



Preface

EACH STAGE OF LIFE BRINGS ITS CHALLENGES. Early adolescence is a stage of life that presents children with some of the most difficult tasks in personal development at a time when they may not yet have developed the resources to meet those challenges. These years challenge children to examine their self-definition before they fully understand those around them, to find a place among peers while those same peers are finding their own places, to distance themselves from their families while still accepting their families' support. For many young people, these years are the most confusing time in their lives.

The difficulties faced by children with intellectual gifts can be subtle or hidden. Their success in the usual academic curriculum can mask problems they have in fitting in with their peers or in relating to adults. Indeed, academic success can itself be a problem: gifted students may become bored with work they have already mastered and may yearn for more exciting material even as they are praised for earning good grades.

The middle school movement was born of a recognition of the particular difficulties that students face at this time in their lives. But no institution is a perfect match for the individuals it serves, and middle schools—as well as other educational institutions—sometimes have trouble serving their gifted students. Happily, the middle school is an institution that is still developing. Its traditions are young and its methods often untried. Middle schools are constantly fine-tuning their efforts on behalf of all their students, including gifted students.

We offer this book of essays as support for middle school teachers, principals, supervisors, and administrators who are engaged in just this sort of fine-tuning. The authors bring a variety of backgrounds and perspectives. Some are academic researchers, others working teachers. Still others are outside the usual academic or educational institutions that support but also confine us in our work.

Chapter 1, on policy and philosophy, offers what is perhaps the book's widest-angled lens on the subject. Chapter 2 instantiates many of the general points made in chapter 1 by describing and classifying specific models of programs for this audience. Chapter 3 focuses in on still more detail, discussing specific issues connected with curriculum for middle school students with high ability in mathematics.

But curriculum in itself is meaningless until implemented by teachers. Chapter 4 discusses the knowledge and skills that middle school teachers need in their work with mathematically gifted students. The points raised are applicable both to preservice education of teachers and to in-service professional development.

Not every opportunity for gifted children arises in the classroom, and not every opportunity comes through the classroom teacher. Chapter 5 offers examples of materials and programs that can supplement and enrich classroom experiences. Teachers and administrators should be aware of these possibilities and how they articulate with more formal experiences in supporting the growth of mathematically promising children.

Articulation is an issue on many levels. Chapter 6 examines various types of articulation from issues within the classroom to those on the national level, and several in between. Chapter 7 offers a look at a working classroom in an example by a master teacher of how to articulate the program of a high school with the goals of a middle school whose students it will serve.

The last two chapters of the book return to a wider perspective. Chapter 8, on equity, addresses a topic of paramount importance. This topic must be discussed with respect to any educational initiative at all, but it has particular nuances in work with gifted students. Chapter 9, on international models, offers a rare look outside the American educational system at possibilities and opportunities offered in selected countries around the world.

Readers of these essays may sometimes find themselves wondering how they relate to the specific issue at hand. Many of the points raised are as valid for general students as for gifted students. Many relate equally well to high school or elementary school as to middle school. And many apply across the curriculum—not just to mathematics. This phenomenon is inevitable: gifted education is a part of education, and good teaching or good curriculum for gifted students must include elements that are important for all students. Part of the message of these essays is to underscore the particular meaning for mathematically gifted middle school students of basic principles of general education.

Readers will find different points of view and different levels of advice and information in different essays. Some of the information in one essay may be repeated, with a slightly different meaning, in another.

And inevitably, readers will find that something has been left out. For example, this volume does not provide specific technical information about identification or assessment. There is abundant literature on this subject. A technical background in, say, testing or psychometrics is not assumed of the reader. However, the references given will lead readers to more detailed discussions of any particular topic.

Another important omission—and for the same reason—is specific content. Very little actual mathematics appears in this book, simply because the field is too wide to cover in a small volume. Again, readers are invited to pursue their interests through an examination of the materials referred to in the essays.

This invitation comes with a caveat, however: the essays' references to other materials appear for the readers' information only, and their inclusion does not imply endorsement by NCTM or the editors. In fact, the same is true of all the opinions expressed in the essays. They are the work of experts in the field, but it is a large and growing field. There are other opinions to be held—perhaps even by our readers themselves.

In fact, we invite you to form your own opinion, whether or not it agrees with those expressed in these essays. That is, we hope that the essays here will stimulate your interest in the large, growing, and fascinating field of education for mathematically gifted middle school children.