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Teaching Interdisciplinary Mathematics

Timothy Sibbald (ed.)

In recent years interdisciplinary teaching has gained attention particularly through efforts to pursue STEM. Other approaches to interdisciplinary education bring other subject disciplines together. In this peer-reviewed book an international selection of authors consider what happens when their subject disciplines are combined with mathematics. The approach is anchored by math education to provide a lens on the implications for a single area of subject content when an interdisciplinary approach is taken. The overall book has implications for other focal subject or discipline foci because it is grounded by a theoretical framework that is not subject or discipline specific. The collection provides inspirational ideas for drawing content areas together but also demonstrates that there are deeper issues that the education field needs to consider. These range from practical classroom issues, including planning, to issues to pedagogical challenges for the experienced teacher, as well as policy and theoretical dimensions when the collection, as a whole, is considered. The theoretical issues that emerge show a need for improving the foundation for interdisciplinary approaches. With mathematics as the anchoring discipline, it is found that mathematical content may effectively be split in the process of pursuing interdisciplinary teaching approaches. This is an informative book that shows that there is a need for further study of how numeracy, the broader scope of mathematics, and an interdisciplinary philosophy of curriculum are entwined.

Editor Bio:

Dr. Timothy Sibbald is an associate professor with the Schulich School of Education, Nipissing University. His research focuses on all aspects of mathematics education including instructional issues, content development and delivery, as well as teacher development. He has also researched teacher movement within school boards and faculty experiences during the tenure-track years in higher education. In addition, he has investigated the teacher-as-researcher concept through self-study over an extended period of time. He is the current editor of the Ontario Association for Mathematics Education Gazette.

