Descriptive
 NA 1 2 3 4

27. Assessment criteria focus on demonstration of knowledge and conceptual understanding of core concepts. NA 1 2 3 4

Comments:

OVERALL CONCLUSION: HOW CONSTRUCTIVIST WAS THIS LESSON? Circle one answer.

Not at All Very Little Somewhat Very

Appendix B Subject Area Classes Observed by School

Subject Area Classes Observed by School

High School	LA	Math	Science	Social Studies	Integrated
Cleveland	7	6	6	6	2
Clover Park	17	10	12	12	0
Davis	10	13	9	8	0
Forks	9	5	8	7	1
Foss	11	14	12	12	13
Foster	9	7	6	6	0
Kent-Meridian	15	11	7	7	2
Kittitas	5	5	7	3	4
Lincoln	14	11	9	11	0
Mabton	11	5	4	4	0
Mariner	18	13	10	9	3
Mount Tahoma	13	10	11	9	0
Stevenson	7	6	5	7	0
Tonasket	9	8	9	5	0
Truman	5	0	0	0	8
West Valley (Spokane)	10	6	10	13	2
Yelm	9	11	10	12	0
Total	179	141	135	131	35

**Appendix C Inter-rater Agreement and Reliability Statistics by
Observation**

Inter-rater Agreement and Reliability Statistics by Observation

Percentage of items on which two observers agreed or differed in scoring with the TAOP							
High Schools	Perfect Agreement-0	Agree 0-1	Differ 1	Differ 2	Differ 3	Differ 4	Reliability coefficient
Cleveland	81	96	15	4	0	0	.82
Clover Park	70	100	30	0	0	0	.93
Clover Park	78	96	19	4	0	0	.54
Clover Park	78	100	22	0	0	0	.92
Clover Park	0	100	0	0	0	0	*
Clover Park	63	96	33	4	0	0	.91
Davis	89	100	11	0	0	0	.83
Davis	100	100	0	0	0	0	1.00
Davis	74	100	26	0	0	0	.88
Davis	70	100	30	0	0	0	.87
Forks	78	100	22	0	0	0	.88
Forks	78	100	22	0	0	0	.95
Forks	83	100	13	0	0	4	.76
Foss	81	96	15	4	0	0	.83
Foss	56	100	44	0	0	0	.85
Foss	70	100	30	0	0	0	.81
Foss	74	96	22	4	0	0	.79
Foss	85	96	11	4	0	0	.89
Foster	89	100	11	0	0	0	.60
Kent-Meridian	81	100	19	0	0	0	.68
Kent-Meridian	67	93	26	7	0	0	.92
Kent-Meridian	78	96	19	4	0	0	.83
Lincoln	63	96	33	4	0	0	.86
Lincoln	67	96	30	4	0	0	.74
Lincoln	78	100	22	0	0	0	.91
Lincoln	48	100	52	0	0	0	.76
Lincoln	70	100	30	0	0	0	.84
Lincoln	100	100	0	0	0	0	*
Mariner	70	100	30	0	0	0	.84
Mariner	74	96	22	4	0	0	.94
Mariner	67	100	33	0	0	0	.72
Mariner	50	100	50	0	0	0	*
Mariner	67	100	33	0	0	0	.74
Mt. Tahoma	96	100	4	0	0	0	.98
Mt. Tahoma	63	96	33	4	0	0	.85
Mt. Tahoma	70	100	30	0	0	0	.80
Mt. Tahoma	0	100	0	0	0	0	*
Stevenson	48	67	19	30	4	0	.70
Stevenson	63	100	37	0	0	0	.92
Tonasket	67	100	33	0	0	0	.74
Tonasket	37	96	59	4	0	0	.74
West Valley	63	89	26	7	4	0	.75
West Valley	89	100	11	0	0	0	.66
West Valley	70	96	26	4	0	0	.93
Yelm	63	96	33	4	0	0	.76
Yelm	48	100	52	0	0	0	.85
Yelm	67	100	33	0	0	0	.80
Average	71%	97%	26%				

Note: Mean and median reliability coefficient = .83

*Summative assessment with only two items scored

**Appendix D Sample Constructivist and Non-Constructivist
Lessons and Scoring Vignettes**

Holistic Observation Rating:	1
Average of Components 1-6:	.2
Subject:	English
Grade Level:	High School-9 th grade
Topic:	Vocabulary

Background

Students came to class and did silent reading for 10 minutes. About half of the class was reading. Then the teacher asked students to take out paper, pencil and their packets. “The lesson for today is about words that are often misused. Look at the first example: Sit and set. Sit is used with a person and set is used with an object. There are 8 pages that are due at the end of the period.” Students proceeded to complete the worksheets. During the class, seven boys were gathered around two (of nine) student computers playing karate action games. It was not clear if they were students in the class, teaching assistants, or visitors.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

UScore: .2

Students were working on a packet of grammar worksheets, and there was no evidence of intellectual engagement.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: .1

There is little about a grammar packet that could create personal meaning.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: 0

While misused words may be considered a “real world problem,” this connection was not explored during the lesson.

Section 4: Students are engaged in active participation, exploration, and research. (Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: 0

No collaboration or involvement on the part of students.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: 0

The lesson was not based on student experience, interest or ability.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding

(Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 1

There was curriculum presented (worksheets), hence the score of “1”. Otherwise the score would be “0”.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge

(Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 1

Comments

Misused words are probably a worthy topic for a high school English class. Some of the examples were actually very interesting to the observer (Affect and Effect, for example). Still, it seems like this kind of “real world” information could be presented in a way that would be meaningful and interesting to students.

Holistic Observation Rating:	2
Average of Components 1-6:	1
Subject:	English
Grade Level:	High School-11 th grade
Topic:	Literature

Background

During the observation, the teacher introduced an assignment in which students were asked to reflect on Tom Sawyer's moral growth. The teacher posed several interesting questions to probe their thinking on this topic, but in every case he followed the question with an answer, not allowing students a chance to reflect or think. The result was that this lesson, which could and/or should have been conceptually challenging, did not ever get off the ground. It appeared to the observer that the teacher did not have confidence that the students would really "get it."

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

UScore: 2.4

While the caliber of the questions posed to the students emphasized conceptual understanding of the text, the teacher did not wait for students to respond.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: .8

The students were asked to use an essay to "brainstorm" answers to some of the questions. However, little brainstorming or reflection was necessary since the answers were obvious on reading the essay. This seemed to preclude the chance to develop understanding or create meaning.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: .2

Tom's dilemma was not connected to either students' personal experiences or current events.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: .3

Students were asked to work individually but were also encouraged to generate their own ideas or questions. Still, the content of the essay and the fact that the teacher continually referred to it suggested that there were “right” answers and that there was really no room for student-generated responses.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: .6

There was no evidence of the teacher activating or accessing prior knowledge around the theme of the assignment. He did, however, bring to their attention the ways in which an author might use paradox and exaggeration in their writing.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding (Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 2

While the questions presented to the students were indeed challenging, the teacher’s delivery and obvious lack of confidence in his students’ abilities limited the potential of the lesson.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge (Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 2

Holistic Observation Rating:	3
Average of Components 1-6:	1.6
Subject:	English
Grade Level:	High School-12 th grade
Topic:	Poetry

Background

Students were presenting poems they had selected and analyzed. Each student had been instructed to choose a poem that they found interesting and meaningful and to do an analysis of the poem for the rest of the class. Presentations were done using Power Point, and when each was finished, other students and the teacher had the opportunity to ask questions. In addition to sharing their poetry analyses, students provided background information on their selected poet.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

UScore: 2.6

Students were expected to read and analyze poetry and then to analyze a selected poem for their peers and the teacher. There was no assurance that their analysis was “right” (i.e., reflected the author’s meaning); nevertheless they were definitely engaged in a conceptually challenging and demanding task. Use of relevant vocabulary was limited, but otherwise this section scored fairly high.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection.

(Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 1.1

The lesson was designed to develop understanding and to create personal reflection, and based on the presentations that were observed this was indeed the case. The degree to which the rest of the class benefited from each analysis was questionable. The teacher asked probing questions as did one or two class members, but the discussions did not go much beyond that. That is, substantive conversation and probing questions would have made this a much more constructivist and highly engaging lesson.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: .4

There was minimal discussion of the poems and any connection they might have to real experiences, beliefs, problems, etc.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan

and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: 2.4

Students generated their own ideas in the form of literary analysis, and carried out independent research to investigate their poems. A strength of the lesson was the fact that students were asked to select their own poems, to research them independently, and to provide a self-generated analysis.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: .3

The lesson clearly built on student interest but beyond that there was little evidence that the lesson tapped into experience, prior knowledge, or accounted for student ability.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding

(Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 2.5

The analysis of poetry seemed to provide a challenging and conceptually rigorous opportunity for the students.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge

(Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 3

Comments

It was the impression of the observer that it would not have taken much more effort on the part of the teacher to make this assignment infinitely more beneficial for students. They did the hard work of choosing “classic” (or at least relatively well-known) poems, investigating the authors, and completing some degree of analysis. Perhaps the presenter could have provided discussion questions; perhaps the teacher could have found “professional” analyses of the poems and had students compare and contrast those with their own, or perhaps groups of students could have analyzed several poems collaboratively.

Holistic Observation Rating:	4
Average of Components 1-6:	1.8
Subject:	English
Grade Level:	High School-11 th grade
Topic:	Literature

Background

The class had finished their reading and study of a classic Russian novel and were preparing for an exam the next day. The teacher opened class by reviewing the structure of the exam (three prompts) and the daily agenda. Students then got into study groups and completed a jigsaw activity, sharing responses to study questions in preparation for the exam.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 3.8

The study questions were challenging, the discussions were intense and thoughtful, and students were using vocabulary that suggested a fairly sophisticated understanding of the elements of a novel. In one group, for example, there was a discussion of how language was used describe the thoughts and feelings of one of the main characters. A student commented on the power of language in writing and how “it was amazing how that *one word* captured so much of who the man was.” Their work clearly demonstrated a deep understanding of the elements of literature and of this particular novel.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 2.8

The jigsaw activity was an appropriate and successful strategy for helping students reflect on and understand the novel. They were serious about their work, and their conversations about the study questions were thoughtful and focused. Certainly reflective thought was at the heart of this exercise. The teacher provided feedback on occasion, but rather than answer their questions directly he redirected them or made probing comments that served to move the discussion forward.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: .2

There was little evidence during the observation period that students related their understanding of the novel to “real life.” Their discussions were instead concerned with making sense of the novel’s characters and themes.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: 2.0

Students were actively involved in the lesson in the sense that all participated and they were intellectually engaged in the discussions. They generated their own questions and ideas related to the novel, which were shared among and between groups. Independent research was not an element of this lesson.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: 0

The lesson was not based on student experience, interest or ability in any obvious way.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding (Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 4

The lesson was rigorous in both structure and content, and students approached their task with serious determination. That the lesson was intended to develop conceptual understanding of the novel was unmistakable.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge (Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 4

Comments

It was impressive to see high school students involved in such thoughtful and serious discourse. They understood the task, which appeared to have been structured to generate this type of discussion and thus a deep understanding of the book. Students were on task, and most seemed to be interested and challenged by the discussions. The teacher was circulating among groups, listening and becoming involved when necessary, but otherwise left the work to the students.

Holistic Observation Rating:	1
Average of Components 1-6:	.4
Subject:	Math
Grade Level:	High School-9 th grade
Topic:	Simple and compound interest

Background

As the observation began, the teacher was presenting a lesson on how to compute interest. Most students were following along, writing the problems down as the teacher solved them on the overhead projector. Four students were asleep at their desks.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: .6

There was virtually no evidence of conceptual understanding in this lesson. Students were listening and copying as the teacher worked through problems on the overhead projector. They did not manipulate ideas, use mathematical vocabulary, nor was there any effort to have them communicate their learning.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: .2

Other than copying the problems demonstrated on the overhead, nothing was done to personalize the information. There were no opportunities for reflection and no substantive conversation took place.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: .4

The teacher made two references to the real world when teaching this lesson on simple and compound interest. First, he recalled a personal banking experience that was interesting if not particularly relevant to the lesson. Secondly he referred to the current economy, falling interest rates and a lower stock market.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: 0

There were no opportunities during the lesson for students to work together, to work independently, or to use any resources beyond the textbook and their assigned problems.

The teacher did, however, remind students to use their calculators. “Come on you guys, wake up. At least you have calculators to help you do these problems. I have to do them without a calculator. Get them out and do this.”

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: 0

Not part of this lesson.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding (Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 0

The lesson was a low level explanation of how to compute simple interest. There was no depth to the curriculum and no attempt to develop understanding at a conceptual or real world level.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge (Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 1

Comments

It was difficult to observe this lesson. The subject is ideal for making real world connections and application, yet it was not done during this lesson. And while teacher talk (lecture) can be powerful and can challenge students to think critically, it did not happen during this lesson. Rather, this teacher’s talk put students to sleep.

Holistic Observation Rating:	1
Average of Components 1-6:	.3
Subject:	Math
Grade Level:	High School-9 th grade
Topic:	Square roots and squared numbers

Background

The teacher asked students to look at a chart of perfect squares they had been given because they would be using it for their assignment. As she constructed a chart of squares and square roots, the teacher continually misused the terms “squared” and “square root.” The teacher told students they could use a number line to find numbers that were not perfect squares. The students were asked to make a number line from 1-10 on the back of their papers. The teacher wrote 1^2 above the 1 on the number line and 2^2 above the 4 on the number line and then asks, “What about the square root of 2? How do you find out?” The teacher wrote on the board: $\sqrt{1} = 1$, $\sqrt{4} = 2$. A student suggested 1.5. The teacher computed 1.5×1.5 on the board and came up with 2.25. She said “That’s too big” and told the students to guess until they found a number that was close. During this time many students were not paying attention. When the teacher asked questions of the students they responded with comments such as, “This is confusing,” “I have no clue,” and “You are confusing me.” The teacher continued to do another example, finding the square root of 30. She then told students they would understand better if they practiced, and gave an assignment.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: .2

There was little evidence of conceptual understanding on the part of students, nor did the teacher appear to have a firm grasp of the concept of squares and square roots.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 0

Most students were not engaged in the lesson at all and many were off task. Those who appeared to be paying attention to the lesson did not understand the concept.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: 0

There was no context given for solving this kind of problem.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: 0

Students were not involved in the lesson at all.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: .3

Students were asked to take out the square root chart they had from a previous lesson which might have been used to activate prior knowledge, but as it was, no reference was made to it.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding

(Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 1

Students did not understand this lesson and were left to do an assignment they clearly did not know how to do.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge

(Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 1

Holistic Observation Rating:	2
Average of Components 1-6:	.9
Subject:	Math
Grade Level:	High School-mixed grades
Topic:	Algebra

Background

The teacher began class by telling the students that he didn't have their tests corrected yet, and then he explained the lesson for the day, which was a mock final exam. The exam was from the next course in their math sequence, and the teacher was using it to help get an idea of their "mathematical competency." He said that they would work for 20 minutes on their own and then they would come back together and review the problems. As the students worked on the test, the teacher walked around the class, addressed questions, and generally monitored the activity. For their part, students worked diligently and mostly independently on the test.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 2.4

The test itself presented the students with conceptually challenging problems, some which required them to explain their strategies, etc.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection.

(Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: .5

Little was done to encourage reflection or to probe students' thinking.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: 0

No connections were made how the problems might be used in a real world context.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: 0

No collaboration, independent research or access of other resources on the part of students.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: .3

In responding to some of the students' questions, the teacher did activate prior knowledge.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding (Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 2

The problems were challenging in that they were not strictly calculation problems; some appeared to involve higher-level thinking.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge (Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 2

Comments

The use of an exam as a formative assessment could be extremely instructive for students. However, it might have been more effective had the teacher encouraged or required students to do this as a collaborative activity, thereby prompting the exchange of ideas, strategies, and questions.

Holistic Observation Rating:	3
Average of Components 1-6:	1.7
Subject:	Math
Grade Level:	High School-mixed grades
Topic:	Geometry

Background

As the observation began, the teacher was working problems on the overhead projector and students were working them at their desks. As he worked the teacher posed probing questions about the operations, theorems, and postulates. Students were fully engaged in the discussion, alternately responding and asking questions. Once he had finished the instruction element of the lesson he had students continue to work on the rest of the problems independently (16 additional problems). They did. Students formed their own groups and continued discussing strategies and answers. It was clear that they were comfortable working collaboratively and that they understood the goal of what needed to be accomplished. Most were engaged and on-task for the rest of the observation.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 3.6

Their work, as evidenced by their discussions, demonstrated that they were working at an understanding level. Relevant vocabulary was part of every conversation (angles, sides, postulates, vertical, congruent).

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 2.5

Following the lead of the teacher, students discussed strategies, the appropriateness of their answers, and alternate ways of problem-solving. The tone of their discussions, set by the teacher, was thoughtful and substantive.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: 0

No examples of this were observed.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: 1.2

The collaboration was impressive. Students had meaningful conversations about the problems.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: .6

The teacher did refer to prior knowledge, but mainly as a review of previous problems.

Section 6: Students are presented with a challenging curriculum designed to develop

depth of understanding (Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 3

The curriculum was challenging and was given depth by the group activity and collaboration.

Section 7: Summative assessment allows students to exhibit higher order thinking

and construct knowledge (Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 3

Comments

The fact that students formed collaborative groups and that the groups actually worked seriously toward a goal made a typical “present and practice” lesson somewhat more challenging and meaningful.

Holistic Observation Rating:	4
Average of Components 1-6:	1.75
Subject:	Math
Grade Level:	High School-mixed grades
Topic:	Algebra

Background

This was a unique lesson. In our experience it is unusual for a substitute teacher to do more than “correct and practice,” yet this lesson, taught by a substitute, was engaging and challenging. Although the lesson veered “a little bit off track” (in the words of the teacher), students were presented with new and challenging problems that deepened their understanding of a broader concept.

While correcting homework problems, the teacher interrupted by calling a “time-out.” He told the students that he was going to take a little detour because “this is something you just *have* to know.” He explained how knowing “i3” was basic to electrical engineering, and then spent several minutes discussing the history of mathematics. Students were captivated by the mini-lesson. They asked probing questions and expressed a general sense of accomplishment when they solved all the “tricky examples” he presented. The intellectual challenge inspired both interest and their enthusiasm.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 3.6

At the outset this appeared to be a “traditional” math lesson (correct homework, ask questions, practice a new skill, start homework). It was enriched when the teacher challenged students to expand their conceptual understanding. The conversation between teacher and students (and between students themselves) was substantive and productive, and students were obviously interested in understanding the concepts.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 2.0

Students did not have the opportunity to explore alternate ways to solve the problems. However, in nearly every other way the teacher helped them understand the concept by asking them to reflect, to try thinking about it a different way, and by asking them pointed and probing questions. It was a masterful example of getting kids interested in a concept that might have otherwise been meaningless and boring.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: .4

Aside from the reference to electrical engineers there was little connection made to real world application.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: .7

There was some discussion between students about the problems, and some asked clarifying and probing questions. Independent research and exploration was not part of this lesson.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: .3

The teacher did activate prior knowledge to a certain degree, but there were no intentional accommodations for learning differences and the lesson was not based on student interest or experience.

Section 6: Students are presented with a challenging curriculum designed to develop

depth of understanding (Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 3.5

The lesson was an excellent example of one that emphasized conceptual understanding (math problem-solving) at a deep level (number theory).

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge

(Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 4

Comments

This teacher offered students a conceptually challenging lesson that engaged them intellectually and eliminated the behavior problems that are typical in “substitute” classrooms.

Holistic Observation Rating:	1
Average of Components 1-6:	1
Subject:	Science
Grade Level:	High School-mixed grades
Topic:	Anatomy

Background

As the observation began, the class was preparing for an upcoming quiz on the organs in the human body. The teacher asked the students to line up on one side of the room, facing a large model of the human body. The teacher told the students that he would start with the first student, asking them to either name the organ or its function. If the student got the answer right, they remained in the line. If they got the answer wrong, they would go to the end of the line. The next person would get the same question and they would continue through the line until someone got the correct answer. Students were advised to listen to each other since the answers would be relevant to everyone. If they did not pay attention, their name would go on the board and they would lose points.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 1.6

The exercise was essentially drill and practice. While the questions pertaining to organ function might be evidence of conceptual understanding, the format did not lend itself to anything more than a one word “correct” answer.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 1

The lesson did not afford students the opportunity to reflect on the information or to personalize it in a way that might further their understanding of organ function.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: 0

The students were expected to know the names and function of specific organs in isolation, and there were no attempts during this observation to take it beyond that.

Section 4: Students are engaged in active participation, exploration, and research. (Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score:

No evidence.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: 1.3

There was no attempt made to connect the material to the student's own experiences.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding

(Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 1

The purpose of the activity was to help students prepare for an upcoming quiz, and the focus was recall and/or memorization. Missing from the lesson was any stated reason why students might need or want to know about the body, organs, and organ function.

Section 7: Summative assessment allows students to exhibit higher order thinking

and construct knowledge (Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 1

Holistic Observation Rating:	2
Average of Components 1-6:	.6
Subject:	Science
Grade Level:	High School-9 th grade
Topic:	Water cycle

Background

Students were working on a coded worksheet in which they colored various elements of the water cycle according to a color code in the text. The teacher reminded them that there would be a quiz the next day “without the definitions, so you need to make sure you know them today.” Most students were alternately coloring and collaboratively trying to explain the process to each other within their groups. As they worked, the teacher circulated and answered questions. He encouraged the two observers to ask any of the students to explain the water cycle process. Two groups of students were able to give reasonable explanations, while one group had no idea what the water cycle was all about.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 1

About half of the students appeared to understand the water cycle process well enough to explain it to someone else. The teacher’s strategy of having students do this collaboratively was helpful.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 1

Coloring and explaining were both useful in developing conceptual understanding. The teacher provided focused feedback when asked.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: 0

Although the water cycle *is* a real world process, this was not emphasized during the lesson.

Section 4: Students are engaged in active participation, exploration, and research. (Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: .5

Most students were actively involved in coloring and talking with each other about their work.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: 0

There was no evidence of prior knowledge, tradition or student experience in this lesson, except for the natural interest students have in coloring.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding (Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 1

The curriculum was only relatively challenging, although there was an attempt on the part of the teacher to facilitate understanding at more than a recall level.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge (Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 2

Comments

At first it appeared that this was a special education class although the teacher explained that it was in fact a regular science class. The reason the lesson scored a holistic “2” instead of “1” was due to the fact that students were required to work collaboratively and explain the water cycle process in their own words. Most were attempting to do this, which appeared to be a useful strategy to extend the coloring worksheet.

Holistic Observation Rating:	3
Average of Components 1-6:	1.9
Subject:	Science
Grade Level:	High School-9 th grade
Topic:	Cells

Background

Students presented their cell projects to the rest of the class. As a warm-up, the teacher asked students to “list three things that are unique” to a certain type of cell. After discussing the responses, students were asked to come before the class and make their presentations. The first shared a paper poster of a nerve cell. She described the cell, parts, and functions and took questions from the teacher and other students. The teacher’s questions were rigorous; those from other students were not. Three other students shared their presentations, one using Power Point. The students appeared to understand the basic information about their cells and adequately presented this information to others.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 3.2

Work did show evidence of understanding and students were able to communicate it reasonably well. Use of relevant vocabulary in particular was impressive.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection.

(Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 2

Students used a variety of strategies and tools, including drawings, diagrams, and discussion. The lesson offered them the opportunity to personalize the assignment in terms of how they presented their information. The teacher posed interesting and challenging questions to each presenter.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: 0

Aside from one or two comments about the role of blood cells in disease, this information was not connected to “real-life” issues or situations during this observation.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: 2

Collaboration was not a part of this particular lesson, but there was evidence of independent research. Students were able to investigate their own topics, and were actively involved in presenting the information.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: 1

With his warm-up activity, the teacher did engage the students in prior knowledge, and the lesson was based on student interest (at least to a certain extent; they were allowed to research their own topic within the general parameter of “cells”).

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding

(Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 3

Student presentations, as well as the teacher’s warm-up activity, were meaningful exercises to engage students in fundamentals of biology, specifically the study of cells. Students (at least those students who were presenting) were engaged in the lesson, and other appeared to attend to the presentations, even if they were not totally absorbed.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge

(Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 3

Comments

Some of the students were challenged and engaged, others paid attention because the teacher told them they needed to take notes. It was one of those lessons that could have been strengthened had the teacher made the effort to structure questions and discussions. Perhaps this happened during a later class session, but it did not happen here.

Holistic Observation Rating:	4
Average of Components 1-6:	2.3
Technology Rating:	4
Subject:	Science
Grade Level:	High School-12th grade
Topic:	Physics (momentum)

Background

The lesson required students to write up a lab in which they had done an experiment to test a hypothesis on force and momentum. The lab write-up included a section for each step of the scientific method (Question, Hypothesis, Procedure, Materials, Analysis, and Conclusions). At the time of the observation most were working on their conclusions. Part of the task included comparing their individual data with data from a theoretical model (provided by the teacher). Students were working individually on computers although a number of them quietly discussed their findings and compared their conclusions.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 4

Evidence of their conceptual understanding came from the discussions that took place as they completed their lab write-ups. Pairs and small groups of students shared their results with each other and then made comparisons to the theoretical model. They discussed “reasonable” data points and speculated about why they got the results they did. Vocabulary was relevant and appropriate (“displacement, ratio, hypothesis, distance, force, momentum”).

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 3.1

The entire process of writing up the lab was one of reflection and analysis in an attempt to understand the results of the experiment. Discussions between students, and between teacher and students helped to clarify scientific principles such as force and momentum. Teacher feedback was concise but relevant.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: .4

One group of students made a connection between their experiment and a real-world situation to which the results might be appropriately extended. Beyond this there was no

evidence that the experiment was applied to real-life situations, thus the score for this section is quite low.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: 1.5

There was quiet collaboration among students as they shared and compared results of their experiments. On the other hand, this particular phase of the lesson did not require students to do any independent research, nor did they independently access other media.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: .6

The teacher did activate prior knowledge at the outset of the lesson as he (and students) reviewed the basic premise of the experiment. However there were no observable accommodations for different ability levels, and although it may have been inherently interesting to some of the students, it did not obviously build on student tradition or experience.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding (Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 4

The curriculum was rigorous, challenging, and required students to predict, compare and contrast, and to consider scientific principles in depth. The teacher was knowledgeable and expertly facilitated the lesson.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge (Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Technology Rating: 4

The computer was essential to this lesson. Students were not only word processing the text of their write-up, but had used a spreadsheet to enter and analyze data and to compare their results to the theoretical model. While it could have been accomplished “by hand,” it would have been laborious and lengthy.

Overall Rating: 4

Comments

This lesson was impressive because of the intellectual demand placed on the students and their response to that demand. They appeared to be engaged in their learning and intent on understanding their results. With the exception of responding to questions or clarifying comments, there was relatively little teacher talk; students were self-directed and had the confidence of their teacher. Awesome!

Holistic Observation Rating: 1
Average of Components 1-6: .9
Subject: Social Studies
Grade Level: High School-12th grade
Topic: Contemporary World Issues

Background

As the observation began, students were identifying current events from the news, including reports about United Airlines bankruptcy and Strom Thurmond’s birthday celebration. Each student presented the basic facts of their “event” but there was no discussion. Following this, the teacher told students they would be completing a worksheet designed to help them understand their perceptions, stereotypes, and views of people in general. The worksheet consisted of ten completion statements such as:

- All artists are _____.
- All people with AIDS are _____.
- Drugs are used by _____.
- People on welfare are _____.

The statements generated comments and some laughter among students although they did complete the assignment. When finished, the teacher suggested that they go over some of the answers. The responses were generally consistent (All athletes are strong) although there was no discussion of why everyone’s answers were the same, what prompted the responses, or what evidence or experience led a student to respond the way they did.

Section 1: Work shows evidence of conceptual understanding, not just recall.
(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 1
Little evidence of conceptual understanding.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: .7
No, although the content certainly seemed appropriate for reflecting and creating personal meaning and understanding.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: .4

Given the fact that this was a Contemporary World Issues class, current events would seem to be relevant and appropriate content. However there was no discussion of the issues, no attempt to understand why students selected the topics, or what they understood about the topic once they were selected.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: .2

The students worked individually for most of the lesson. And although they were “actively” participating in filling in the blanks, the teacher did not channel this participation into a meaningful discussion of stereotypes.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: 1.3

Completing statements about common stereotypes could be construed as the use of diverse experiences, although beyond filling in the blanks there was little substance to the lesson. The teacher concluded the lesson with a comment that “these are some things to think about.”

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding

(Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 1.5

Students were not asked to do much more than provide the teacher with examples. The opportunity to explore current issues and/or stereotypes was missed.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge

(Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 1

Holistic Observation Rating:	2
Average of Components 1-6:	7
Subject:	Social Studies
Grade Level:	High School-9 th grade
Topic:	Timelines

Background

Class began with 10 minutes of SSR. Some students brought books to read while others picked up National Geographic or another magazine when they walked in. At the conclusion of SSR, the teacher asked students to take out a pencil and paper so they could work on timelines. She told them that there would be a timeline test on Friday (this was Monday) and that they would practice creating timelines so they could do it on the test. She then gave them some dates and instructions on making a timeline.

1912 = A
1942 = B
1978 = C
1936 = D
1955 = E
etc

“First find the earliest and latest dates and put those on your line. Then add the others. So what would be my starting dates for this set of data? 1912 and 1978, right. What happens if I make intervals of one year?” She went on to explain how the intervals had to make sense based on the data. Students constructed several timelines using the above dates while the teachers walked around and checked their work. Discussion was limited to practical points such as placement of lines, words and numbers.

The teacher then gave them a second set of data with dates spanning 1772 through 1983 and they practiced making a timeline with those. This continued for the remainder of the observation.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 1.2

Students used the information provided to make timelines, and in the process it appeared that they developed a basic understanding of appropriate intervals, sequencing data, and reading symbolic sources. Students did not use pertinent vocabulary although the teacher did.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 1.0

An understanding of timelines and the sequence of historic events resulted from the work students did in creating their timelines. The teacher provided feedback and students commented on each other's work, after which they made necessary changes to their timelines. Aside from that, little was done to facilitate students in making meaning of the assignment. There were no alternates to the data given nor did the teacher's comments appear to probe or extend their understanding.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: .4

The teacher made several attempts to relate timelines to the real world although students did not have an opportunity to extend these connections.

Section 4: Students are engaged in active participation, exploration, and research. (Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: .3

There was some collaboration among students as they made their timelines, but it was mostly for the purpose of completing the assignment and not to develop a conceptual understanding of the topic.

Section 5: Teacher uses diverse experiences of students to build effective learning. (Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: 0

Student experience was not evident in the lesson, nor was student interest.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding (Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 1.5

While the students had a chance to create several timelines, little time was devoted to explaining the purpose and usefulness of timelines. Rather, this was primarily a skill-based lesson with relatively little intellectual demand placed on the students.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge (Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 2

Comments

This was a traditional social studies lesson that focused on skill development. The only reason it received a “2” rating rather than a “1” was because there was at least some collaboration on the part of students as they created their timelines, and because they had the opportunity to actually create something rather than just read about it. The teacher could have related this to students’ lives relatively easily and might have provided examples (or had students look for examples) of various timelines to understand how and why they are useful.

Holistic Observation Rating:	3
Average of Components 1-6:	1.2
Subject:	Social Studies
Grade Level:	High School-12 th grade
Topic:	Resources

Background

The teacher handed out directions for a simulation activity and asked students to get into their groups. They were to use maps to answer questions about plants, animals and natural hazards. Each student had a map of a fabricated country, and listed on the map were all of the various plants, animals and hazards such as volcanic activity and tornados. As a group they were to determine which plants, animals and hazards might be used (or avoided) while living there by answering questions such as the following:

- How, if at all, will this vegetation be utilized for clothing? List specific plants and means of preparation. Sketch, if possible.
- In what ways can the vegetation be utilized for transportation? Sketch, if possible.
- Assuming any or all of the listed hazards struck your society, how might they affect the religious, social, political, and recreational structure?
- Which animals could be utilized for work? Explain.

Some groups actively discussed the questions while others invested only moderate effort. When students were asked about the project, most could explain what they were supposed to do but not all could clarify their responses to the questions.

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 2

Listening to the group discussions revealed that students generally understood the concepts. Use of relevant vocabulary was evident as well.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 1.3

The students were involved in an appropriate activity to build understanding, and they examined alternatives as they answered questions. The teacher did not engage the whole class in discussion, although he did talk with individual groups, facilitating their discussions with probing, reflective questions.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: .4

This lesson was a simulation where students were encouraged to think as a group about potential and necessary resources.

Section 4: Students are engaged in active participation, exploration, and research. (Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: .7

The students worked collaboratively although they did not engage in independent research.

Section 5: Teacher uses diverse experiences of students to build effective learning. (Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: 0

The lesson was not based on diverse experiences of students although it appeared that they were interested and somewhat motivated in the topic.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding (Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 3

The lesson developed conceptual understanding and was based on central ideas of cultures and society such as survival and use of resources.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge (Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 3

Holistic Observation Rating:	4
Average of Components 1-6:	2.3
Subject:	Social Studies
Grade Level:	High School-10 th grade
Topic:	World History

Background

As the observation began, students were working in groups of four, finishing an exercise in which each group wrote a story using five specific WWII vocabulary words. One student from each group was selected to read their story, and these varied greatly, from themes of war to very personal and contemporary stories. The teacher offered feedback at the end of each story on the correct usage of the vocabulary words. The list of vocabulary words was student-generated: in their reading of WWII material, any word they encountered that was unfamiliar was added to the list. These included, among others: vital, apprehension, inevitable, incapacitated, neutral, ruthless, reservoir, pan Slav, vulnerable, obligation, deterred and alliance. With the teacher they defined the word prior to writing stories.

After finishing the stories the students were asked to regroup into their “timeline” groups. Each group represented a particular country at the time of WWII (France, Germany, Serbia, Russia, Great Britain) and was responsible for preparing a response to the following two questions:

1. What are your reasons for going to war?
2. What would it take for you to reverse your decision?

Section 1: Work shows evidence of conceptual understanding, not just recall.

(Appropriate methods, fundamental concepts and vocabulary, construction of knowledge, and elaborated conceptual communication)

Score: 3.8

The stories generated by groups of students demonstrated that they had a conceptual understanding these words both in and beyond the context of WWII.

Section 2: Students are engaged in activities to develop understanding and create personal meaning through reflection. (Use of appropriate learning strategies, self-evaluation and revision of work, consideration of alternatives, intentional reflection, focused feedback from the teacher, substantive conversation)

Score: 2.3

In using vocabulary words to create stories, the students were clearly creating personal meaning. In fact, several of the stories were very contemporary and reflected issues that were be meaningful to high school students.

Section 3: Apply knowledge in real world contexts. (Knowledge is connected with relevant personal experiences, knowledge is connected across disciplines and/or to real world problems, community resources are involved, student work is produced for an audience beyond the class, students connect with the world outside school via field experiences or technology)

Score: .6

The lesson integrated several subject areas including language arts, math, and history, and dealt with a historical event (WWII) and the reality of choices and negotiations that go into a political decision-making.

Section 4: Students are engaged in active participation, exploration, and research.

(Student work collaboratively, generate their own ideas, questions and hypotheses, plan and/or carry out independent research, and independently access and use print media, equipment or technology)

Score: 2.2

The students were actively involved both in creating (vocabulary) stories, completing a time line, and developing a rationale for supporting and/or opposing the war. Scoring criteria were posted and the teacher occasionally reminded students about the importance of each group member in completing the project.

Section 5: Teacher uses diverse experiences of students to build effective learning.

(Teacher accesses prior knowledge, accommodates student strengths and needs, and builds the lesson on diverse cultural tradition, student interests or experiences)

Score: 1

In having the students generate a vocabulary list of words that they did not know or understand, the teacher was drawing on the students' own experiences and/or knowledge to enrich and personalize the content. Creating stories ensured that their understanding went beyond the context in which they read the words.

Section 6: Students are presented with a challenging curriculum designed to develop depth of understanding (Lesson presented emphasizes conceptual understanding, and the central ideas and concepts of the subject are covered in depth)

Score: 4

The students were actively and intellectually engaged in the lesson as they prepared to debate and defend their decisions to support or oppose the war. The guidelines and goals of the lesson were clear and the task was interesting and challenging to the students.

Section 7: Summative assessment allows students to exhibit higher order thinking and construct knowledge (Assessment requires students to communicate learning through elaborated writing, speaking, modeling, or demonstrating, and assessment criteria focus on conceptual understanding of core concepts)

Score: NA

Overall Rating: 4