Reviews

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Ellner and Barnes have written a book that will interest people who work in teacher preparation programs and those who are involved in in-service education as well as educators who are interested in the processes of educational innovation. These authors describe what happened in a novel experimental approach to teacher preparation at the Claremont Graduate School (California) during the period 1970-1972. They also give some personal accounts of the participants during their two years in the program and in the ensuing four years.

A major purpose of the program was to prepare teacher candidates to plan and carry out new educational programs that would be functional for disadvantaged children. Thus, the first year of the program consisted of courses and other experiences that would provide a basis for planning new school programs. In the words of the authors, "Through study in the social and behavioral sciences, the students were able to gain a broad theoretical perspective about problems associated with cultural differences and the effects of poverty upon a society" (p. 9). The fifteen participants took two courses together, one in social psychology and the other in anthropology. Other courses and experiences during the first year were individually selected depending upon individual interests and perceived needs.

The end product of the first year's activities was to be a summer "minischool," conceived by and carried out by small groups of the teacher-candidates. How they planned these minischools and operated them constitutes the major portion of the book. "Live Oak" was created as a school for teenagers in a housing development. "The Black School" was (as its name indicates) a high school program for black youth. "La Escuelita" was developed for preschool Chicanitos in a predominantly Chicano neighborhood, as were "La Palmas" and "Ramona." The "Urban Studies Workshop" was created by three candidates (who were Russian-American, Jewish-American, and Afro-American respectively) for youth who were identified as alienated in a traditional school setting.

How each group went about its planning, the problems they encountered, and the sense of frustration and reward each one experienced are all presented in a lucid and engaging manner. Ellner and Barnes have avoided the usual pitfalls of educational innovators, that is, the account is neither dry and pedantic nor is it self-serving. I found that it caused me to think of ways that their experiences could be incorporated into our teacher preparation program and into curriculum planning with school districts. It was helpful in both respects. It is unusual to find a book in education that is instructive, or lively, or just plain fun to read. Schoolmaking is all three.


During the past year or so, the New York Times, The Saturday Review, CBS's Evening News, and
countless other newspapers and magazines have enthusiastically reported the results of Neville Bennett’s study of open and traditional teaching in England. Interestingly enough, the same reporters have completely ignored the publication of not one study, but rather the careful synthesis and analysis of 200 or so studies completed in both Britain and the United States during the past 15 years dealing with the same topic Bennett and his colleagues addressed themselves to.

Robert Horowitz’s Psychologi
cal Effects of Open Classroom Teaching on Primary School Children: A Review of the Research is a meticulously well organized and thorough summary of what research seems to say about the effectiveness of open education. The studies themselves are conveniently categorized into sections dealing with academic achievement, self-concept, attitude toward school, creativity, independence and conformity, curiosity, adjustment and anxiety, locus of control, and cooperation. Each category includes data on criteria for school selection, sampling, measures, and results.

This complete and thorough work, though far less strident than Bennett’s single study, quietly but consistently leads one to the conclusion that in Horowitz’s words, “The open classroom sometimes has measurable advantages for children, and it sometimes appears to make no measurable difference. It rarely appears to produce any measurable harm.”

This may not be the winning endorsement of child-centered classrooms that some of us would like to see. On the other hand, it is a long, long way from the negative results reported so broadly in Bennett’s study.

I have written a great deal this year about the Bennett study, and in particular, I was very critical about much of its methodology. I am certain that a careful scrutiny of many of the studies reported by Horowitz would also reveal a number of methodological flaws. This, in my opinion, is largely a reflection of the relatively primitive state of the “science” we have come to accept so readily in education and other related fields.

Nevertheless, one cannot help but wonder why a summary such as Horowitz’s goes largely ignored while a single, exceedingly flawed study is reported everywhere as something approaching the definitive word on open education. One is forced to the conclusion that personal bias and bandwagonism far outweigh objectivity in the media’s coverage of the field of education.


Lakatos argues that mathematicians no longer question the nature of mathematical truth and that this refusal to re-examine the character of mathematical discovery entails serious detrimental consequences both for the teaching of mathematics and for its advancement as a field of knowledge.

Lakatos believes that mathematical discovery evolves in much the same way as does scientific discovery. In true Popperian fashion, Lakatos argues that what happens in mathematical discovery is that several hypotheses are generated, and that then mathematicians attempt to eliminate those hypotheses that lead to contradiction. Only that hypothesis or set of hypotheses that is not eliminated becomes a legitimate candidate for inclusion in our present knowledge of mathematics.

Certainly there are many occasions in the history of mathematics that seem to suggest that there might be something to this argument. For example, there were numerous attempts by mathematicians and philosophers to show that the fifth axiom of Euclid did not need to be treated as a postulate. As each successive attempt failed, mathematicians became generally more convinced that Euclidean geometry was not only sound, but in some sense, theoretically invincible. However, the hypothesis that there could not be a non-Euclidean geometry was refuted by the development of such geometries by Lobatschewsky, Bolyai, and Gauss.

Lakatos believes that the formalists—deductivists as he calls them—are mistaken in treating mathematics as a game whose basic rules are set down once and for all. If such were actually the case, then the activity of doing mathematics would amount to no more than simply mapping out the logical geography of mathematics as determined by a single set of generative rules for mathematical proof. Lakatos seems to liken mathematics not to a game whose limiting procedural rules are complete, but to one in which new rules may be developed and old rules eliminated. To impose the formalists’ limitations on the doing of mathematics will, Lakatos believes, preclude many novel developments.

From a pedagogical point of view such an approach to mathematics tends to preclude the student from experiencing the charm and personality of mathematics. To illustrate the above argument Lakatos devotes the body of the book to a hypothetical classroom discussion of the properties of a polyhedra. Through this device the reader is able to watch, as it were, as individual hypotheses are developed, modified, refuted, or con-

firmed. The classroom discussion demonstrates not only how it is that mathematical discovery comes about, but how one might go about initiating students into the activity of creating mathematics.

I believe teachers of mathematics from junior high school through college may benefit immensely from a careful perusal of Proofs and Refutations. Although Lakatos died before completing his editing of the work, editors John Worrall and Elie Zahar are to be commended for their preserving the author's intent and style adding only their own helpful comments in the form of notes and suggestions.

The Recorded Anthology of American Music. New World Records, New York, New York. (A 100-disc anthology that may be purchased only by educational or nonprofit institutions, or as gifts to be donated to an educational or nonprofit institution.) —Reviewed by Clark Dobson, Associate Professor, Department of Education, George Mason University, Fairfax, Virginia.

On the Potomac River side of the Kennedy Center for the Performing Arts in Washington, D.C., the visitor will find the following words of the late President inscribed in heroic-sized letters:

"I am certain that after the dust of centuries has passed over our cities, we, too, will be remembered not for victories or defeats in battle or in politics, but for our contribution to the human spirit."

When the fireworks of the Bicentennial had passed, it was reassuring to receive some tangible proof that our contributions to the human spirit were also part of the celebration.

New World Records, assisted by a grant from the Rockefeller Foundation, plans to issue 100 albums of representative American music. These records, to be issued in groups of ten until the end of 1978, will include new and archival performances of popular, folk, and classical music representing the breadth, diversity, and significance of our musical heritage.

The remarkable history of American music is often given short shrift by historians and concert halls. Good examples of the neglect are amply provided in the first ten albums issued in the Anthology:

- The Birth of Liberty: Music of the American Revolution
- Songs of Earth, Water, Fire and Sky: Music of the American Indian
- The Pride of America: The Golden Age of the American March
- Sound Forms for Piano: Experimental Music by Cowell, Cage, Johnston, and Nancarrow
- Charles Tomlinson Griffes: Selected Works
- Fugues, Fantasia and Variations: Nineteenth-Century American Concert Organ Music
- Sissle and Blake's Shuffle Along: An Archival Re-creation of the 1921 Production Featuring Members of the Original Cast
- When I Have Sung My Songs: the American Art Song 1900-1940
- Maple Leaf Rag: Ragtime in Rural America
- Bebop

The first six records listed were newly made for the Anthology. They are excellent performances, beautifully recorded. From a very good selection, two specific gems must be singled out for special comment. The Charles Tomlinson Griffes album honors a gifted, but neglected, American composer, and includes some previously unrecorded works. A splendid performance by Seiji Ozawa and the Boston Symphony Orchestra, Phyllis Bryn-Julson, Sherrill Milnes, Olivia Stapp, and the New World Chamber Ensem-


