

Preface

The International Commission on Mathematical Instruction (ICMI) has a substantive interest in ensuring that its resources and influence extend to any country that is able to mobilize the elements of its mathematics education enterprise to make productive use of this connection. In line with this goal, ICMI in conjunction with the International Mathematical Union (IMU), and with the support of UNESCO and ICSU (International Council for Science), promotes the Capacity & Networking Project (CANP). It aims to enhance mathematics education in developing countries by supporting the educational capacity of those responsible for mathematics teachers, and to create sustained regional networks of teachers, mathematics educators and mathematicians, linking them to international support.

CANP consists of a programme in a different developing world region every year: each programme has, at its centre, a two-week workshop of about forty participants, half from the host country and half from regional neighbours, who interact with experts in mathematics, mathematics education, and school policy coming from different parts of the world. It is primarily aimed at mathematics teacher educators, but each event includes also mathematicians, researchers, policy makers, and key teachers.

The Capacity & Networking Project is a major international initiative in the mathematical sciences in the developing world to help exchange information, share state of the art research, enhance mathematics education and build a sustainable network for policy makers, scholars and practitioners across those targeted regions.

The programme builds on existing activities in the region and does not seek to reproduce or compete with existing development programmes.

At the time when this book is printed (2016) five CANP workshops have been held: CANP-1 in Sub Saharan Africa (2012), CANP-2 in Central America and Caribbean Area (2012), CANP-3 in South East Asia (2013), CANP-4 in East Africa (2014), CANP-5 in Andean Region and Paraguay (2016).

The main goal of a CANP consists in building capacity in mathematics education and creating a sustainable regional network in the countries, which participate in the workshop, with a common goal of improving mathematics education in the

region. The initial two-week workshop is an occasion for launching the network and for collecting and sharing information about the situation of mathematics teaching in the region. For this, before the workshop each group of participants from a country prepares a report about the state of the art in their own country: the reports are presented, compared and discussed during the meeting. After that, they are further elaborated according to the results of the discussions and constitute a final report for that CANP.

They constitute interesting documents about mathematics education in the regions touched by the different CANPs, and give a piece of information not always accessible in an easy way. For this reason ICMI decided to launch a new series of books with an international publisher, Springer, in order to make accessible non-expensive format reports to an international audience of informed policy makers and scientists.

The present volume is the first in the series of CANP reports: it is the result of a huge work of elaboration of the original documents presented at CANP-4 workshop, held from September 1st to 12th, 2014 at the Aga Khan University Institute for Educational Development East Africa, in Dar es Salaam, Tanzania. The event involved more than 80 participants from Tanzania, Kenya, Uganda and Rwanda; it was organised in a splendid way thanks to the wonderful work both of the International Programme Committee, and of the Local Organising Committee (LOC), and especially of Anjum Halai, chair of the LOC, and her team. The Aga Khan University Institute for Educational Development East Africa supported the event in a number of ways which made it possible to offer such a rich programme. In fact CANP-4 included lectures given by outstanding mathematicians and mathematics educators, regional presentations, workshops, round table discussions, panel presentations, and other parallel activities (school visits, mathematical games, traditional dance, poems). Many hours were devoted to the discussion of the regional reports, which are the germs from which this book was originated, and to the creation of an East Africa Mathematics Education and Research Network, chaired by Alphonse Uworwabayehe from Rwanda who is ably supported by Angelina Bijura from Tanzania.

The editors of the volume, Anjum Halai and Geoff Tennant, and the other authors, Peter Kajoro, Simon Karuku, Mussa Mohamed, Veronica Sarungi, and Alphonse Uworwabayehe, made a huge effort to have the different articles written according to what they call the 'Harmonization and Enhancement of Education Quality' issues. They are nicely illustrated in the book: the main idea is to show the necessity in Eastern Africa countries of equipping the students with those mathematical skills that will enable them to compete effectively in the East African Community's (EAC's) envisaged common market and to facilitate mobility of students and teachers across the EAC partner states. The six chapters of the book show the related difficulties and possibilities for the school systems in EAC, which come from a different colonial past (British and Belgian).

I thank all those who have made possible the existence of this book: the editors, the authors, the publisher, and particularly the participants to the CANP-4 event. I do think that making its content accessible to mathematics educators, teachers, and

policy makers represents a useful tool for approaching the problems of mathematics education within a global landscape, but without forgetting the specific cultural and social needs of a developing region, in this case the EAC.

It is my strong hope that with the publication of the other CANP books, we will have a wide updated picture of mathematics education needs and problems from relevant parts of the developing world. This will help to avoid the dangers of the alienation generated by the loss of the variety of cultural richness existing in the different regions of the world.

January 26, 2016

Ferdinando Arzarello
President of the International Commission
on Mathematical Instruction

Mathematics Education in East Africa
Towards Harmonization and Enhancement of Education
Quality

Halai, A.; Tennant, G. (Eds.)

2016, XIV, 80 p. 4 illus. in color., Softcover

ISBN: 978-3-319-27257-3