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# Elementary Mathematics For Teachers

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Mathematics Teacher Education in the Public Interest

Vision in Elementary Mathematics

Elementary Mathematics in Context

Success from the Start

The Teaching of Elementary Mathematics

Bringing Understandings To Light

An Activity Approach

Beyond Classical Pedagogy

Elementary and Middle School Mathematics

Developing Mathematical Proficiency for Elementary Instruction

Proving in the Elementary Mathematics Classroom

Teaching Developmentally

Designs for Student Learning and Teacher Enactment

Mathematics Content for Elementary Teachers

A Guide for Teachers and Leaders

Mathematics for Elementary School Teachers: A Process Approach

Partnering With Parents in Elementary School Math

Discrete Mathematics For Teachers

MATHEMATICS FOR ELEMENTARY TEACHERS. (PRODUCT ID 23864410).

Elementary Mathematics Curriculum Materials

The Elementary Mathematics Specialist's Handbook

A Problem-Solving Approach to Mathematics for Elementary School Teachers  
(Scandinavian Edition).

Five Teaching Turnarounds for Grades K-6

A Resource for Field Experiences

Teachers' Professional Development and the Elementary Mathematics Classroom

Mathematics Teachers at Work

Teachers' Professional Development and the Elementary Mathematics Classroom

Elementary Mathematics Specialists

Teaching Elementary Mathematics to Struggling Learners

Developing, Refining, and Examining Programs That Support Mathematics Teaching  
and Learning

Teachers' Understanding of Fundamental Mathematics in China and the United  
States

Bringing Understandings To Light

Connecting Curriculum Materials and Classroom Instruction  
Teaching by Design in Elementary Mathematics, Grades 4–5  
Elementary and Middle School Mathematics: Pearson New International Edition  
Catalyzing Change in Early Childhood and Elementary Mathematics  
Strengths-Based Teaching and Learning in Mathematics  
The How and Why of Teaching Elementary Mathematics  
Initiating Critical Conversations

*Elementary  
Mathematics For  
Teachers*

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## **DONNA GIADA**

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*Mathematics Teacher Education in the  
Public Interest* Guilford Publications  
How to build productive relationships in  
math education I wasn't taught this way.  
I can't help my child! These are common  
refrains from today's parents and  
guardians, who are often overwhelmed,  
confused, worried, and frustrated about

how to best support their children with  
what they see as the "new math." The  
problem has been compounded by the  
shift to more distance learning in  
response to a global pandemic.  
Partnering With Parents in Elementary  
School Math provides educators with  
long overdue guidance on how to  
productively partner and communicate  
with families about their children's  
mathematics learning. It includes  
reproducible surveys, letters, and

planning documents that can be used to improve the home-school relationship, which in turn helps students, parents, teachers, and education leaders alike. Readers will find guidance on how to:

- Understand and empathize with what fuels parents' anxieties and concerns
- Align as a school and set parents' expectations about what math instruction their children will experience and how it will help them
- Communicate clearly and productively with parents about their students' progress, strengths, and needs in math
- Run informative and fun family events
- support homework
- Coach parents to portray a productive disposition about math in front of their children

Educators, families, and students are best served when proactive, productive, and healthy

relationships have been developed with each other and with the realities of today's math education. This guide shows how these relationships can be built.

*Vision in Elementary Mathematics*

Oxford University Press

This book compiles and synthesizes existing research on teachers' use of mathematics curriculum materials and the impact of curriculum materials on teaching and teachers, with a particular emphasis on – but not restricted to – those materials developed in the 1990s in response to the NCTM's Principles and Standards for School Mathematics. Despite the substantial amount of curriculum development activity over the last 15 years and growing scholarly interest in their use, the book represents

the first compilation of research on teachers and mathematics curriculum materials and the first volume with this focus in any content area in several decades.

*Elementary Mathematics in Context*  
Routledge

Strengthen mathematics lessons through collaborative learning with this research-based professional development program. Included are grade-appropriate number and operations topics aligned with the Common Core State Standards.

**Success from the Start** Corwin Press  
Elementary mathematics specialists are teacher leaders who are responsible for supporting effective PK–6 mathematics instruction and student learning. The Association of Mathematics Teacher Educators (AMTE), the Association of

State Supervisors of Mathematics, the National Council of Supervisors of Mathematics, and the National Council of Teachers of Mathematics, in a 2010 joint position paper on Elementary Mathematics Specialists (EMSs), all advocate for the use of EMSs to support the teaching and learning of mathematics. The specific roles and expectations of EMSs will vary according to the needs of each setting, “but their expertise and successful experience at the elementary level is critical” (p 1). *Elementary Mathematics Specialists: Developing, Refining, and Examining Programs that Support Mathematics Teaching and Learning* is AMTE’s latest resource supporting the important work of EMSs. It has five sections related to the preparation and professional

development of EMSs: (a) Overview and Current State of Affairs; (b) Models of EMS Program Development & Delivery; (c) Supporting EMSs in the Field; (d) The Mathematics Specialist Research; and (e) Future Directions. The book provides support to EMS practitioners, program providers/developers, and researchers seeking to answer important questions about how to prepare Mathematics Specialists, support them in the field, and research their effectiveness.

The Teaching of Elementary Mathematics Wiley

The emergence of the National Council of Teachers of Mathematics Standards in 1989 sparked a sea change in thinking about the nature and quality of mathematics instruction in U.S. schools. Much is known about transmission forms

of mathematics teaching and the influence of this teaching on students' learning, but there is still little knowledge about the alternative forms of instruction that have evolved from the recent widespread efforts to reform mathematics education. Beyond Classical Pedagogy: Teaching Elementary School Mathematics reports on the current state of knowledge about these new instructional practices, which differ in significant ways from the traditional pedagogy that has permeated mathematics education in the past. This book provides a research-based view of the nature of facilitative teaching in its relatively mature form, along with opposing views and critique of this form of pedagogy. The focus is on elementary school mathematics classrooms, where

the majority of the reform-based efforts have occurred, and on the micro level of teaching (classroom interaction) as a source for revealing the complexity involved in teaching, teachers' learning, and the impact of both on children's learning. The work in elementary mathematics teaching is situated in the larger context of research on teaching. Research and insights from three disciplinary perspectives are presented: the psychological perspective centers on facilitative teaching as a process of teachers' learning; the mathematical perspective focuses on the nature of the mathematical knowledge teachers need in order to engage in this form of teaching; the sociological perspective attends to the interactive process of meaning construction as teachers and

students create intellectual communities in their classrooms. The multidisciplinary perspectives presented provide the editors with the necessary triangulation to provide confirming evidence and rich detail about the nature of facilitative teaching. Audiences for this book include scholars in mathematics education and teacher education, teacher educators, staff developers, and classroom teachers. It is also appropriate as a text for graduate courses in mathematics education, teacher education, elementary mathematics teaching methods, and methods of research in mathematics education.

Bringing Understandings To Light  
McGraw-Hill Science, Engineering & Mathematics

This activities manual includes activities

designed to be done in class or outside of class. These activities promote critical thinking and discussion and give students a depth of understanding and perspective on the concepts presented in the text.

*An Activity Approach* Corwin  
MATHEMATICS FOR ELEMENTARY SCHOOL TEACHERS, 6E offers future teachers a comprehensive mathematics course designed to foster concept development through examples, investigations, and explorations. In this text, intended for the one- or two-semester course required of Education majors, Bassarear demonstrates that there are many paths to solving a problem, and sometimes problems have more than one solution. The author presents real-world problems—problems

that require active learning in a method similar to how archaeologists explore an archaeological find: they carefully uncover the site, slowly revealing more and more of the structure. Visual icons throughout the main text allow instructors to easily connect content to the hands-on activities in the corresponding Explorations Manual. With this exposure, future teachers will be better able to assess student needs using diverse approaches. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

*Beyond Classical Pedagogy* Springer  
Nature  
Placing mathematics specialists in elementary schools is a recent



development that is gaining momentum as schools move to more rigorous standards, including the Common Core State Standards for Mathematics. Working with teachers to improve schoolwide mathematics performance, the mathematics specialist is unique among the specialists at elementary schools today. In this handbook: Vignettes flesh out the elementary mathematics specialist's many responsibilities. Experienced specialists offer tips on gaining teachers' trust—and access to their classrooms. Special guidance highlights effective collaboration between the principal and the specialist. The transition from classroom teacher to elementary mathematics specialist is challenging, but the principal can smooth the

specialist's path by reassuring teachers that the new specialist is there to support them, not judge them. In the authors' words, "The mathematics specialist, when introduced to the faculty in the right way, becomes a soft place where the teacher can fall."

### **Elementary and Middle School Mathematics IAP**

The need to improve the mathematical proficiency of elementary teachers is well recognized, and it has long been of interest to educators and researchers in the U.S. and many other countries. But the specific proficiencies that elementary teachers need and the process of developing and improving them remain only partially conceptualized and not well validated empirically. To improve this situation,

national workshops were organized at Texas A&M University to generate focused discussions about this important topic, with participation of mathematicians, mathematics educators and teachers. Developing Mathematical Proficiency for Elementary Instruction is a collection of articles that grew out of those exciting cross-disciplinary exchanges. Developing Mathematical Proficiency for Elementary Instruction is organized to probe the specifics of mathematical proficiency that are important to elementary teachers during two separate but inter-connected professional stages: as pre-service teachers in a preparation program, and as in-service teachers teaching mathematics in elementary classrooms. From this rich and inspiring collection,

readers may better understand, and possibly rethink, their own practices and research in empowering elementary teachers mathematically and pedagogically, as educators or researchers.

### **Developing Mathematical Proficiency for Elementary Instruction IAP**

Textbook on numbers, arithmetic, and prealgebra for elementary school mathematics teachers. Designed to be used with five Primary Mathematics books (textbooks 3A, 4A, 5A, 6A, and workbook 5A; all U.S. ed.), part of an elementary mathematics curriculum designed by Singapore's Ministry of Education and adapted for use in the U.S.

[Proving in the Elementary Mathematics](#)

Classroom Mitchell Beazley  
Elementary Mathematics for  
Teachers Ingram

Teaching Developmentally Routledge  
Sure-fire techniques of visualizing,  
dramatizing, and analyzing numbers  
promise to attract and retain students'  
attention and understanding. Topics  
include basic multiplication and division,  
algebra, word problems, graphs,  
negative numbers, fractions, many other  
practical applications of elementary  
mathematics. 1964 ed. Answers to  
Problems.

**Designs for Student Learning and  
Teacher Enactment** Pearson Education  
For Elementary Mathematics Methods or  
Middle School Mathematics Methods  
Covers preK-8 Written by leaders in the  
field, this best-selling book will guide

teachers as they help all PreK-8 learners  
make sense of math by supporting their  
own mathematical understanding and  
cultivating effective planning and  
instruction. Elementary and Middle  
School Mathematics: Teaching  
Developmentally provides an  
unparalleled depth of ideas and  
discussion to help teachers develop a  
real understanding of the mathematics  
they will teach and the most effective  
methods of teaching the various  
mathematics topics. This text reflects  
the NCTM and Common Core State  
Standards and the benefits of problem-  
based mathematics instruction.  
Mathematics Content for Elementary  
Teachers Ingram  
Guide teachers to help all PreK-8  
learners make sense of mathematics.

Elementary and Middle School Mathematics: Teaching Developmentally illustrates how children learn mathematics, and then shows pre-service teachers the most effective methods of teaching PreK-8 math through hands-on, problem-based activities. As teacher candidates engage with the activities, they boost their own knowledge of the math and learn concrete, developmentally appropriate ways to incorporate problem-based tasks in their classrooms. Examples of real student work and new common challenges and misconception tables allow readers to visualize good mathematics instruction and assessment that supports and challenges all learners. An important reference to consult throughout a teaching career,

this book reflects the Common Core State Standards and NCTM's Principles to Actions, as well as current research and coverage of the latest teaching technology. -- Provided by publisher.  
[A Guide for Teachers and Leaders](#)  
Routledge  
Tasks in Primary Mathematics Teacher Education is intended to advance relevant research and innovative international practices in the preparation and professional development of mathematics teachers. Emerging from discussion at the ICMI study on teacher professional development, this volume, focused on primary and elementary teachers, culls a richness that can only be found by gathering wisdom from varied experiences around the world. The choice of tasks, and the associated

pedagogies, is a key aspect of teaching and learning mathematics. Arguing that what students learn is largely defined by the tasks they are given, several major themes are presented. One such major strand, the form, function and focus of tasks, is discussed throughout several chapters, offering analysis, discussion of implementation, and exemplars of a broader category of illustrative techniques for developing critical understanding.

*Mathematics for Elementary School Teachers: A Process Approach* Springer Science & Business Media

These materials were developed, in part, by a grant from the federally-funded Mathematics and Science Partnership through the Center for STEM Education. Some of the activities were adapted

from the National Council of Teachers of Mathematics Illuminations, the National Library of Virtual Manipulatives, Hands-On Math Projects with Real Applications by Judith A. Muschla and Gary R. Muschla, Learning Math with Calculators: Activities for Grades 3-8 by Len Sparrow and Paul Swan, and Mathematical Ideas by Charles D. Miller, Vern E. Heeren and John Hornsby. The following UNC Charlotte, Charlotte, North Carolina graduates contributed to the development of the work products: Anna Athanasopoulou, Stephen Chambers, Fabio Franco, Jen Krieger, Morgan Leith, Chris Muellenbach, Ashley Nagowski, Jamie Pursley, Brandy Reece, Lauren Selvey and Linda Xiong.

*Partnering With Parents in Elementary School Math* PALM-Ed Pty Ltd

An introduction to teaching elementary and junior-high school mathematics, it incorporates recommendations of the NCTM. Focuses on the "how" and "why" of each mathematical topic, with stress on good pedagogy and development of problem-solving skills. The Second Edition contains a new chapter on the Logo computer language. References to NCTM standards now appear in every chapter and there are many new problems.

*Discrete Mathematics For Teachers*

Cengage Learning

Studies of teachers in the U.S. often document insufficient subject matter knowledge in mathematics. Yet, these studies give few examples of the knowledge teachers need to support teaching, particularly the kind of

teaching demanded by recent reforms in mathematics education. Knowing and Teaching Elementary Mathematics describes the nature and development of the knowledge that elementary teachers need to become accomplished mathematics teachers, and suggests why such knowledge seems more common in China than in the United States, despite the fact that Chinese teachers have less formal education than their U.S. counterparts. The anniversary edition of this bestselling volume includes the original studies that compare U.S and Chinese elementary school teachers' mathematical understanding and offers a powerful framework for grasping the mathematical content necessary to understand and develop the thinking of

school children. Highlighting notable changes in the field and the author's work, this new edition includes an updated preface, introduction, and key journal articles that frame and contextualize this seminal work.

MATHEMATICS FOR ELEMENTARY TEACHERS. (PRODUCT ID 23864410).

Wiley

This book is designed for a mathematics for elementary school teachers course where instructors choose to focus on and/or take an activities approach to learning. It provides inductive activities for prospective elementary school teachers and incorporates the use of physical models, manipulatives, and visual images to develop concepts and encourage higher-level thinking. This text contains an activity set that

corresponds to each section of the companion text, *Mathematics for Elementary Teachers: A Conceptual Approach* which is also by Bennett/Nelson. The *Activities Approach* text can be used independently or along with its companion volume. The authors are pleased to welcome Laurie Burton, PhD, Western Oregon University to this edition of *Mathematics for Elementary Teachers: An Activity Approach*.

*Elementary Mathematics Curriculum Materials* Routledge

The book presents comparative analyses of five elementary mathematics curriculum programs used in the U.S. from three different perspectives: the mathematical emphasis, the pedagogical approaches, and how authors communicate with teachers. These

perspectives comprise a framework for examining what curriculum materials are comprised of, what is involved in reading and interpreting them, and how curriculum authors can and do support teachers in this process. Although the focus of the analysis is 5 programs used at a particular point in time, this framework extends beyond these specific programs and illuminates the complexity of curriculum materials and their role in teaching in general. Our analysis of the mathematical emphasis considers how the mathematics content is presented in each program, in terms of sequencing, the nature of mathematical tasks (cognitive demand

and ongoing practice), and the way representations are used. Our analysis of the pedagogical approach examines explicit and implicit messages about how students should interact with mathematics, one another, the teacher, and the textbook around these mathematical ideas, as well as the role of the teacher. In order to examine how curriculum authors support teachers, we analyze how they communicate with teachers and what they communicate about, including the underlying mathematics, noticing student thinking, and rationale for design elements. The volume includes a chapter on curriculum design decisions based on interviews with curriculum authors.

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