Mega-Schools, Technology and Teachers

Education for All (EFA) has been a top priority for governments and intergovernmental development agencies for the last 20 years. So far the global EFA movement has placed its principal focus on providing quality universal primary education (UPE) for all children by 2015.

The latest addition to The Open and Flexible Learning series, Mega-Schools, Technology and Teachers addresses the new challenges created by both the successes and the failures of the UPE campaign. This book advocates new approaches for providing access to secondary education for today’s rapidly growing population of children and young adults and examines:

- the creation and expansion of Mega-Schools, which combine distance learning and community support and have a proven track record of increasing access at scale.
- how to prepare the 10 million new teachers that are required to achieve Education for All by 2015 by focusing on classroom-based in-service training.
- strategies for using technology to scale up distance education cost-effectively.
- the creation of a 21st century educational ecosystem that integrates open schooling and teacher education with communities and their school systems.
- successful examples of open schools and teacher education programmes operating at scale around the world.

Readers will be delighted to find that Sir John Daniel, best-selling Routledge author of Mega Universities and Knowledge Media, delivers another insightful and practical book on educational technology. Mega-Schools, Technology and Teachers will be of interest to all who are concerned by the central educational challenge of our times: providing secondary education to tens of millions of young people around the world.

John S. Daniel has been president and CEO of the Commonwealth of Learning since 2004 after previous appointments as assistant director-general of UNESCO, vice-chancellor of the UK Open University and president of Canada’s Laurentian University.
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Mega-Schools, Technology and Teachers
Achieving Education for All

John S. Daniel
To:
Kristin
Julian, Anne-Marie and Catherine
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The numbers that are presented in this book Mega-Schools, Technology and Teachers by Sir John Daniel, and the challenges he identifies, are staggering. Even with the success of the Education For All (EFA) campaign it is estimated that by 2015 there will be 30 million children who will be unable to receive a primary school education. Furthermore, it is also estimated that the world will need a further 10 million teachers by this date and that there will be over 400 million children aged 12–17 years who will be unable to benefit from a secondary school education. Any naïve belief that we can simply scale-up conventional teaching methods, including the provision of teachers, to meet the demands for primary and secondary school education is laid bare.

For those of us working in the field of education this book makes uncomfortable reading—especially as it challenges many of our long held assumptions about quality provision. Assumptions associated with the primacy of pre-service teacher education compared to in-service training practice, of the superiority of public rather than private educational provision, of the exclusivity of small group teaching rather than mass education…and, of course, the role that Communication and Information Technology can contribute.

This book offers us a new concept—that of Mega Schools and a synthesis of ideas that demonstrate that it is possible that Open Schools can have a positive role to play alongside conventional schools, that Distance Learning practices and Communication and Information Technology can be combined for the benefit of both learners and teachers. The book also offers us compelling evidence from around the world, combined with a range of case studies, that illustrate that with imagination and innovation, coupled with entrepreneurship and commitment we can raise to the challenge facing us.

In the opening pages of this book Sir John admits that in writing it he experienced 'a growing sense of shame' that whilst a senior member of UNESCO he uncritically accepted the conventional wisdom of experts about how best to achieve Education for All (EFA). I’m sure that after reading this book you will agree that he has more than corrected any lapse. The challenge Sir John outlines for us is formidable. If we are not to experience a similar feeling of shame we need to think and act differently. The vision Sir John offers is one that is achievable and one that millions of future adults will thanks us for.

Fred Lockwood
Our work at the Commonwealth of Learning (COL), which aims to scale up the opportunities for learning on which the future of humankind depends, inspired me to write this book. I have chosen to focus on just two of our activities, open schooling and teacher education, because they contribute decisively to the core task of global development: the achievement of Education for All. Let me thank first the colleagues leading this work, Frances Ferreira (open schooling) and Abdurrahman Umar (teacher education), who have advised me patiently and kindly shared their draft publications.

My warm appreciation goes to all my COL colleagues for creating such an intellectually stimulating environment. Kodhandaraman Balasubramanian, Willie Clarke-Okah, Angela Kwan, John Lesperance, Wayne Mackintosh, Joshua Mallet, Tanyss Munro and Ian Pringle have all given me ideas. I am especially grateful to our Board Chair, the Honourable Burchell Whiteman, for his encouragement and to our Vice-President, Asha Kanwar, who has willingly increased her workload to give me more time to write. It is also a pleasure to acknowledge Dave Wilson's wise counsel, Amy Monaghan's ingenious help in tracking down documents, Annette Bacchus' useful tutorial in formatting documents and Alex Hennig's impressive design skills. Royalties from this book will be shared with COL.

A career in higher education and distance learning spanning four decades has brought me into contact with many institutions. One of the pleasures of this research has been getting in touch again with some wonderful colleagues. All have been most generous in sharing their recollections of events and pointing me to new sources of information. My particular thanks go to two special friends who, after reviewing the whole manuscript, challenged and encouraged me with their perceptive comments: Desmond Bermingham and Stamenka Uvalić-Trumbić.

Other colleagues have been good enough to check passages about their institutions or programmes. The text has been enriched by the inputs and suggestions of Jophus Amanuah-Mensah, Mahmood Butt, Charlie Reed, Bernard Cornu, Anne-Marie Laliberté Denis, Glen Farrell, Alice Flores, Crystal Gips, Anwarul Islam, Maxim Jean-Louis, Jean-Michel Lacroix, Rehana Masrur, Sugata and Sushmita Mitra, Bob Moon, Widad Othman, Alejandro Pisanty, Sheldon Shaeffer, Abhimanyu Singh, Daniel Tau, James Tooley, Michel Umbriaco, Jesus Vazquez-Abad, and Paul West. I thank them for their help and take responsibility for errors of fact or interpretation that remain.

Many other researchers, writers and educational leaders have inspired me by their arguments, findings and insights. I express particular appreciation to Dominique Abrioux, Tony Bates, Bob Bernard, Svava Bjarnason, Nick Burnett,

This is the second book that I have contributed to this series. I congratulate Fred Lockwood for his longevity in the role of Series Editor. It is a pleasure to thank him for nursing me through the process once again and for sharing documents that he had collected on open schooling.

In the year that I began primary school my father was appointed principal of one the emergency teacher training colleges that Britain created after World War II in order to supply the additional teachers required by a reformed education system. I honour his memory and like to think that he would have enjoyed reading my reflections about similar challenges in a new century.
## Glossary of Acronyms

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<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>ACU</td>
<td>Association of Commonwealth Universities</td>
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<tr>
<td>AIOU</td>
<td>Allama Iqbal Open University, Pakistan</td>
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<tr>
<td>AVU</td>
<td>African Virtual University</td>
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<tr>
<td>BGCSE</td>
<td>Botswana General Certificate of Secondary Education</td>
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<tr>
<td>BOCODOL</td>
<td>Botswana College of Distance and Open Learning</td>
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<td>BRAC</td>
<td>Bangladesh Rural Advancement Committee</td>
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<tr>
<td>CAPES</td>
<td>Certificat d’aptitude au professorat de l’enseignement du second degré</td>
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<tr>
<td>CAPET</td>
<td>Certificat d’aptitude au professorat de l’enseignement technique</td>
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<tr>
<td>CERI</td>
<td>Centre for Educational Research and Innovation (OECD)</td>
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<td>CNED</td>
<td>Centre National d’Enseignement à Distance</td>
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<td>COL</td>
<td>Commonwealth of Learning</td>
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<tr>
<td>CPD</td>
<td>Continuing Professional Development</td>
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<td>CSET</td>
<td>California Subject Examinations for Teachers</td>
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<td>CSU</td>
<td>California State University</td>
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<tr>
<td>CTCS</td>
<td>Certificate in Tertiary and Community Studies (UPNG)</td>
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<td>DEEP</td>
<td>Digital Education Enhancement Project</td>
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<td>DFID</td>
<td>Department for International Development (UK)</td>
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<td>eAC</td>
<td>eAfrica Commission</td>
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<td>EFA</td>
<td>Education for All</td>
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<td>FTI</td>
<td>Fast-Track Initiative</td>
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<td>GER</td>
<td>Gross Enrolment Ratio</td>
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<td>GMR</td>
<td>Global Monitoring Report</td>
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<td>GNP</td>
<td>Gross National Product</td>
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<tr>
<td>HITW</td>
<td>Hole in the Wall</td>
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<tr>
<td>IB</td>
<td>International Baccalaureate</td>
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<td>IDLN</td>
<td>Indonesia Distance Learning Network</td>
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<tr>
<td>IRFOL</td>
<td>International Research Foundation for Open Learning</td>
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<tr>
<td>IRI</td>
<td>Interactive Radio Instruction</td>
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<tr>
<td>IT</td>
<td>Information Technologies</td>
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<tr>
<td>ICT</td>
<td>Information and Communications Technologies</td>
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<tr>
<td>IUOFM</td>
<td>Institut Universitaire de Formation de Maîtres (France)</td>
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<tr>
<td>LH</td>
<td>Learning Hub</td>
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<tr>
<td>LIVES</td>
<td>Learning through Interactive Voice Educational System</td>
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<td>MCDE</td>
<td>Malawi College of Distance Education</td>
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<td>MDG</td>
<td>Millennium Development Goal</td>
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Glossary of Acronyms

MIE Minimally Invasive Education
MIT Massachusetts Institute of Technology
NCE Nigerian Certificate in Education
NCES National Council for Educational Statistics
NEPAD New Partnership for African Development
NER Net Enrolment Ratio
NGO Non-Governmental Organisation
NIIT National Institute for Information Technology
NIOS National Institute of Open Schooling (India)
NOLNET Namibia Open Learning Network
NTI National Teachers’ Institute (Nigeria)
NUT National Union of Teachers (Nigeria)
ODL Open and Distance Learning
OECD Organisation for Economic Cooperation and Development
OER Open Educational Resource
OFSTED Office for Standards in Education (UK)
OFTP Ontario Federation of Teaching Parents
OLPC One Laptop Per Child
OUM Open University Malaysia
PC Personal Computer
PERMAMA Perfectionnement des Maîtres en Mathématiques (Québec)
PGCE Post-graduate Certificate of Education
PISA Programme for International Student Assessment
PNG Papua New Guinea
PTR Pupil Teacher Ratio
QA Quality Assurance
SLTP Sekolah Lanjutan Tingkat Pertama (Junior Secondary School, Indonesia)
TEI Teacher Education Institution
TESSA Teacher Education in Sub-Saharan Africa
TFA Teach For America
UE University of Education (Pakistan)
UKOU United Kingdom Open University
UN United Nations
UNDP United Nations Development Programme
UNESCO United Nations Educational, Scientific and Cultural Organisation
UPE Universal Primary Education
UPNG University of Papua New Guinea
Education for All (EFA) is a longstanding human aspiration that still eludes many countries. This book starts from four beliefs in proposing ways to attain this lofty goal.

First, EFA is a vital ambition because education nourishes the human spirit, improves the quality of lives and holds the key to the future of humankind on planet Earth. It may also promote higher material living standards, but its fundamental value is to give people greater freedom to choose their futures.

Second, government action is essential to give all citizens access to learning opportunities. This does not mean that the state has to be the principal provider of education. As nations evolve into knowledge societies their people will require better initial education and regular training throughout their lives. Public funds are insufficient to support all the learning opportunities needed. Governments’ main role is to establish—and to enforce without corruption—legislation that maximises the accessibility, appropriateness and effectiveness of education and training. Countries must embrace all cost-effective methods of schooling and foster innovative ways of providing it.

Third, harnessing technology, which has already increased the availability and quality of products and services everywhere while reducing their cost, is crucial to the achievement of EFA. Technology is the application of scientific and other organized knowledge to practical tasks by organizations consisting of people and machines, so it draws on non-scientific knowledge as well as applied science. Technology is about practical tasks rather than theory and always involves people and their social systems. Achieving EFA is a practical task focussed on people.

Fourth, education in the 21st century requires more emphasis on learning and less on teaching. Indeed, our ideal is the adoption of a culture of self-directed learning by individuals and communities. Technology can encourage this transition.

Chapter 1 starts from first principles to defend the assertion that educating everyone is important. In historical terms this is a relatively new ambition. What is the justification for it? What progress has been made in the global campaign for EFA that has been gathering pace for two decades? For some years I had the privilege of being thoroughly immersed in this great project as Assistant Director-General of UNESCO. I am proud that it has brought universal primary education within reach for many countries but regret that the quality is often so poor. What are the consequences of this blend of success and failure?

The most urgent consequence of success is that tens of millions of children are completing primary school and seeking secondary education. Countries that have had to struggle to create a network of primary schools and provide the