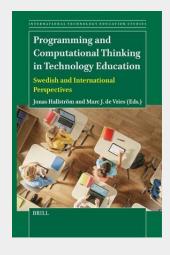
Programming and Computational Thinking in Technology Education

Swedish and International Perspectives

In the last decade, programming and computational thinking (CT) have been introduced on a large scale in school curricula and standards all over the world. In countries such as the UK, a new school subject—computing—was created, whereas in countries such as Sweden, programming was included in existing subjects, notably mathematics and technology education. The introduction of programming and CT in technology education implies a particular relationship between programming and technology. Programming is usually performed with technological artefacts—various types of computers—and it can also be seen as a specific branch of engineering. This book analyses the background to and current implementation of programming and computational thinking in a Swedish school technology context, in relation to international developments. The various chapters deal with pertinent issues in technology education and its relation to computers and computing, for example, computational thinking and literacy, teachers' programming competence, and computational thinking, programming, and learning in technology education. The book includes examples from educational research that could also be used as inspiration for school teaching, teacher education and curriculum development.

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