Chapter 1

Introduction

Background of the Review

1.1 Mathematics is a major subject in HK primary and secondary schools. The existing school mathematics curriculum comprises seven different subjects at different levels of schooling. Before the re-structuring of CDC in September 1999, the relevant syllabuses were under the ceilings of four different CDC subject committees[2], each of which is responsible for their own stage of schooling and scope of study. There were frequent calls from different mathematics education sectors for better co-ordination of the various mathematics syllabuses at primary, secondary and sixth form levels. These views were shared by members of various subject committees. The proposal of conducting a holistic review of the mathematics curriculum was therefore endorsed by CDC on 18 April 1997.

1.2 The Ad hoc Committee was subsequently set up by CDC in July 1997 to conduct the holistic review. The target of the review is to make recommendations to CDC on ways of enhancing continuity and intra-level coherence of the mathematics curriculum at various levels based on sound academic principles and practical demands. The Ad hoc Committee was expected to submit its final report to CDC by the end of 1999.

Terms of Reference of the Ad hoc Committee

1.3 The terms of references of the Ad hoc Committee are:

(a) To review the aims and objectives of mathematics education from P.1 to S.7.
(b) To review the mathematics syllabuses at different levels with particular attention to curriculum continuity and coherence.
(c) To initiate researches and surveys in support of the review.
(d) To propose the implementation strategies of the various syllabuses and to make recommendations on the need of teacher education and the provision of resources.

[2] The four CDC subject committees are: CDC Mathematics Subject Committee (Primary), CDC Mathematics Subject Committee (Secondary), CDC Mathematics Subject Committee (Sixth Form) and CDC Applied Mathematics Subject Committee (Sixth Form).

(e) To report the recommendations to CDC in due course.

Membership of the Ad hoc Committee

1.4 The membership of the Ad hoc Committee was as follows:

Chairman	Dr. WONG King-keung Member Hong Kong Airport Authority
Vice-chairman	Dr. LEUNG Yat-ming Chief Executive The Curriculum Development Institute, ED (until 5.2.1998)
	Mrs LAI LAU Sui-kuen, Lily Acting Chief Executive The Curriculum Development Institute, ED (6.2.1998 – 6.9.1998)
	Dr. CHAN Ka-ki, Catherine Chief Executive The Curriculum Development Institute, ED (since 7.9.1998)
Members	Mr. CHAN Kwok-wai Teacher Tai Po Government Primary School AM Teacher
	Mr. CHAN Wai-chung Vice-Principal St. Francis Xavier' s School, Tsuen Wan
	Prof. CHENG Shiu-yuen Head Department of Mathematics The Hong Kong University of Science & Technology
	Mr. FUNG Chi-yeung Senior Lecturer Department of Mathematics The Hong Kong Institute of Education
	Mr. HO Yue-shun Principal King' s College

	Mr. LEE Siu-hok Principal SKH Tin Wan Chi Nam Primary School
	Dr. SHEN Shir-ming Dean Faculty of Social Sciences The University of Hong Kong
	Deputy Director School of Professional and Continuing Education The University of Hong Kong (since January 1999)
	Mr. SIU Chung-leung Vice-Principal Shue Yan Secondary School
	Mr. TSANG Kin-wah Principal Inspector The Advisory Inspectorate Division, ED
	Mr. WAN Tak-wing Subject Officer The Hong Kong Examinations Authority
	Dr. WONG Ngai-ying President The Hong Kong Association for Mathematics Education
Secretary	Mr. LEUNG Shiu-keung Principal Inspector The Curriculum Development Institute, ED (until 31.3.1999)
	Mr. KWAN Siu-kam Principal Curriculum Development Officer The Curriculum Development Institute, ED (since 1.4.1999)

Mission of the Ad hoc Committee

1.5 The mission of the Ad hoc Committee is to review holistically the mathematics curriculum of HK and develop a conceptual framework and guidelines for designing a coherent, challenging, balanced and flexible mathematics curriculum, with application in

real-life situations, which enables students to be developed as creative thinkers and helps equip them with suitable mathematical power for life-long learning so that they can remain to be competitive in the society of the 21st century. The Ad hoc Committee also enhances continuity and intra-level coherence of the mathematics curriculum at various levels and suggests viable implementation strategies to improve the quality of teaching and learning of mathematics.

Approach of the Review

1.6 During the period from July 1997 to December 1999, a total of 22 meetings were held. Apart from that, two briefing sessions on 16 December 1998 and 28 June 1999 to news media for publicizing the progress of the holistic review and one public forum on 16 December 1999 to primary and secondary school teachers for collecting feedback were conducted.

1.7 In conducting the review, the Ad hoc Committee focused its attention on the aims and objectives of the school mathematics education. It proposed to conduct researches and surveys to provide support and to substantiate the review. The Ad hoc Committee also expressed keen concern in the implementation strategies of future syllabus revisions, the need for teacher education and the provision of adequate resources.

1.8 The Ad hoc Committee has accomplished three major tasks. First, it gathered general information about teaching and learning of mathematics in HK and overseas. Academics from education institutions were invited to make presentations in the meetings. Second, the Ad hoc Committee put great emphasis on communicating and exchanging opinions with different CDC subject committees. Detailed discussions on recent development of mathematics education in primary and secondary schools were held with the CDC subject committees of the primary, secondary and sixth form levels. Third, the Ad hoc Committee agreed that supportive research would be needed to study views and expectation of different sectors on school mathematics as well as the world-wide trends of mathematics education. Two supportive research studies were designed. They were:

Research 1: Comparative Studies of the Mathematics Curricula of Major Asian and Western Countries (The research team was led by Dr. Leung Koon-shing, Frederick of HKU.)

Research 2: An Analysis of the Views of Various Sectors on the Mathematics Curriculum (The research team was led by Dr. Wong Ngai-ying of CUHK.)

1.9 Based on the discussion of the issues, 10 position statements were worked out. In

the report, the issues are grouped under three categories, namely the direction of changes, the anticipated mathematics curriculum and the implementation strategies.

1.10 The Ad hoc Committee also expressed its views on the Primary and Secondary Mathematics Syllabuses which were being under revision during the process of review. The feedback collected from the consultations of these syllabuses together with the findings of the two research studies have been taken into account in finalizing the recommendations in the report.

1.11 In the report, Chapter 2 describes the current mathematics curriculum of HK while Chapter 3 gives the brief summaries of the findings of the two research studies. Their executive summaries can be found from Appendices 1 and 2 respectively while the full reports from the web site www.cdccdi.hk.linkage.net/cdi/maths/index.htm. Chapters 4 to 6 address the main areas of concern, the views and the proposed improvements of the Ad hoc Committee. Chapter 7 is a summary of the recommendations.