

## DESIGNING A MATHEMATICS CURRICULUM

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### Abstract

A decade of PMRI saw the changes in the classroom in some of the primary schools in Indonesia. Based on observation, we can say that though the mathematics syllabus in Indonesia did not change, its curriculum has changed under the movement of PMRI. In this article, we put in writing some of the experience gained through the involvement in designing curricula since 1971. Hopefully, some of the observations made may be of use to the colleagues in Indonesia. The discussion below will cover some deciding factors in designing a curriculum, some practices, and the latest trends. For convenience, we keep the discussion general, and do not refer to a specific syllabus. Also, in many cases, we refer mainly to secondary schools, that is, Grade 7 to Grade 10.

**Key words:** PMRI, syllabus, mathematics curriculum, assessment, modelling

### INTRODUCTION

A decade of PMRI saw the changes in the classroom in some of the primary schools in Indonesia. PMRI stands for Pendidikan Matematika Realistik Indonesia or Indonesian Realistic Mathematics Education. For a report on PMRI, see Sembiring et al (2010). We often refer to syllabus as an official document which describes what to teach in schools. We may refer to curriculum as the package of a syllabus together with the implementation tools such as textbooks and resource materials for teacher training. Then we can say that though the mathematics syllabus in Indonesia did not change, its curriculum has changed under the movement of PMRI. Naturally, the next topic of interest is the design of a mathematics curriculum encompassing PMRI.

Historically, say before the World War II or before 1945, syllabus was nothing but a collection of exercises, and teaching is nothing but going through the exercises. Afterwards, there was a textbook and teachers followed the textbook. The so-called syllabus at the time was exam syllabus, which consisted of a single sheet of items in mathematics designed for students taking a public examination. Now, a syllabus, or