Book Review

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*Mathematics Education Research: Past, Present and Future.*
Bangkok, Thailand: UNESCO Principal Regional Office for Asia and the Pacific.
245 pp., no ISBN

This book is a compelling and provocative contribution to the literature and should be read by anyone with a concern about mathematics education research and its trends. It is written by two highly experienced and committed researchers who are seeking a paradigm shift in the way we think about research in our field. Neither of the authors is new to controversy and its consequences, and there will certainly be some strong reactions to their controversial ideas and expressions. I hope however that the book will be read and critiqued in the way the authors intended—namely, as a challenge to existing paradigms and mind-sets and as a stimulus to finding new and more appropriate research stances and approaches.

Ostensibly, the main context of the book is the Asia-Pacific region; but there are plenty of other contexts where I believe the authors would argue that research has lost sight of its crucial role. The book is certainly not a bland survey of research, such as might be found in Chapter 2 of a cautious thesis. Nor does it present a balanced, impartial, or representative view of research. It is a focussed, highly partial, and idiosyncratic view, and all the better for that. We have so few “straight-from-the-shoulder” research reviews that this one makes welcome and refreshing reading. I often wish that more writers would make their assumptions and values clear when discussing research issues. With Clements and Ellerton, you won't die wondering.

It is therefore a book to be read. What a strange thing to say, you might respond! Well, I wonder how many readers of this journal have actually sat down and read from cover to cover the *International Handbook of Mathematics Education* (Grouws, 1992), which was intended to be a reference book? The authors of this book state that “The book has two main purposes: the first is to summarise and critique international trends in mathematics education research; the second is to develop a set of recommendations concerning the role and potential of mathematics education research.” (p. 1).

It certainly gives the initial impression of being a review of research, and in some sense it does do that job. But it is not a good reference book, and as we shall see, it is not intended to just do that job. It is not laid out in a standard, subject-focussed way, and the chapters often have what seem to be rather surprising
subsections. The headings of Chapter 2, for example, will give a good flavour of the whole book. The chapter is titled "What are the Basics in Mathematics Education?" and it has four main sections with the following subsections:

The Politics of Mathematics Education
- Round pegs in square holes [about working with students in PNG in 1980]
- Sacrificial lambs [on the imposition of "foreign" basics on indigenous groups]
  - Who should make curriculum decisions?
  - Language and Garma
  - Cultural imperialism
  - Mathematics for the minority

The Last Bastions of Academic Standards
- Changing circumstances for tertiary departments of mathematics
- Accusations of elitism

Newman Error Analysis Research, and Implications for the Issue of "What is Basic?"
- The Newman procedure
- Example of a Newman interview
- Summary of findings of early Newman studies
- Some recent Newman data

The Death of Proof in School Mathematics?
- Throwing out the baby with the bath water.
- Curriculum considerations: Should all students be introduced to the notion of proof?

These are not the main ideas one would expect to find in a chapter on the "basics." But the authors' choices of entries are argued and justified, and the chapter is both provocative and challenging. The aim of the chapter is conveyed also by the running head: "Redefining the basics."

Having said that it is not primarily a reference work, I should point out that there are many references that will be new to many readers, as well as many familiar ones and many from the authors themselves. There are also 28 pages of references, a subject index, and an author index. They have done a splendid job in bringing to a wider audience research findings that hitherto have not been seen in the mainstream literature, but of course these references are all in English! As I pointed out in my chapter for the *International Handbook* (Bishop, 1992), what is published in English is likely to be a very tiny fraction of the research that is actually carried out.

Clements and Ellerton are no strangers to research in the Asia-Pacific region, nor are they researchers who are happy to rely on a few easy-to-find references. They are dogged in their search for fresh research papers, and readers can trust that the research referred to in their book does include the most relevant and up-to-date research from the region. As they proudly say in their first sentence in the