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THE COGNITIVE AND METACOGNITIVE DEMANDS

OF LIBRARY RESEARCH AS EXPERIENCED BY

FORM ONE STUDENTS

A thesis presented in fulfilment of the requirements

for the degree of Doctor of Philosophy in Education

at Massey University

PENELOPE ANNE MOORE

1992
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Abstract

In recent years educators have become increasingly aware of the necessity to support the development of higher order thinking abilities in all students. It has been suggested that, in this regard, special attention should be given to those aspects of the curriculum "which are inherently enabling of further learning" (Resnick, 1987, p44).

Library research skills tuition is one such area but traditional modes of teaching these have frequently overlooked the cognitive and metacognitive demands of tasks requiring information retrieval and use. The extent of these demands as they affect students undertaking project assignments independently was largely unknown and prompted the following study.

To access the levels of knowledge and thinking processes used by students, think aloud/concurrent interviews were conducted individually while 23 Form 1 students (mean age 11 years 8 months) attempted to gather information for a project. These interviews were videotaped and then replayed to students to provide memory cueing for retrospective interviews.

Students were found to have wide ranging metacognitive knowledge, the accuracy of which influenced their performance on the information retrieval task. However, the knowledge they made public concerning the learning task and the criteria by which their learning would be assessed was very limited. Few students voiced recognition that the criteria for evaluation would have implications for the way in which they approached the learning task itself. In contrast, they voiced considerable awareness concerning the expected features of the materials they must use, qualities of their own learning abilities and processes, and interactions between these. However, Form 1 students often lacked an accurate understanding of the relationships within the library system and between access structures in individual books.
Overall they had insufficient general and tactical knowledge to facilitate the use of alternative action paths when a favoured approach failed. However, both able and less able students were found to engage in some form of executive control processing. Two case studies are presented which illustrate differences in the quality of students' executive control processes. In particular, students varied in the degree to which monitoring events triggered associated planning and regulation/revision episodes.

The findings are discussed in terms of their implications for providing a learning environment that supports the development of higher order thinking and increased information retrieval success.
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