

## Research on Teaching

JANET EATON

### Selective Elective Teaching

Philip Cusick, a researcher at the Institute for Research on Teaching, studied two comprehensive secondary schools to describe and explain the networks of relations among staff members and to hypothesize about the effects of those networks on curriculum.

Because the two schools were designed to be responsive to students, administrators spent most of their time attending to individual students. Teachers, therefore, created much of the curriculum. Each taught in a way that fit his or her own style, background, opinions, predilections, and interests.

For example, a teacher who was interested in philosophy created an elective course in philosophy and drummed up enough demand to teach three classes per term. A social studies teacher who had majored in geography said that he gets a map into every social studies lesson he teaches and, in effect, teaches geography. An English teacher who loved music created an elective called "Music as Expression."

A teacher's attitude toward the content and method of teaching "was not developed or carried on within a formal or collegial network," said Cusick. "Rather it sprang from the teacher's own relationships, background, personal opinions, outside constraints (such as family obligations) and so on."

According to Cusick, while "there is a quality education to be had in either school, there is nothing to prevent students who lack the sophistication, maturity, or guidance from slipping through the system without even the rudiments of an education. The individual, wheth-

er teacher or student, confronts such a system on his/her own."

For more information see Philip Cusick, *The Egalitarian Ideal and the American High School* (New York: Longman, in press).

### Informed "Gatekeeping"

If a school counselor and a student differ in race, ethnicity, sex, or social class, these cultural differences can result in misinterpretations that influence the counselor's recommendations. So say Frederick Erickson, Institute for Research on Teaching, and Jeffrey Schultz, University of Cincinnati, after studying community college counseling interviews.

Because counselors, like other school personnel, are the "gatekeepers"—people who open and close the gates of social mobility through education and career opportunities—misinformed recommendations can have far-reaching consequences, says Erickson.

Without being conscious of it, counselors and students may misinterpret each other's culturally learned ways of listening and speaking. These subtle miscues make it hard for them to know when it is their turn to talk, when a question is being asked, whether the other understands what's being said, or when a response is expected. The behavior of either person is not unreasonable or bizarre (though it might seem that way to one or both of them) but their actions *together* are not adequately social, reciprocal, and complementary.

The authors suggest that counselors make more small talk. Because finding something in common is easier for people with similar cultural backgrounds, they recommend hiring more minority counselors and letting students choose which counselor they will see.

They also suggest that counselors and other school personnel involved in gate-

keeping become more aware of cultural differences in ways of listening and speaking and of the influences these differences may have on their formal and informal assessments of students and colleagues.

For more information, see Frederick Erickson and Jeffrey Schultz, *The Counselor as Gatekeeper: Social Interaction in Interviews* (New York: Academic Press, 1982).

### Why Small Classes are Better

According to *School Class Size* (1982), "Meta-analyses have uncovered a relationship between smaller classes and increased levels of pupil achievement, increased quality of instruction, and increased levels of teacher morale and pupil attitude." But what makes smaller classes better?

To find out, researchers Cahen, Filby, McCutcheon, and Kyle reduced by one-third the number of students in four classrooms and observed before and after the reduction.

Teachers preferred smaller classes because they could spend more time teaching and less time disciplining students and were able to cover more material in greater depth in some subject areas. Teachers were also able to give more individual help and there was more overall teacher-student contact. Student attention rates went up 29 percent.

The instruction, teaching style, and room arrangement, however, did not change with class size. Write the researchers, "The machinery functioned more smoothly, but the design of the machine remained the same."

For more information see L. S. Cahen, N. Filby, G. McCutcheon, and D. Kyle, *Class Size and Instruction* (New York: Longman, 1983); and G. V. Glass, L. S. Cahen, M. L.

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Smith, and N. Filby, *School Class Size* (Beverly Hills, Calif.: Sage, 1982).

### Basals Evaluated

The Institute for Research on Teaching's Language Arts Project analyzed 1,959 selections in 34 basal reading textbooks to find out what contents students can learn from them. In analyzing the second-, third-, and fourth-grade textbooks, researchers focused on three types of content: subject matter (knowing something), functional (knowing how something works or how to do something), and ethos (knowing to do the right thing). They determined whether each basal selection offered stu-

dents an opportunity to learn substantive content in each of these three categories.

Only 57.1 percent of the selections contained subject matter content; 29.1 percent contained functional content; 12.3 percent contained ethos content. Only 4 percent of the selections contained content in all three categories, and only 16 percent contained content in more than one category.

Comparing publishers, Harcourt, Brace, and Jovanovich had the highest percentage of selections containing subject matter content (72.2 percent), and Ginn had the lowest (39.7 percent). Laidlaw had the highest percentage of

selections containing functional content (18.5 percent); Harcourt, Brace, and Jovanovich had the lowest percentages of selections containing functional content (13.8 percent) and ethos content (3.5 percent).

Such information is important to anyone involved in selecting reading textbooks. For more information see W. H. Schmidt and others, "Educational Content of Basal Texts: Implications for Comprehension Instruction" in *Comprehension Instruction: Perspectives and Suggestions*, ed. G. Duffy, L. Roehler, and J. Mason (New York: Longman, 1983).

## Curriculum Trends: Mathematics

STEPHEN S. WILLOUGHBY

### Home-Made Math Tests in Detroit and New York

Two of the nation's largest school systems are creating their own tests because leaders in those systems believe that problem solving and thinking should be central to a quality mathematics education, and they don't believe the available commercial test materials take problem solving seriously. Creating the tests is more difficult than buying them "off the shelves" but it may be the only way to get commercial test makers to move in directions advocated by most leaders in mathematics education.

Information regarding construction and use of these specially created tests may be obtained from Stewart Rankin, 308 School Center Building, 5057 Woodward Ave., Detroit, MI 48202, or Irwin Kaufman, 131 Livingston St., Brooklyn, NY 11201.

### Math Texts Need More Than "Thumb Tests"

Research indicates that the textbook is the most important determinant of math content taught in the classroom. Although many educators have decried this situation, it is likely to remain so for the foreseeable future. With such in-

structional weight placed on it, how do we ensure the textbook's contribution to quality education?

The National Commission on Excellence in Education cites some main problems with textbooks today: too few experienced teachers and scholars are involved in writing textbooks and many are "written down" by their publishers to ever-lower reading levels in response to perceived market demands. Many books do not challenge students: a recent study by Education Products Information Exchange reveals that a majority of students have mastered 80 percent of the material in some textbooks *before* the books are opened.

Faculty members often use the inadequate "thumb test" in selecting textbooks (riffle through the book quickly with the thumb and reject any book that looks different or seems challenging to teachers or students).

To ensure the use of quality texts, the Commission suggests that publishers furnish evidence of the textbook's quality and appropriateness, based on results from field trials and credible evaluations. Consumers, at least, should ask for such information from publishers and give preference to publishers who have put substantial effort into developing and testing materials.

*How to Evaluate Mathematics Textbooks* furnishes evaluative criteria and is available for \$1.60 per copy (\$1.28 for NCTM members) from the National Council of Teachers of Mathematics,

1906 Association Dr., Reston, VA 22901.

### Math Research Made Direct, Useful

While the quality and quantity of mathematics research has been greater than that in most other subject areas, it has had surprisingly little impact on classroom practice. A major reason often proposed for this lack of impact is the abstruse style and recondite statistics found in most mathematics reports.

Recognizing this problem, the National Council of Teachers of Mathematics has published an easy-to-read booklet, *Classroom Ideas from Research on Secondary School Mathematics*, written by Donald J. Dessart and Marilyn N. Suydam. It reviews recent research findings on teaching algebra and geometry and emphasizes ideas likely to be immediately useful to the classroom teacher. Main ideas are highlighted in boxes throughout the booklet, making for easy and direct access by teachers. The authors explain concepts in depth but do not get bogged down with statistics; for those seeking such detail, a complete bibliography of original reports is provided.

Copies of *Classroom Ideas from Research on Secondary School Mathematics* are available for \$6.00 per copy (\$4.80 NCTM members) from the National Council of Teachers of Mathematics, 1906 Association Dr., Reston, VA 22091.

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