HOMEWORK

How important is homework in learning? Do teachers assign homework as a supplement to what is taught in class or do they assign it to make up for what they don't have time to teach in class? Is too much homework assigned or not enough? Does homework lead to learning or is it just "filler"?

Internationally, homework assignment at Grade 8 ranges from a low in Sweden, where only 3 percent of students receive math homework three or more times a week, to a high in Cyprus, Greece, Ireland, Lithuania, Romania, and Slovenia, where 98 percent of the students take math work home three or more times per week. In Japan, this proportion is 22 percent. In the U.S., 87 percent of eighth graders take home math homework three or more times per week.[1] In science, the variety among nations is similar but the amount of homework is somewhat less.[2]

- In Ohio, math and science homework is assigned to students slightly more often than the U.S. national average, and about even with international averages.[3]
    - Of Ohio's third- and fourth-grade students, 66 percent receive math homework assignments three or more days per week.
    - The figure rises sharply to 92 percent for seventh- and eighth-grade students and 97 percent for high school seniors.
    - In science, homework is less frequently assigned; 90 percent of third and fourth graders receive science homework assignments less often than once or twice per week.
    - Eighty-three percent of seventh- and eighth-grade science students receive homework one to four times per week.
    - Seventy-eight percent of Ohio's seniors in science classes take home science work four times a week or more.
- Typically, in Ohio and the rest of the U. S., homework consists of repetitive practice exercises. A sampling of U.S. teachers was asked which types of tasks they assigned to students as homework on a weekly basis:[4]
    - Sixty-five percent reported they had students complete routine exercises as homework.
    - Forty-three percent said they assigned tasks that required applying concepts in new contexts.
    - Twenty-three percent assigned project or experiments.
    - Thirteen percent gave problems with no clear solutions.
- As a group, U.S. teachers spend more time reviewing homework in class than teachers in other countries. Teachers in most other countries spend little or no time on homework in class.[5]

Feedback is fundamental to learning, but feedback opportunities can be scarce in the classroom.[6] Students receive credit or grades on tests and essays, but these assessments occur at the end of the assignment or project. Homework, too, should be graded daily. Delayed feedback is of little value. Teachers who assign homework do students a significant disservice if the work is not graded and reworked promptly and returned to the student.

If the learning goal is to enhance understanding and applicability of knowledge, it is not enough to give homework assignments and tasks that focus primarily on repetition, drill, and practice.[7] The major function of homework is to provide formative, constructive assessments along the way—input that gives students opportunities to revise and improve the quality of their thinking and understanding.

Endnotes

1. A. Beaton, I. Mullis, M. Martin, et al., *Mathematics Achievement in the Middle School Years: IEA's Third International Mathematics and Science Study,* Boston College, TIMSS International Study Center, Chestnut Hill, MA, 1996.
2. A. Beaton, M. Martin, and I. Mullis, et al., *Science Achievement in the Middle School Years: IEA's Third International Mathematics and Science Study,* Boston College, TIMSS International Study Center, Chestnut Hill, MA, 1996.
3. NCREL analysis.
4. R. Henke, X. Chen, and G. Goldman, *What Happens in Classrooms? Instructional Practices in Elementary and Secondary Schools, 1994-95,* National Center for Education Statistics, U.S. Department of Education, Washington, DC, 1999.
5. L. Peak, *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Teaching, Learning, Curriculum, and Achievement in International Context: Initial Findings from the Third International Mathematics and Science Study,* National Center for Education Statistics, U.S. Department of Education, Washington, DC, 1997.
6. J. Bransford, A. Brown, and R. Cocking, *How People Learn: Brain, Mind, Experience, and School,* National Academy Press, Washington, DC, 1999.
7. Ibid.

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This work was produced in whole or in part with funds from the U.S. Department of Education under Eisenhower grant number R168R50003. The content does not necessarily reflect the position or policy of the Department of Education, nor does mention or visual representation of trade names, commercial products, or organizations imply endorsement by the federal government.