

## Snapshot #8

### **Monitoring and Reinforcing Learning: Westmoreland Elementary School Harrisburg High School**

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#### **RESEARCH FINDINGS**

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Close monitoring and reinforcement of students' learning progress is positively related to their achievement, according to the effective schooling research. As outlined in *EFFECTIVE SCHOOLING PRACTICES: A RESEARCH SYNTHESIS* (Northwest Regional Educational Laboratory, 1984), the elements of monitoring and reinforcement shown to promote positive learning outcomes include the following:

At the CLASSROOM level:

#### **1.5 LEARNING PROGRESS IS MONITORED CLOSELY.**

- Teachers frequently monitor student learning, both formally and informally.
- Teachers require that students be accountable for their academic work.
- Routine assessment procedures make checking student progress easier. Students hear results quickly; reports to students are simple and clear to help them understand and correct errors; reports are tied to learning objectives.
- Teachers use assessment results not only to evaluate students but also for instructional diagnosis and to find out if teaching methods are working.

#### **1.12 INCENTIVES AND REWARDS FOR STUDENTS ARE USED TO PROMOTE EXCELLENCE.**

- Excellence is defined by objective standards, not by peer comparison. Systems are set up in the classroom for frequent and consistent rewards to students for academic achievement and excellent behavior. Rewards are appropriate to the developmental level of students.
- All students know about the rewards and what they need to do to get them. Rewards are chosen because they appeal to students.

- Rewards are related to specific student achievements. Some rewards may be presented publicly; some should be immediately presented, while others delayed to teach persistence.
- Parents are told about student successes and requested to help students keep working toward excellence.

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## SITUATION

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Westmoreland Elementary School is one of 38 schools in the Eugene, Oregon School District, a large district serving 17,600 students. The student population in the Eugene district is predominantly white; black, Asian, and Hispanic students together only comprise five percent. According to the 1980 census, the median family income in the district was \$21,838, with the majority of the population working in agriculture, wood products and retailing. Eugene is the home of the University of Oregon, a community college, a private college, and several business schools; and a large percentage of the population also works for these educational institutions. Westmoreland Elementary is a K-5 school with 282 students.

Harrisburg, Oregon is a small, rural community approximately 20 miles from Eugene. Much of the population of 1,600 is employed in farming or in the wood products industry, and income levels are low to moderate. Harrisburg Union High School District 5-J is a one-school district. Harrisburg High is a four-year school with 182 students.

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\*\*\* Context: Westmoreland Elementary School \*\*\*

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One instructional approach which is especially concerned with all aspects of monitoring and reinforcing student learning is the Direct Instruction System for Teaching Reading and Arithmetic (DSTAR). Program development and technical assistance regarding the DSTAR programs is conducted by the Direct Instruction Follow Through Program in Eugene. Follow through staff provided NWREL School Improvement staff with recommendations of teachers in the Eugene district with whom they had worked and who they believed to be especially skilled in monitoring students' learning and providing reinforcement.

We wished to observe and write about classroom monitoring/reinforcement from a more general perspective than that of DSTAR or any other specific instructional approach. Therefore, although the first grade teacher observed in preparation for this report is trained in the use of the DSTAR programs, she was not using a formal Direct Instruction methodology during the time of the observation. Instead, her monitoring and reinforcement practices were a combination of methods used in the DSTAR programs and more general monitoring/reinforcement techniques appropriate to the kinds of lessons conducted during the observation.

For more information, contact Pat Bauer, Westmoreland Elementary School, 1717 City View Street, Eugene, Oregon 97502-3499, (503) 687-3373.

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\*\*\* Practice: Monitoring and Reinforcing \*\*\* \*\*\* Learning in a First Grade Classroom \*\*\*

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On the afternoon of the observation, the class of 23 first graders engaged in:

- A "special person" activity (The rotating honor of "special person" is intended to strengthen personal identity and build self-esteem.)
- A math lesson, game, and seatwork activity
- A discussion of Thanksgiving, followed by listening to the teacher read a Thanksgiving story and a discussion of "what I am thankful for"
- An art activity with a language arts emphasis

The classroom has two-person work tables arranged in two concentric semicircles and space at the front for activities that call for sitting on the floor.

The teacher brought the children in from the playground. A full-time aide who works one-to-one with an orthopedically impaired girl brought that child into the classroom. The teacher asked the children to sit on the floor in the front of the classroom for "special person" time. The boy who was the special person of the week sat in a chair with the other children around him. The teacher asked the children to raise their hands and tell the special boy things about him that they like. While this activity proceeded, the teacher worked at maintaining order by calling attention to the behavior of children who were behaving APPROPRIATELY. She continued throughout the afternoon with this practice of "catching children being good," identifying them by name, and commenting positively on their behavior, e.g., "Greg is my super good listener", "Jenny sure knows how to follow directions"; "Watch while Billy walks up to the table and puts the papers away." The teacher exhibited an upbeat and enthusiastic manner to which the children appeared very responsive.

A smooth and rapid transition to the next activity--an explanation of a math game--followed the special person activity. The teacher held the children's attention and began her explanation while gathering math game materials and arranging them on the floor for a demonstration. As she explained and demonstrated the "Ten Dollar Bill Game," she followed each major point with a question intended to check children's understanding. The questions often called for a choral response, but were sometimes directed to particular children.

When she was satisfied that the children understood the game, she gave them directions for gathering manipulative materials for a math activity and asked them to take their seats, again calling attention to the children who were following directions, being quiet, etc.

To convey the concept that thirteen is ten-and-three, sixteen is ten-and-six, and so on, the teacher took the children through a series of exercises using cubes with numbers on their sides. The exercise required that the children both answer verbally and display answers using the cubes. Again, both choral and individual responses were given. The teacher consistently gave positive verbal reinforcement to students who answered correctly, speaking to them (or about them) by name and frequently touching them.

Moving about the room, counting aloud with children, checking their answers as displayed on the cubes, and checking individual understanding of the "ten and \_\_\_" concept, the teacher quickly determined which children were slow in arriving at correct answers and worked closely with them. When helping children individually during this and other activities, the teacher came down to the child's level by squatting down or sitting on a child-size chair.

Children were then given a brief seatwork activity. The teacher passed out worksheets while guiding children through the process of putting the math cubes away, so that materials were ready by the time children returned to their seats. She moved around the room checking students' work and helping them as needed. The students were to begin playing the math game

when they finished and turned in their worksheets. The teacher responded to those who were slower in completing their worksheets with encouraging comments such as, "You got the first part finished. Good! Now let's work on the next part." The teacher moved around the room and answered questions during the math game.

A class discussion followed regarding the first Thanksgiving and the way that modern day Thanksgiving holidays are celebrated. The teacher asked questions which elicited a combination of accurate responses and some very strange and creative ones. She responded with enthusiastic and positive verbal reinforcement for correct answers, and when answers were inaccurate (e.g., "the Indians killed the pilgrims"), she made supportive comments, such as "Let's see what our Thanksgiving story will say about that. Maybe we'll find out we're right, and maybe we'll learn something new."

The teacher read a story about the first Thanksgiving, explaining difficult words and asking questions to check understanding as she went along. She read fairly rapidly and with quite a lot of emotion, keeping the children focused by asides such as, "Sarah, do you know that. . ." (story narrative) and, "Then, Greg, guess what? The pilgrims. . ." (more narrative). The activity concluded with the teacher eliciting from the children a list of things for which they are thankful and writing these on the chalkboard.

This became the lead-in for an art/language arts activity in which children cut out a picture of a turkey and wrote on each turkey tail feather an item from the list of things for which they are thankful. This activity was highly interactive, with the teacher moving about the room checking children's work, answering questions, and giving help and encouragement to students experiencing difficulty.

The school day ended with the teacher guiding the children through cleaning up and, finally, with listening to the principal announce good citizenship awards for the week over the loudspeaker. Awards were also given out in the classroom, and the teacher encouraged children to share these with their parents.

Several general features of this teacher's monitoring style are especially worthy of note. While the primary focus here is monitoring students' LEARNING, it is worth remarking that the teacher is very effective at monitoring students' BEHAVIOR and keeping them on task, as well as monitoring their learning progress.

This teacher's approach to monitoring, as exhibited during the observation, is very much in keeping with the research on effective monitoring and reinforcement practices. She was very positive, focusing on children's successes and finding areas of achievement or improvement to comment on for those students who were having difficulty. In fact, she did not find it necessary to use the word "no" during the entire afternoon; rather, she consistently identified and commented on something positive in children's work or behavior.

Skill in keeping track of students' understanding of the material presented was evident. While maintaining a brisk instructional pace, the teacher managed to note each student's responses to questions and problems and to clarify/reteach before moving on to the next item. During instruction, each major point was immediately followed by a question, e.g., "So we counted ten-and-six bees on the flowers. How many bees did we count?"

Reinforcement of correct responses and appropriate behavior was a constant part of classroom activities. This reinforcement was personalized by speaking students' names and touching them.

In addition, the reason for the praise or the reinforcement was always clearly specified, e.g., "James, I hear you thanked Suzanne for giving you the scissors; I like that," or "Paula knows that there are ten-and-five kittens in the picture. Watch her hold up her number cubes for tenand-five."

Finally, the pace of instruction and the attentiveness of the teacher insured that the children received immediate feedback/reinforcement regarding their learning, on-task behavior, and social behavior. Thus, the inadvertent reinforcement of misunderstandings or negative behavior that sometimes results from failure to notice and address problems was avoided. Instead, children were constantly given the message that they and their learning are important and noticed.

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### **CONTEXT: HARRISBURG HIGH SCHOOL**

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Five years ago, before the present Wood Technology Program instructor joined the Harrisburg faculty, the program was not a particularly successful one. There was no regular shop instructor; teachers of other subjects took turns filling in. The learning atmosphere was rigid, with tools and materials under lock and key. There was little or no reinforcement of basic skills, and the program was not a popular one; fewer than thirty students participated annually.

Then, under the direction of a new district superintendent/high school principal, an effort was launched to upgrade the quality of all the school's programs. As part of this effort, the present wood shop instructor was hired and has since instituted many changes in the program. As the program is currently operated:

- More and more modern equipment has been acquired and is in use.
- The instructor promotes the program to students, teachers, and parents; current enrollment is approximately seventy students, including nine girls.
- The instructor solicits and acquires pallets and other free wood from local businesses, which keeps costs down, enabling students to carry out projects they could not otherwise afford.
- Under the instructor's direction, advanced students refurbish travel trailers and build boats; the proceeds from these activities have made the wood shop program almost entirely self-supporting.
- Tools are hung on the wall so as to be constantly available for use; there have been no thefts in four years.
- The instructor has established good rapport with students and handles all discipline problems without referring students to the principal's office.
- Competence and safety in using wood-working machinery are constantly emphasized; there have been no accidents since the present instructor took charge of the program.
- The first nine weeks of the beginning woodshop class are devoted to classroom instruction. Students study woodworking manuals; learn how to determine materials needs and costs for projects; and are introduced to the various kinds of woodworking machines, their uses, and safe operation.
- The instructor has developed a mathematics workbook for use by students in the advanced building construction class. These students receive a math credit for their mastery of the material in the workbook.
- The instructor is committed to the goal of having all students experience success. Many students (including some special education and behaviorally disordered students) who have not succeeded in other classes have experienced improvements in basic skills and

behavior as they are guided to successful completion of wood-working projects.

The wood technology shop space is modern, roomy, and well-equipped. In addition, the program makes use of a conventional classroom in which students learn woodworking basics using program manuals, compute materials needs and costs, and carry out other paper and pencil activities.

More information is available from Jack Carroll, Wood Technology Program Instructor, Harrisburg High School, 400 S. 9th Street, Harrisburg, Oregon 97446, (503) 995- 6626.

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\*\*\* Practice: Monitoring/Reinforcement \*\*\* in a Secondary Wood Shop Class \*\*\*

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School Improvement Program staff observed a beginning woodworking class with 18 students and an advanced class where, due to absences and recent transfers, there were only five students.

At the beginning of each class, students entered the classroom and the instructor read announcements. He then checked with each student about what he or she was planning to do in class that day. Students who were between projects agreed to help others. By the time students left the classroom and entered the shop area, the instructor had clarified with everyone what he or she was to be doing. As part of his opening comments, the instructor noted a couple of problems--a hole drilled recently in a workbench and finish being sanded off one of the benches. He reminded students to be careful and quickly reviewed guidelines for the use of the tools. His manner was positive--non-accusing and non-threatening.

Several of the students in the beginning class were making gun racks or towel racks. As they worked, the instructor moved around the room, checking their projects and offering suggestions. He was also frequently approached by students with questions. Using words, gestures, manuals, and his own drawings, the instructor assisted students--often beginning a step by way of demonstration, but always turning the project back to the student as soon as he had explained what to do. When students demonstrated understanding, the instructor enthusiastically acknowledged this and encouraged them to carry on. Watching students who had just received help, it was obvious that the explanations/demonstrations had been effective: They proceeded with confidence on the next step of their projects.

There was no off-task behavior observed in either class. Even when students needed help and had to wait their turn to talk with the instructor, they were attentive to what he was saying.

The instructor's manner in dealing with students was very supportive and non-patronizing. His demonstrations involved frequent eye contact with students and checking to make certain they were understanding him. A supportive hand on a student's shoulder while reviewing a drawing or explaining a detail contributed to the positive and encouraging atmosphere.

Researchers consistently note that effective monitoring and reinforcement are grounded in teachers' awareness of what is going on in their classrooms. The shop instructor exhibited this "with-it-ness". While most of his moving around the classroom was methodical and matter-of-fact, he was quick to notice and respond if students were doing anything that might pose a safety hazard or result in their project materials being damaged.

The observer approached a number of students, asking them questions about the class: Why did

you sign up for it? Did you have woodworking experience before taking classes here? Do you like the class? Does it require much math and reading? In general, the students said they signed up for the class either because they thought it would be fun or because older students had told them it was a good class. Some students said they wanted to be carpenters or cabinetmakers. Most had had no previous woodworking experience. All said they like the class, and some volunteered that it was their favorite class. All said that they have to use their math and reading skills a lot, and some went on to describe the specific activities requiring these skills. Students were not asked specifically whether they like the instructor, but several said that they did. As one boy put it, "He makes you work hard, but he's a real good teacher."

Monitoring and reinforcing the learning progress of first graders acquiring basic skills differs greatly, of course, from the way monitoring and reinforcement are carried out in a secondary shop class. Still, it appears that there are some constants which can be observed in both kinds of settings. Both teachers, for example, had a high degree of awareness of what was going on in their classrooms. No students were ignored or allowed to be disruptive or otherwise off-task. Both teachers moved about their classrooms, checking students' work and responding to questions. Both were extremely positive in their interactions with students, encouraging them, conveying confidence in their abilities, and finding accomplishments or improvements to note and reinforce. Both used a variety of methods to keep track of students' understanding/mastery of instruction--choral response, individual response, checking seatwork or benchwork, inviting questions, having students give physical demonstrations of understanding--in addition to the more formal kinds of record keeping and assessment which are not apparent in brief observations such as these. Finally, both teachers conveyed affection and respect for the students and enthusiasm about their learning. Not surprisingly, the students--big and little--responded with positive attitudes and motivation to learn.

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