Education is a pivotal cornerstone of a successful society. Numerous books have been written on education and the need for change in the system, delivery, and management of education. The outcry for improvement, innovative teaching, and more interaction has been in the domain of school improvement systems over the past few decades. However, progress has been painfully slow with major resistance to change both by the policy makers and traditional teachers.

Over the last 30 years, I have observed that good teachers and professors disappear upon entering the administration. For a comfortable life, many educators compromise and become tick box specialists due to the nature of the university and school systems where the policies are driven by the number of students enrolled, number of students graduated, and the grants/funds received.

Whilst these are good economical and financial decisions, the education and teaching should be free of such throes and allowed to evolve and improve to be more effective for imparting knowledge and training to future generations. New methods and policies in education should be focused on the development of new teaching techniques and practices, funding more teacher training and recruitment of teachers, development of student friendly learning resources, effective student advice, and opportunities for students to shadow the expert professionals.

Teaching, in schools or colleges/universities, needs to change from the traditional teacher-centered system to student-centered approaches. In theory, this is recommended and to a certain extent practiced all over the world; however, there is still no real freedom for students and teachers to explore new ways of learning. Teaching and learning are severely restricted through well-placed policies by the administration.

The students, too, have become frustrated with the traditional teaching system but also find it daunting to experience such new teaching methods. I have seen excellent innovative teachers leave the profession due to rigid rules and regulations that restricted them from practicing new styles and methods of teaching. Students complained about the effectiveness of the new teaching methods since those meth-
ods challenged their established norms. However, if our educational system does not challenge the minds of students, if students are not compelled to seek new knowledge beyond classroom settings, and if they are not tested on new grounds, how could we ever expect the students to be truly effective and independent in their chosen professions?

This is why I was excited to read this book written by like-minded professors who not only believe in change to the educational system, but also have done something constructive to prove and push the policy decisions towards a novel, effective form of teaching. Science and mathematics are considered as the most difficult subjects by the majority of students due to the way they are taught in classroom settings. Yet, results of scientific discoveries and technological developments are refreshing and provided convenience and comfort enabling learning to take place at time and place of choice for students. An integrated link between the two is an ideal path to getting students to be more involved in seeking true knowledge in science and mathematics. Even science and mathematics alone will not survive in an ever-changing society. They need to be synergistically combined with arts, commerce, and businesses to be effective in the world arena. Hence, I am a strong advocate of multidisciplinary studies combined with latest innovative research. This compilation of cases on research-based teaching is a timely addition to the scholarly work that must be read by academics and administrators alike. Research-based teaching methods implemented and results revealed in this book have established a strong reason for change to the curricula, teaching styles, teacher training, and in the use of IT. I strongly encourage the administration to embrace and implement the methods described in this book at least to provide students with the opportunity to experience a new way of learning science and mathematics.

This book, which is a collective work of individual experts in the fields of science and mathematics education and edited by Prof. de Silva who himself has pioneered new teaching methods of those I have been very familiar over the past 20 years provide practical, easy to follow methods for teachers. This book also demands policy changes by the administrators. I highly recommend this book to those ready to spring in to action to change the current educational system. If the methods and curricula changes suggested in this book are implemented in schools and colleges/universities, we can eventually expect a generational change in the attitudes and perceptions amongst students and parents towards science and mathematics.

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