ED432938 1999-00-00 The Art and Science of Classroom Assessment: The Missing Part of Pedagogy. ERIC Digest.

ERIC Development Team

www.eric.ed.gov

Table of Contents

If you're viewing this document online, you can click any of the topics below to link directly to that section.

ERIC Identifier: ED432938
Publication Date: 1999-00-00
Author: Brookhart, Susan M.
Source: ERIC Clearinghouse on Higher Education Washington DC.| BBB32577 _ George Washington Univ. Washington DC. Graduate School of Education and Human Development.

The Art and Science of Classroom Assessment: The Missing Part of Pedagogy. ERIC Digest.

THIS DIGEST WAS CREATED BY ERIC, THE EDUCATIONAL RESOURCES INFORMATION CENTER. FOR MORE INFORMATION ABOUT ERIC, CONTACT ACCESS ERIC 1-800-LET-ERIC

How does an instructor know whether students are learning what the instructor is trying to teach them? How do students find out how they are doing, and can they use that information to study more effectively? Would students be able to tell what the instructor thinks is important for them to learn by looking at the assignments that "count" in a course? Good assessment yields good information about the results of instruction; it is itself a necessary component of good instruction. Students who do not understand what they are aiming to know and how they will be expected to demonstrate their achievements will not be able to participate fully in managing their own learning. Sound assessment and grading practices help teachers improve their own instruction, improve students' motivation, focus students' effort, and increase students' achievement.

"Assessment" means to gather and interpret information about students' achievement, and "achievement" means the level of attainment of learning goals of college courses. Assessing students' achievement is generally accomplished through tests, classroom and take-home assignments, and assigned projects. Strictly speaking, "assessment" refers to assignments and tasks that provide information, and "evaluation" refers to judgments based on that information.

WHY IS CLASSROOM ASSESSMENT OF STUDENTS'

ACHIEVEMENT IMPORTANT?Students should be able to tell what the instructor thinks is important for them to learn by looking at a course's tests, projects, and other assignments. These assessments are an instructor's way of gathering information about what students have learned, and they can then use them to make important decisions--about students' grades, the content of future lessons, the revision of the structure or content of a course or program. Thus, it is important that student assessments in higher education classes give dependable information.

HOW CAN AN INSTRUCTOR ENSURE THE QUALITY OF

INFORMATION FROM CLASSROOM ASSESSMENTS?Information from classroom assessments--grades, scores, and judgments about students' work resulting from tests,

assignments, projects, and other work--must be meaningful and accurate (that is, valid and reliable). The results of assessment should be indicators of the particular learning goals for the course, measuring those goals in proportion to their emphasis in the course. An instructor should be confident that students' scores accurately represent their level of achievement. "The Art and Science of Classroom Assessment" describes five different kinds of learning goals or "achievement targets": knowledge of facts and concepts (recall); thinking, reasoning, and problem solving using one's knowledge; skill in procedures or processes, such as using a microscope; constructing projects, reports, artwork, or other products; and dispositions, such as appreciating the importance of a discipline. Different methods of assessment are better suited for measuring different kinds of achievement.

WHAT METHODS OF ASSESSMENT ARE PARTICULARLY SUITED TO VARIOUS

ACHIEVEMENT TARGETS, AND HOW ARE THEY CONSTRUCTED, ADMINISTERED,

AND SCORED?Four basic methods of assessment are presented: paper-and-pencil tests, performance assessments, oral questions, and portfolios. Paper-and-pencil tests are the most commonly used form of assessment in higher education. Performance assessments are tasks and associated scoring schemes ("rubrics") that require students to make or do something whose quality can be observed and judged. Oral questions are commonly asked in the context of classroom discussions, more often in smaller seminar-style classes than in large lecture sections. Portfolios are collections of students' work over time, according to some purpose and guiding principles; they usually include students' reflection on the work. "The Art and Science of Classroom Assessment" provides suggestions about writing good tests, performance tasks, oral questions, and portfolio specifications, and about constructing scoring schemes that examine performance according to learning goals. Two kinds of scoring--objective, requiring a right/wrong or yes/no decision, and subjective, requiring judgments of quality along a continuum--and principles for devising scoring schemes and examples are described.

HOW CAN THE RESULTS OF SEVERAL ASSESSMENTS BE MEANINGFULLY

COMBINED INTO ONE COMPOSITE GRADE?Grading usually requires constructing one score or judgment from several scores on various assignments and tests. The combination must be valid and appropriately weight the scores of various components according to their places in the instructor's intentions for the course. A set of good assessments can be rendered into an invalid grade if the individual scores are not

carefully combined. Four methods of determining final grades serve different grading purposes an instructor might intend, depending on the course: the median method, weighted letter grades, total possible points, and holistic rating.

The topic of grading is found in the higher education literature, largely under discussions or studies of "grade inflation." A review of the recent literature on grade inflation may yield some surprises for readers. Although grade inflation is a concern at the present time, previously during this century writers expressed some concern about grade deflation. Several authors have raised related issues that suggest the topic is more multifaceted than the straight-line function the term "inflation" implies: issues about the nature of education, differences in grades among the disciplines, and the noncomparability of grades in different historical periods.

IN WHAT AREAS MIGHT FACULTY IMPROVE THEIR ASSESSMENT SKILLS,

AND WHAT RESOURCES ARE AVAILABLE TO HELP?Assessment of students' work in higher education classrooms is important--and important to do well. One science professor has been heard to comment that professors sometimes measure the specimens in their labs more accurately than they measure the students in their classrooms, yet important human consequences follow from both. Faculty members who wish to improve their skills in assessment can find some good resources already available, some of the best of which are recent books and articles, and easily obtained materials on the Internet. The Art and Science of Classroom Assessment summarizes some of what the author thinks are the best "next step" resources for readers.

WHAT CONCLUSIONS CAN BE DRAWN FROM THE REVIEW OF THE LITERATURE?

The literature on principles of classroom assessment has been written mostly for K-12 education. The Art and Science of Classroom Assessment uses examples and discusses assessment contexts relevant to college courses and young (and not-so-young) adult students. Empirical studies of classroom assessment in higher education underscore the importance of instructors' fairness, clarity in tests, assignments, and scoring, and clear descriptions of the achievement target or learning goal in higher education classrooms. More studies are needed that investigate the needs, types, results, and effectiveness of assessment in higher education and that tie the findings to theories about adult learners. Some excellent resources presently exist for helping instructors design and conduct valid, reliable, fair, and interesting assessments of students' work--a crucial function in higher education classrooms.

References

Crannell, A. (1994). How to grade 300 mathematical essays and survive to tell the tale.

PRIMUS, 4(3), 193-204.

McClymer, J. F., & Knoles, L. Z. (1992). Ersatz learning, inauthentic testing. Journal on Excellence in College Teaching, 3, 33-50.

Nitko, A. J. (1996). Educational assessment of students (2nd ed.). Englewood Cliffs, NJ: Merrill.

Ory, J., & Ryan, K. (1993). Tips for improving testing and grading. Newbury Park, CA: Sage.

Rodabaugh, R. C., & Kravitz, D. A. (1994). Effects of procedural fairness on student judgments of professors. Journal on Excellence in College Teaching, 5(2), 67-83.

Walvoord, B. E., & Anderson, V. J. (1998). Effective grading: A tool for learning and assessment. San Francisco: Jossey-Bass.

This ERIC digest is based on a full-length report in the ASHE-ERIC Higher Education Report series, 27-1, The Art and Science of Classroom Assessment: The Missing Part of Pedagogy by Susan M. Brookhart. This report was prepared by the ERIC Clearinghouse on Higher Education in cooperation with the Association for the Study of Higher Education and published by the Graduate School of Education and Human Development at the George Washington University. Each report is a definitive review of the literature and institutional practice on a single critical issue. Many administrators subscribe to the series and circulate reports to staff and faculty committees with responsibility in a report's topic area. The eight issue series is available through subscription for $144.00 per year ($164.00 outside the U.S.). Subscriptions begin with Report 1 and conclude with Report 8 of the current series year. Single copies, at $24.00 each, can be ordered on-line at http://www.eriche.org/Reports and by writing to: ASHE-ERIC Higher Education Reports, The George Washington University, One Dupont Circle, Suite 630, Washington, DC 20036-1183, or by calling (800) 773-3742, ext. 13. Catalog available on-line and by mail. The mission of the ERIC system is to improve American education by increasing and facilitating the use of educational research and information to effect good practice in the activities of learning, teaching, educational decision making, and research, wherever and whenever these activities take place. This publication was partially prepared with funding from the Office of Educational Research and Improvement, U.S. Department of Education, under contract no. RR-93-00-0036. The opinions expressed here do not necessarily reflect the positions or policies of OERI or the department. Permission is granted to copy and distribute this ERIC-HE Digest.

Title: The Art and Science of Classroom Assessment: The Missing Part of Pedagogy. ERIC Digest.
Note: For the full report, see HE 032 245.

Document Type: Information Analyses---ERIC Information Analysis Products (IAPs) (071); Information Analyses---ERIC Digests (Selected) in Full Text (073);
Target Audience: Practitioners, Teachers
Available From: ERIC Clearinghouse on Higher Education, One Dupont Circle, Suite 630, Washington, DC 20036-1183.
Descriptors: College Students, Educational Assessment, Evaluation Methods, Higher Education, Knowledge Level, Student Educational Objectives, Student Evaluation, Thinking Skills
Identifiers: ERIC Digests
###

[Return to ERIC Digest Search Page]