

Preface

Curriculum frameworks or content standards acquired special prominence in educational policy in the latter half of the twentieth century – a prominence still evident as we enter the twenty-first. Many of the world's educational systems have experienced an important shift of focus in education policies during this period. The stress had traditionally fallen on improving material investments and guaranteeing universal access to public education. The 1980s and 1990s, however, brought a stronger emphasis on the conceptual understandings, procedural knowledge and other academic objectives to be met by all students in primary and secondary education – and thus a renewed interest in the intended curriculum as one of the most critical components of educational policy. The movement towards the development or reform of educational content standards in many educational systems reflects this emphasis on the quality of the content of the intended curriculum. Policy makers and educational leaders have favored the development of official curricula and a variety of implementation tools to insure the delivery and attainment of socially significant disciplinary content. Most new curricula stipulate the acquisition of higher order knowledge by all students, and such prescription tends to be informed by the type and amount of knowledge that is perceived to be critical for students to function effectively in society and in the economy.

A considerable body of work has been contributed to support the use of educational policy programs focused on the quality of the content of schooling in what has been termed content-driven reform. It is stated that ambitious curriculum intentions must be formulated and subsequently appropriate mechanisms must be designed to implement these curricula so that students may have the opportunity to attain high levels of achievement. Content-driven reform holds that a core specification of curriculum goals provides the basis for setting up a policy structure designed to enhance the achievement of pupils. Thus, the intended curriculum is projected to directly impact teacher training and certification, school course offerings, instructional resources, and systems of accountability.

Paradoxically, the specification of 'curricula for high achievement' and the attendant policy instruments that might be concerned with translating these into 'high achievement' opportunities to learn in the classroom have not greatly benefited from empirical work – cross-national or otherwise.

Certainly high expectations concerning the role of policies regarding curriculum intentions have been held in many countries. In a survey of thirty-eight nations conducted as a part of the Third International Mathematics and Science Study (TIMSS), the majority reported a number of reforms and managed changes in the content, pedagogy and technology prescribed in national curriculum policy for school mathematics and science.

Programs of study, content standards, curriculum frameworks and the like are, however, policy instruments designed at a great distance from classrooms – they influence the classroom decisions of teachers, but often provide little in the way of detailed guidance regarding the day-to-day management of educational opportunities in classrooms.

Textbooks are commonly charged precisely with the role of translating policy into pedagogy. They represent an interpretation of policy in terms of concrete actions of teaching and learning. Textbooks are the print resources most consistently used by teachers and their students in the course of their joint work. Results from the TIMSS reports clearly depict the influence that textbooks exert on the results of that work.

This book inspects textbooks in detail, specifying how they go about the business of translating policy into pedagogy. Thus, this book belongs to the body of work from the TIMSS that seeks to explain how cross-national attainments in student achievement are related to features of educational policy and its implementation. This work continues the vision of Benjamin Bloom, Thorsten Husén and their colleagues, who inaugurated the line of research to which the authors of the current volume are heirs, with the purpose of speaking to issues of educational policy and practice. Clearly, one issue of pervading importance to the nations that participated in TIMSS was the quality of educational opportunities afforded students to learn mathematics and science – and the instruments that optimize such quality.