

## CHAPTER 1

# Conference Arrangements

### The Background of the Conference

1. The First Commonwealth Education Conference held at Oxford, England, in 1959, was followed, in 1961, by a Conference of Commonwealth experts on The Teaching of English as a Second Language. It was held at what was then Makerere College in Uganda. In view of the success of this Conference, the Second Commonwealth Education Conference, held in New Delhi in January 1962, considered whether, and on what terms, it was desirable to hold conferences of experts in other subjects. The Delhi Conference agreed that this was a suitable form of Commonwealth co-operation in education provided the following principles and criteria were taken into account:

- (a) the conference must offer reasonable assurance of providing significant and worthwhile results of value to the participants and to their countries;
- (b) it must assist in raising the standards of teaching and education in the specialist field concerned;
- (c) in determining priorities, preference should be given to conferences which are designed to meet the needs of developing countries and which concentrate on areas where the need for the training of key people is of special importance; and
- (d) care must be taken not to duplicate the work of international agencies and to consider in each case whether a problem requiring attention might be taken up by countries outside as well as inside the Commonwealth.

The Conference further recommended that the Commonwealth Education Liaison Committee should be responsible for considering subjects for further expert conferences, and referred to the Liaison Committee the suggestion that a conference on the teaching of science and mathematics would be of immediate importance to developing countries.

2. Following the deliberations of the Commonwealth Education Liaison Committee, and after consultation with Governments, a conference of experts on School Science Teaching was held at the University of Ceylon, Peradeniya, in 1963. The Report of this Conference was unanimously adopted and commended to Governments for appropriate action by the Third Commonwealth Education Conference in Ottawa in 1964. This Conference added the further criterion that **subjects for such conferences of experts should be of clearly defined scope, and went on to recommend that the Commonwealth Education Liaison Committee should consider holding Specialist conferences on mathematics in schools and on the training of technicians.**

A Conference on The Education and Training of Technicians was held at the Huddersfield College of Education (Technical), England, in 1966.

3. In 1966, the Commonwealth Education Liaison Committee reviewed all subjects for Specialist Conferences which had been suggested up to that time, either by Commonwealth Education Conferences or by individual governments, and a clear consensus emerged that there should be a conference on The Teaching of Mathematics in Schools, confined to teaching at the primary and secondary levels. It was considered that it would be most useful if some assessment could be made of the different programmes and projects being developed in this field since mathematics forms the basis of science upon which development depends and no country can afford not to strive for better ways of educating its people and for using educational resources to better advantage. It appeared that a Commonwealth initiative in the field of school mathematics would serve these ends. Further, it was the view of professional bodies that new methods in teaching mathematics had reached a stage in their development where Commonwealth educationists would benefit greatly from an exchange of ideas and experience. Accordingly, members of the Commonwealth Liaison Committee, after careful deliberation and consultation with their Governments, agreed that a Commonwealth Specialist Conference of Mathematics in Schools be arranged, that it be confined to teaching at the primary and secondary levels, and that it be primarily a conference of specialists in that field. At the same time, the Liaison Committee set up a Planning Committee to investigate and make recommendations on such matters as the aims, scope and agenda of the Conference, and thereafter deal with its detailed planning, time, location and finance. (Later, when the Commonwealth Education Liaison Unit, which had hitherto acted as the Secretariat for the Commonwealth Education Liaison Committee, became integrated with the Commonwealth Secretariat as its Education Division, financial responsibility passed to the Finance Committee of the Commonwealth Secretariat).

4. Professor W.H. Cockcroft, G.F. Grant Professor of Mathematics at the University of Hull, England, was invited to serve as Chairman of the Planning Committee, and the Director of the Education Division of the Commonwealth Secretariat acted as its Secretary. The original Planning Committee comprised Mr. N.R. Edwards (Australia), Mr. H. Houghton and Mr. D.H. Christie (Britain), Mr. J.C.A. Corea (Ceylon), Mr. P. Cotton (New Zealand), Mrs. L.S. Dorset (Trinidad and Tobago), Mr. A.J. Kisubi (Uganda) and Dr. H.W. Springer (Assistant Secretary-General). Later, as the result of changes in the Australian High Commission and in the British Ministry of Overseas Development, Mr. Edwards was replaced by Mr. P. Bowler, and Mr. Christie by Mr. H.D. Moisley. A panel of mathematics experts was co-opted to advise in their various fields; this comprised Miss E.E. Biggs, Mr. D.G. Chisman, Dr. A.G. Howson, Mr. R.C. Lyness, Mr. J.B. Morgan, Mr. G.C. Nobbs, Mrs. E.M. Williams, and Professor J. Wrigley. During the later stages of planning, and in Professor Cockcroft's absence in the United States, Mr. J.B. Morgan acted as Chairman of the Organising Committee.

5. In considering and consulting with Governments about the venue of the Conference, the Planning Committee and the Commonwealth Education Liaison Committee had regard to the location of previous Commonwealth or Specialist Education Conferences, as geographical and regional rotation in these matters is desirable.

It was also agreed that it would be advantageous if the host country had been engaged in development projects in the field of mathematics, or was conveniently located in relation to other countries engaged in such work. An invitation from the Government of Trinidad and Tobago to hold the Conference in the University of the West Indies, St. Augustine, Trinidad, from 2nd to 14th September 1968, was warmly accepted.

6. In September 1967, invitation to participate in the Conference were extended to all Commonwealth Governments by the Commonwealth Secretary-General, Mr. Arnold Smith, in association with the Government of Trinidad and Tobago. In his letter of invitation, Mr. Smith expressed the aims of the Conference as follows:-

- (i) To survey current practice in school mathematical education at primary and secondary level, both in teaching methods and procedures and in content;
- (ii) To consider the principles on which contemporary courses should be planned and executed for the different levels of children's development and abilities;
- (iii) To examine the problems which must be met if courses are to be appropriate to the differing cultural, scientific, and economic needs of the countries concerned.

7. "Clearly," he said, "the scope of the Conference will need to be limited if it is to achieve its maximum usefulness for the school systems of the different countries of the Commonwealth. It has been decided, therefore, to confine the agenda to the teaching of *school* mathematics. It will restrict its study of the subject to primary and secondary schools, thus eliminating both pre-school and post-secondary education".

### **Participation**

8. The Conference was attended by ninety-four delegates from twenty-nine countries and territories of the Commonwealth. A full list of the delegates and observers is included on Appendix IV of this report.

### **The Conference Programme**

9. The Campus of the University of the West Indies at St. Augustine provided a very attractive setting for the Conference which was opened by the Prime Minister of Trinidad and Tobago, Dr. the Right Honourable Eric Williams, who was introduced by the Chairman of the Conference, Professor W.H. Cockcroft. A vote of thanks was proposed by Dr. H.W. Springer, Assistant Commonwealth Secretary-General.

In conducting the Conference the Chairman was ably assisted by the Co-chairman, Dr. K.A. Julien, Dean of the Faculty of Engineering in the University of the West Indies.

10. The main themes of the Conference and the guest speakers, who presented papers at Plenary Sessions on them were:-

- (1) *Fundamental ideas and objectives of mathematical education*  
Professor G. Polya (Stanford University)

- (2) *The teaching of mathematics at primary level, including both method and content*  
Miss E.E. Biggs (Department of Education and Science, London)
- (3) *The teaching of mathematics at secondary level – (a) as a general ‘core’ subject, and (b) as a subject for those with specialist requirements*  
Professor W.W. Sawyer (University of Toronto)
- (4) *Assessment of children’s progress and evaluation of programmes: purpose and method*  
Professor J. Wrigley (University of Reading)
- (5) *Teachers: Selection; initial and subsequent training*  
Mr. D.A. Perera (Ministry of Education and Cultural Affairs, Colombo)
- (6) *Resources for learning mathematics, including textbooks, films, radio, television, programmed learning, etc.*  
Professor A.L. Blakers (University of Western Australia)

11. Commonwealth Governments were invited to contribute papers on topics related to those dealt with in the lead papers and on their programmes in School Mathematics. A list of the contributed papers appears in Appendix III of this report. In addition, international organisations involved in assisting programmes of mathematics education in developing countries were invited to send observers, and to contribute papers, and two sessions of the Conference were devoted to studying Commonwealth and International Co-operation in this field.

12. After the presentation at Plenary Sessions of the main topics the themes were considered in detail by two Working Groups, A and B, which then reported to the Conference on their discussions and recommendations or suggestions for action. Working Group A concerned itself with primary and secondary education and working Group B with teacher training, assessment and evaluation and resources for teaching mathematics. The programme was so arranged that it was possible for delegates to take part in the work of one Working Group in each category.

13. A notable feature of the Conference was a very fine display of textbooks and teaching materials. The Planning Committee had invited Commonwealth Governments to arrange to send from their countries samples of textbooks and teaching materials used in their schools, and a number of countries responded to this invitation. In addition, Professor A.L. Blakers, of the University of Western Australia, arranged for a wide variety of publishers to send specimen copies of their publications. As a result, one of the most comprehensive collections of school textbooks on mathematics ever displayed was available to the delegates at the Conference. At its conclusion, Professor Blakers, and the representatives of the Governments of Britain and Canada, announced that the books on display were being presented to the University of the West Indies. A bibliography of the books exhibited at the Conference is given in Appendix I.

14. Arrangements were made for delegates to visit a few schools and teacher training colleges, and two afternoons in the programme were devoted to this.

15. The closing session of the Conference was addressed by the Minister of Education and Culture in the Government of Trinidad and Tobago, Senator the Honourable D.P. Pierre.

16. Delegates were impressed by the cordiality, warmth and hospitality they encountered throughout their brief stay in Trinidad. The Pro Vice-Chancellor of the University of the West Indies, Dr. H.D. Huggins, was host to the participants of the Conference on the first day. Later in the week the Governor General of Trinidad and Tobago, Sir Solomon Hochoy and Lady Hochoy received the delegates. A variety show organised by the Ministry of Education and Culture was highly appreciated.

### **Acknowledgements**

17. The Commonwealth Education Liaison Committee and the Commonwealth Secretariat wish to place on record their deep gratitude to all those who contributed to the success of the Conference. While it is difficult to enumerate the persons who have given so much of their time and with unflagging devotion have worked for the Conference, the Commonwealth Secretariat is particularly appreciative of the concern shown by Dr. Eric Williams in the problems the Conference was tackling and the interest and assistance given by the Minister for Education and Culture, Senator the Honourable Donald Pierre. Special indebtedness is acknowledged to the Permanent Secretary for Education, Government of Trinidad and Tobago, Dr. Romain, Mr. Walter Jones, the Liaison Officer of the Conference, the Administrative Officers, Committee Secretaries, and Verbatim Reporters who contributed to the smooth working of the Conference. A special word of thanks goes to the Supervisor of the typing pool and the typists, Transport Officer and drivers for the cheerful willingness and graceful co-operation in meeting the demands of a tight schedule, to the Pro Vice-Chancellor of the University of the West Indies, Dr. Huggins, the staff of the Institute of Education, the School of Engineering and Milner Hall for their personal interest in the welfare and comfort of the delegates.

18. The support given by Commonwealth Governments and international organisations is gratefully acknowledged. The Conference owed much of its success to the skilful chairmanship of Professor Cockcroft, to the co-operation and wise counsel of the Planning Committee, to the discussion stimulated by the high standard of papers delivered by the various experts, and to the exchange of views by delegates leading to constructive thinking and better mutual understanding. Thanks for the preparation of this report are due to the members of the Editorial Committee Professor Cockcroft, Mrs. Williams, Miss Biggs, Mr. Floyd, Professor Wrigley, Dr. Howson and Mr. Lyness, who assisted in compiling the chapters, to Mrs. A. Krishnaswamy, Research Officer of the Commonwealth Secretariat for her work in organising, editing, and proof reading, and in particular to Mrs. E.M. Williams, who as Editor-in-Chief has been mainly responsible for the preparation of the manuscript.