

Book Review

de Vries, M. J. (2005). *Teaching about technology: An introduction to the philosophy of technology for non-philosophers*. Dordrecht, The Netherlands: Springer. \$129.00 (hardcover) pp. 170, ISBN 1-4020-3409-1

Reviewed by Vincent Childress

Marc de Vries' latest book, *Teaching about Technology: An Introduction to the Philosophy of Technology for Non-Philosophers*, was interesting to the reviewer because it provided a link between philosophies of technology and the nature of the technology curriculum more than any other philosophy-related work he has read. The book is intended for use with pre-service teachers, graduate students, and others who are interested in teaching technology. *Teaching about Technology* is part of a series of books on science and technology that is edited by William Cobern of Western Michigan University in Kalamazoo, Michigan. The editorial board for the series is comprised of university professors from around the world including Ghana, South Africa, Columbia, Hong Kong, and Taiwan. The series, entitled Science and Technology Education Library, is primarily related to science education. The publisher, Springer, is based in Berlin, Germany but has a number of publication outlets around the world and is involved in science and technology related publications generally.

de Vries provides a well organized introduction to the nature of philosophy and helps readers understand fundamental concepts like ontology and epistemology as they relate to the person and knowledge. He provides many examples of how various philosophers have viewed knowledge in the past, and traces a progression of technology philosophers' beliefs up to the present. At this point in the book, he helps prospective teachers of technology understand why having a philosophy is important. He relates the development of a personal philosophy of technology to the curriculum of technology education.

Next, de Vries uses philosophy as a "sieve" through which technologies can be sorted. He starts by characterizing technology artifacts, covering several different philosophical points of view that help the reader organize technology artifacts as content. This is an example of how de Vries uses philosophy to reveal the nature of technology education and its curriculum more than other authors. In a like manner, de Vries describes technological knowledge, technological processes, technological ethics, and aesthetics. Across these

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particular four chapters, artifacts, knowledge, processes, and ethics and aesthetics, de Vries provides a balanced view of technology, what it is, and what people believe about it. Moreover, he makes it a point to discuss the importance of a balanced view of technology and this discussion underscores the importance of, and capitalizes on, Pupils' Attitudes Toward Technology (PATT) research. In light of PATT research in general, it is refreshing that the first four chapters of the book culminate in a balanced view of technology.

In order to make practical use of PATT research in the context of technological philosophies, de Vries moves into everyday perspectives on how to apply the reader's new found knowledge of a philosophy of technology. A chief concern is that the technology teacher should go into the classroom ready to design curriculum and instruction that will address what is currently understood about learners' perceptions of technology. For example, de Vries makes a very important observation about technology and gender:

An interesting outcome in some of the studies is that the less positive attitude (in terms of interest) with girls is related to a narrower view they have of technology. In the previous section we have seen that pupils...have an artifact-oriented view of technology. This holds for girls even stronger than for boys. And also it appears that this focus on artifacts, rather than on the human and social aspects of technology, makes them less interested in technology. That fits well with many other studies into gender aspects of interests, from which we know that girls more than boys are interested in human and social issues. (p. 108)

de Vries also outlines several perspectives on technology curricula and their origins. He includes portions of the *Standards for Technological Literacy: Content for the Study of Technology* and other prominent curriculum perspectives and relates their structures back to the reader's philosophical perspective. Finally, de Vries outlines several methods of instruction that may be useful in helping students to understand technology.

There are only a few criticisms of the work. The most noticeable problem is the high frequency of mechanical/grammatical errors in writing. The book is written in English, but de Vries is from The Netherlands. The reviewer can only imagine the difficult task of writing in one language and then having to translate those thoughts into another language. However, these errors might only be noticeable in English-speaking countries and will certainly be removed in subsequent printings. Like this reviewer, de Vries has a tendency to be wordy and present content through complex sentences. However, it is difficult to write about such a complicated subject without getting "heavy" on the expression of ideas. A third point, more of an observation than a criticism, is that the methods covered in the book, sequenced near the book's end, are so limited that it seems as if they were afterthoughts or were presented in such a way as to help the author avoid the appearance of dictating what should be done in the technology classroom or laboratory in terms of methods. For example, to the reviewer's recollection, no mention is made of the various ways in which teachers can facilitate students' interactions with technologies. Yet, the reviewer knows that the extent to which a technology program is hands-on, design-oriented, or the

like, in part, is a function of the teacher's philosophy. This observation may be based more on the reviewer's biases about particular philosophies than it is based on some shortcoming of the work. It is important from an international perspective that de Vries not try to influence technology teachers to adopt his particular philosophical view on technology. Those decisions are local.

In terms of helping students understand the connections between philosophy and the nature of technology and technology curricula, de Vries' book is a good choice for the classroom. The extent to which a pre-service technology teacher gets excited about philosophies and philosophers (e.g., progressivism and Dewey) is a function of the teacher educator and how he or she intends to design the teacher's introduction to philosophy. Having the de Vries book as a lead-in to the student's development of his or her own philosophy of technology would provide a good foundation from which a series of stimulating discussions could arise.