

# Preface

**M**athematics teaching and learning has changed significantly in the last two decades. The role of the school leader has also evolved, and at no other time in education has effective instructional leadership been so important! This could be the first time in modern history that what we teach our children in school today could be virtually irrelevant to their adult lives due to fast-paced changes in technology and how they impact our day-to-day living.

As school leaders, we are often inadequately prepared for the important task of curriculum and instructional leadership in the area of mathematics education. This book is written to help school leaders with that important challenge of supporting mathematics education in schools. In particular, new administrators, math coaches and instructional leaders, and principals or assistant/vice principals who do not have a strong background in mathematics education will find this book helpful. For the experienced mathematics leader, this book will provide a concise summary and overview of research about the changes in mathematics education and what is needed to support your school with effective mathematics instructional strategies, along with suggestions for job-embedded professional learning initiatives.

Chapter 1 provides a vision for mathematics learning with a historical and research-based overview of mathematics reform and mathematics change over the past two decades. It provides you with a concise research base of information to help with the “why” of mathematics change and improvement initiatives.

Chapter 2 provides the “what” of mathematics education. In “Observing and Evaluating a Mathematics Classroom,” information will be provided on what to look for in a mathematics

classroom, and the instructional strategies, teacher practices, and resources of an effective mathematics classroom are discussed.

Chapter 3 provides specific tools and strategies for the administrator to support effective mathematics education in a school. There are summaries of effective job-embedded professional learning strategies and a comprehensive list of supports that the school leader can put in place so that effective changes in mathematics education happen.

Chapter 4 provides the “tools for success” for the school leader. The tools and resources include literature lists and print resources, mathematics manipulatives, World Wide Web resources, parent and home connections, etc.

A section called “Principal Resources” includes useful templates for observing and evaluating a mathematics classroom, a Vision Statement for mathematics education, a Gap Analysis to help you get started with your school improvement initiatives in mathematics, and an extensive mathematics literature list.

At the back of the book is an extensive resource and reference list. This list will provide you with further information if you wish to dig even more deeply into the area of mathematics education and improvement.

This book will get you started on your journey to being an effective mathematics school leader, and it will help you support your faculty in embarking on an exciting and wonderful journey to help children become critical thinkers and problem solvers.