

Series Preface

The fifth volume of *Advances in Mathematics Education* focuses on an under addressed area of research in mathematics education, namely early mathematical thinking and learning. Despite the groundbreaking work of Piaget that led to the formulation of developmental theories, interest in further developing neo-Piagetian models of learning has waned since the 1980's. Three decades later, the community has come to realize that these developmental models do not take into consideration the sophisticated mathematical thinking that children are capable of, given the right mathematical activities to stimulate them into abstract reasoning.

The book, *Reconceptualizing Early Mathematics Learning*, edited by Lyn English and Joanne Mulligan presents studies that advance children's mathematical learning in ways we did not think was possible. The chapters focus on notions of early algebra, statistical thinking, beginning numeracy as well as the advocacy for the kinds of learning that are important for the 21st century. Several of the chapters also address the professional development of teachers necessary to promote early mathematical learning experiences. The theoretical foundations of this work are set in Newton and Alexander's chapter that surveys the state of the art. This is followed by empirical studies of Mulligan in Australia, Clements in the U.S. as well as alternative play-based classrooms of Wager. Data modeling is another theme explored by English with children in grades 1–3. Interdisciplinary approaches are also found in the work of Diefes-Dux that utilize model eliciting activities in art classrooms. The book provides a balance between theoretical foundations, empirical work with children that advance theories, as well as the importance of work with teachers to provide early mathematics learning and development.

An important feature to note in volume 5 is that the book series, *Advances in Mathematics Education*, has moved into topics not traditionally anchored in prior volumes of the connected journal, ZDM—*The International Journal on Mathematics Education*. This suggests that the series is open to research perspectives from the community that advance our field, without necessarily being anchored to ZDM.

We are deeply convinced that this book will make a strong contribution to the much needed diversity of theoretical advances in mathematics education.

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