

BOOKS REVIEWED

Activities in Mathematics First Course & Second Course

Johnson, Hansen, Peterson, Rudnick, Cleveland, Bolster

Publisher - Scott, Foresman & Co. (now Gage Publishing Limited), Price \$7.90.

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The topics covered in these books are patterns, numbers, measurement, probability, graphs, statistics, proportions, and geometry.

The teacher's edition introduces each broad topic with a comprehensive overview. For each activity to be used in relation to the topic there is provided the objectives, an overview, a list of necessary materials, and practical procedures.

The students' books are very attractive and the vocabulary is very readable. The activities used to develop the desired understandings and concepts deal with contemporary issues of high interest to students. To avoid the monotony of drill, many activities are introduced using games. Emphasis is placed on student involvement. Among activities used to develop each topic are those that will interest and challenge students with a wide range of mathematical ability.

These books should prove of particular interest to students at the elementary and junior high school levels that have found mathematics to be difficult and uninteresting.

The textual material is supplemented with an excellent set of duplicating masters and overhead visuals.

A Symposium on the Evaluation of Modern Mathematics Curricula - A Report

D. Alexander, University of Toronto

J. Beamer, University of Saskatchewan

W. Higginson, Queen's University

At the International Congress of Mathematicians, Vancouver, August 21-29, 1974, a three-day symposium was organized by the International Commission on Mathematical Instruction (I.C.M.I.) to discuss evaluation of Modern Mathematics Curricula. Reports were presented by representatives of the United Kingdom, Russia, Poland, Brazil, Japan, India, U.S.A., Canada, Germany, Denmark, and Hungary with a general discussion on the topic on the third day. An official report will be sent in due course to all affiliated organizations (in Canada, the Canadian Mathematical Congress). The following reflects the impressions of the Canadian representatives.

There appeared to be general agreement that initial evaluations conducted in the experimental phases of the new curricula had been favorable while the eval-

uations became less significant as the curricula were expanded to encompass more schools. Reference was made to three factors which could explain this: 1) the reduction in the selectivity of the secondary and tertiary student bodies which coincided with the introduction of the new programs in most countries; 2) the lack of adequate teacher training for implementing the new programs; 3) the inability to define "modern mathematics curricula" (is it primarily content or method; what content, what method?).

The only large-scale study reported was the National Longitudinal Study of the U.S.A. where the most important factor determined was the teacher. No characteristics were identified for the effective teacher and the effectiveness of the teacher was not consistent in successive years. It is expected that the National Assessment of Educational Progress will contain some evaluation of mathematics curricula in the U.S.

In the U.K. a study is just being undertaken which will be an observational type rather than statistical. There is a definite feeling that large-scale statistical studies are doomed to failure because of the many uncontrollable variables involved.

Dr. Christiansen (Denmark and UNESCO) emphasized the need for evaluation of curricula on the basis of well-established goals (i.e. the goals of a developing country like Brazil, where illiteracy is a major problem, are entirely different from those of the U.S.A.). He also referred to his experience with UNESCO as impressing him with the impossibility of successfully 'transplanting' curricula. "Each country must find its own salvation."

The Polish answer to teacher training was enlightening. At 4 p.m. on a given day each week, every elementary teacher will be required to watch an in-service T.V. program and assignments will be marked weekly by the local superintendent. This is one way of solving the teacher training problem. (It was not clear what happens to delinquents.)

Although no conclusions were reached on the evaluation of the modern mathematics curricula or on how such evaluation should take place -- or indeed even whether it should take place -- the symposium did provide a forum for an exchange of information and opinions on an international level and was valuable for this alone.

The ICMI is a commission of the International Mathematical Union. Canadian representation is through the Canadian Mathematical Congress. Dr. A.J. Coleman, President of the CMC, hopes to institute a mechanism for making this representation more effective in the future through the formation of a national committee or commission for mathematics education. It is hoped that he will find the support, political and financial, for such a committee.

A new booklet, *The Overhead Projector in the Mathematics Classroom*, by George Lenchner, describes how to get the most out of this ubiquitous but under-used aid. Describing precisely what materials to use, how to design and make them, and how to present them effectively, this booklet helps the classroom teacher make optimum use of his overhead projector. With many detailed diagrams and two-color illustrations, plus an extensive list of suppliers, this is a practical as well as an imaginative guide. The handy 32-page booklet is available from NCTM for \$1.10.