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*Mathematics Textbooks, Misconceptions and Conceptual Understanding*

Mathematics instruction, in many North American secondary and tertiary institutions, is strongly textbook-driven. Textbooks determine not just what is taught, but also suggest strategies that are to be used in teaching. Moreover, "... textbook represents a message from the larger mathematical community about what students should learn."

Perhaps contradictory to one's expectations, textbook-related research is far from developed. There have been various attempts at evaluating textbooks, or studies exploring the relationships between textbooks and curriculum or between textbooks and learners; or studies that compared textbooks in different countries. However, the amount of research related to the quality of mathematical content and its exposition appears to be quite modest. Very few mathematics education researchers have taken a really close look at what is in the textbooks, with the focus on how the material is presented and what kind of learning may be implied.

By examining a variety of case studies, I will illustrate several findings of my research (collaboration with Ann Kajander). We took a closer look at textbooks commonly used in Ontario (grade 12 and first year university), to determine to what extent, and how, mathematics textbooks potentially contribute to the creation and strengthening of students' misconceptions (e.g. sources of systematic errors). This way, we investigate to what extent textbooks might promote (or not) deep, conceptual understanding of the material that they present.

I will attempt to convince the audience that this is an area of research that requires genuine collaboration between mathematicians and mathematics educators—that, in the end, will benefit both groups.