

**Comments on UNESCO "The Teaching of Mathematics
at the Secondary Levels" Preliminary Edition, June 1965**

Merten M. Hasse

The purpose of this book is to bring together the latest trends in the teaching of secondary mathematics, both in content and method. Source material has been derived from programs current in many different countries and represents a good cross-section of what is happening around the world.

The philosophy and ideas are presented as a balance between the three objectives of secondary mathematics: a) Providing the pupil with the minimum knowledge deemed necessary for any educated man; b) Equipping him for various practical activities; c) Affording a preparatory training which will enable him to undertake higher or university studies. (See page 18). A very wholesome attitude is expressed on page 9: "We do not want to have anything in common with one whose aim is to inculcate into children as much mathematics as possible, whether the latter like it or not. The primary aim of mathematics teaching is and should be to arouse interest in mathematics. This achieved, hard work may also be required; failing this, even the slightest amount of mathematics will be found difficult."

The editors have drawn from authors and recommendations of mathematical societies from several countries. There is recognition that situations in different countries and communities vary a great deal. As an example, Calculus usually is not taught in the general high schools most common in the United States, but is considered a college subject. Only in special "high schools of

science" is a thorough course in Calculus taught at the secondary school level.

There is the recognition that new emphasis is being placed on precision of terminology, proof, structure, and discovery as against rote memory and drill.

There is a warning against tacking on some "modern" mathematics at the end of a traditional program; rather, many mathematical concepts can be taught at an earlier age. (There is an urgent need for a study similar to this book in Elementary School mathematics and the results used to provide closer articulation between elementary and secondary mathematics.)

Aside from minor and obvious typographical errors, the book is written in good, understandable English. It can be supposed that the editions in other languages are as good.

A truly meaningful evaluation of each of the expositions and problems offered as examples would, in some cases, require testing in the classroom as a basis for suggesting specific changes or improvements. However, the scope of topics with specific examples gives a comprehensive picture of the "new" or "modern" programs which are remarkably similar in many countries, an exception being that in the United States the students in the general high schools do not go as far in mathematics as do the students in European and Oriental high schools which are more likely to be university or technical college preparatory.

Although the introduction of the book mention^s

the scope of the book as comprising both content and methods, by far the greater emphasis is on objectives, curricula, and syllabi of experimental programs. There is a brief mention of visual aids and programmed instruction. But how can a book describe teaching methods in detail? They will vary with the teacher, the kinds of pupils, the community, and other situations. It is difficult to learn teaching methods from a book; "on-the-job" training is the best way. Perhaps the next best way is to observe a master teacher in action, or witness a televised or filmed teaching session. (Several excellent films on teaching mathematics are available in the United States; those with Dr. Max Beberman of Illinois are especially good.)

The committees in Korea dedicated to the im-

provement of mathematics teaching can use this book to great advantage by selecting the topics and curricula most appropriate to the needs of the country and the communities. The committee should also urge that training in the "new" mathematics be given to the young people in their teacher training courses and that opportunities be afforded to provide in-service training or summer institutes for experienced teachers who need updating.

I am looking forward to the publication of the revised edition of this book and intend to use it in my teacher training course in the United States.

(美國 South Dakota 大學校 教授)

『數學教育』過號案內

各級學校의 算數·數學科 教育課程, 全國數學教育研究大會의 記錄, 새로운 數學用語, 外國의 數學教育現況 및 動向, 數學教育史, 大學入試 數學問題 懇談會의 記錄, 教具製作, 各級學校의 學習指導의 實際問題點, 새로운 教育理論 및 思想, 教育課程改訂의 問題點 등 80 여편의 論文이 실려있는 本會誌『數學教育』의 지난 연도분이 얼마남지 않았읍니다. 過年分을 必要로하는 分은 다음과 같이 申請하기 바랍니다.

區 分	會 員	非 會 員
1號—3號(1963年度分)	會費 100 원	每號 50 원
4號—7號(1964年度分)	會費 200 원	每號 80 원
9號—10號(1965年度分)	"	"

※ 1963年度分은 現在 80部밖에 남지 않았읍니다.

申請處 韓國數學教育會 事務局 (대체 서울 553번)