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**Learning about design in context: An investigation of learners'
interpretations and use of real-life cases within a constructivist
learning environment created to support authentic design
activities**

A thesis submitted in fulfilment of the
requirements for the award of the degree

Doctor of Philosophy

from

University of Wollongong

by

Susan Jane Bennett

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Faculty of Education
2002

Declaration

I, Susan Bennett, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Faculty of Education, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other institution.

Susan Bennett

17 April 2002

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Abstract

Teachers and designers in a range of disciplines are interested in engaging their students in authentic activities that reflect the experiences of practitioners and have begun to explore the potential of cases to present the complexity of real-world situations. Despite a long tradition of cases in legal, medical and business education, there is little empirical research on which to base the design and implementation of case-based approaches. This study addresses this gap by investigating learners' understanding of multimedia design and development derived from the analysis of two real-life cases, and how this understanding supports learners in their own design projects.

A qualitative case study approach was used to follow a class of graduate-level students enrolled in a technology-supported, case-based subject designed using Jonassen's (1999) model for a constructivist learning environment. The study was guided by three key questions: (1) How do learners interpret the case materials? (2) How do learners develop solutions to their project design tasks? (3) What aspects of the projects and cases do learners reflect on at the end of the subject? Student work from case analysis, group project and reflective tasks was collected as a key data source. This was complemented by interviews with students and their instructor, observations by the researcher at class meetings, and the collection of documents, such as discussion list records and subject files. Data analysis was guided by the research questions, but also sought to identify emergent themes and issues.

The study found that the case analysis task produced a diverse range of responses from students, both in terms of the issues discussed and the type of responses elicited. Learners found the cases useful in raising their awareness of project issues, and suggesting design approaches and management strategies. The critical role of discussion and reflection in developing students' understanding of multimedia design and development emerged. The study also revealed some of the limitations of the case approach and highlighted the need for strategies that support learners' thinking and reasoning. The findings have implications for the design of cases and suggest avenues for further research.

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