the district's plan for the adoption. This would include an overview of what will happen, when it will happen, why it will happen this way, and who will be responsible. This should prevent misunderstandings from developing into problems as well as keep those involved mentally atuned to the same clock.

2. Provide a review of the latest thinking or research. All the experts agree training should include a review of the latest thinking or research[3] in the subject of study. If those who evaluate textbooks are not aware of what is possible— what could and should be—how can they select something better?

Harriet Tyson-Berstein feels this review of the research should also include a historical/social/political/economic overview of the state textbook adoption process and how this affects textbooks and publishers.

3. Teach how to assess, rank, and define district needs. The most essential training should explain how to determine what is most wanted by the district in a new textbook program. Basically, this is called a "needs assessment," but some felt this term was overused and meaningless. David Elliott describes this step as "learning how to describe the district's educational goals and needs in order to get at what it wants in the curriculum and . . . what they expect the textbook to provide." Jean Osborn says each district "should be aware of achievement problems. The textbook selection should be directed toward solving the biggest problems." Whatever they are called (needs, goals, wants, problems,

expectations, or criteria), once these items are identified, they must be ranked in order of importance[4]—for all the experts agree evaluation should be in-depth and should focus on a manageable, realistic number of items. ("Manageable numbers" ranged from three to six items.)

Jean Osborn gives this as an example: if you know the students in your district have a problem with vocabulary, and they're not getting the support they need from parents, then evaluation of textbooks for instruction and use of vocabulary becomes important for that district. In another district, where it's not a problem, it needn't be evaluated.

The experts also emphatically agree that whatever is evaluated must be clearly defined by the selection committee so that all committee members evaluate new textbooks "through the same lens." Roger Farr recommends that committees examine both good and bad examples of each item to be evaluated, so that all members have the same points of reference in looking at the new textbooks.

4. Teach how to evaluate textbooks. Finally, training should include how to evaluate new books. Although there is disagreement on what is *most important* to look for, all experts feel that committees must look beyond the terminology, publicity, copyright, readability formulas, and labels—and focus on the kinds of thinking each textbook demands of children and the clarity of information for the district's target population.

Specific topics of training these individuals recommend include: identifi-

cation of what textbooks can and can't do—and what a good book should do well; how students learn and how textbooks contribute to students' acquisition of knowledge; techniques for trying to see the books through the eyes of a child; and ways of analyzing the quality of writing and instructional design.

Most important, all of the above training should happen *before* committee members begin to examine any new textbooks.☐

1. Interstate Consortium on Instructional Materials, March 1984, Tallahassee, Florida; and Textbook Reform: A Cooperative Agenda, June 1985, Washington, D.C.
2. These individuals include Bonnie Armbruster, Jan Dole, David Elliott, Roger Farr, Connie Muther, Jean Osborn, Harriet Tyson-Bernstein, and Arthur Woodward. In next month's column, I'll identify their special areas of interest and how they can be contacted for more information.
3. Suggested sources of research summaries appear in "Reviewing Research When Choosing Materials," *Educational Leadership* 42 (February 1985): 86.
4. I use a *3 = high, 0 = low* ranking system for a large number of items, with a maximum number of points allowed. The maximum number is determined by multiplying the number of items by 1 1/2. Such a ceiling on total points forces the group to make real choices between items of most importance.

Please send questions, ideas, responses, or suggestions for this column to **Connie Muther**, director, Textbook Adoption Advisory Services, 25B Esquire Dr., Manchester, CT 06040.

Technology

Lewis A. Rhodes

Getting Off the Anti-Bandwagon Bandwagon

It's happening again! Within a predictable number of years after a new idea is introduced in education, articles and speeches begin to appear deriding educators for climbing aboard every passing bandwagon. This time it is

computers. With increasing frequency, cautions such as these appear.

We must not be swept away with the emotions of the moment for the panaceas of the month.

We're apparently content to project casually into the future the facts of today, which always masquerade as the trends of tomorrow.

The serious question these concerns bring up is *not* why some educators appear to be seduced by new ideas, but why other educators feel they have to put them down. Just what is a "bandwagon," and who is being taken for a ride?

Bandwagons, and the innovations

Trends

for which they serve as metaphors, are vehicles of hope. In them an individual glimpses a possibility of moving toward a personally important educational goal. They carry hope because they suggest relevant new possibilities at times when our strong sense of purpose is matched only by our lack of confidence in conventional approaches.

But there are often more critics than there are bandwagons. Perhaps the bandwagon critics look upon those who build them as dreamers—ensconced in the pleasant land of what-might-be instead of bridging the gap between dreams and reality in schools. Perhaps the critics play only a zero-sum game in which if one idea wins, another has to lose. Perhaps the critics don't realize, that it's the crowds by the side of the road that actually determine the course of the parade, even while they criticize its direction.

Critics not withstanding, today's technology bandwagon is rolling forward even though we cannot perceive its ultimate destination. Most people see only the more visible surface characteristics of the technology—what it does, and the results it produces. Yet we know from history that institutions and society change when people within them change because an innovation has had a personal consequence. Thus, organizations change as a consequence of the people in them meeting their needs in new ways.

But one critical factor constrains our ability to see the ways in which new technologies can extend and empower us. Education is one of the only institutions for which society provides tools for the *clients* rather than the *workers*. Television in the 1960s provides a good example. Then, as now, educators suffered from a wide range of problems that were essentially problems of communication—of moving information rather than people. Yet we were attracted to television's ability to deliver information to the student clients. The other communication problems of schools remained untouched by the medium and, in the end, drove out effective use of television even for instruction.

Until society provides computers for teachers and principals as readily as for students, it will be difficult to discover the personal, human consequences of technology which will change and improve schools for students. However futurists may try, they cannot wholly anticipate the consequences of a technological tool. The important thing to predict, to paraphrase Isaac Asimov, is not the automobile, but the shopping center; not television, but people behaving as though problems halfway around the world were happening on the next block; not computers in education but a curriculum and school organization in which both the adults and children better meet their needs. Nothing is more powerful than the conceptual leap one experiences when one suddenly realizes that what was a hope is now a possibility, that what once was a problem can now be solved.

There is hope for education if we use the new tools that are available to us today to enhance and empower education's major resource—the human beings who care about, and for, children. That's a bandwagon worth riding.□

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Reviews

Improving Student Achievement Through Mastery Learning Programs
Daniel U. Levine & Associates
San Francisco:
Jossey-Bass Inc., 1985.

—Reviewed by David Squires, Red Bank Public Schools, Red Bank, New Jersey.

A comprehensive discussion of the successes and the problems of implementing mastery learning, this book provides essential reading for educators and school board members who are considering adoption or refinement of any structured curriculum. Two introductory chapters summarize essential components of mastery learning, and the remaining chapters focus on learning activities, reading, supervision, management, teacher reactions, testing, grouping, and case studies. Needed is a chapter on the criteria for choosing objectives or units. Longitudinal student achievement data from a number of school systems indicate that mastery learning has improved student achievement, just as the case studies indicate that there is no "quick fix."

Available from Jossey-Bass Inc., Publishers, Dept. 62425, P.O. Box 62000, San Francisco, CA 94162–0425, for $23.95.

Indicators of Precollege Education in Science and Mathematics
Edited by Senta A. Raizen and
Lyle V. Jones
Washington, D.C.:
National Academy Press, 1985.

—Reviewed by John D. McIntyre, Southern Illinois University, Carbondale.

Everything you might wish to know about the current state of affairs in elementary and secondary education science and mathematics is contained in *Indicators of Precollege Education in Science and Mathematics*. This study examines research on science and mathematics teachers, curriculum content, instructional time and course enrollment, and student outcomes. The authors offer recommendations for continued research and monitoring of these indicators. Educational reformers, curriculum directors, and