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THE CCAE MATHEMATICS LABORATORY

by

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Requirements for the Degree of Master of Education in the  
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## ABSTRACT

Many students undertaking courses at tertiary institutions find that lack of basic mathematical skills, or lack of confidence in these skills, is impeding their progress. This can arise with students in science, administration, geography, nursing, computing, education, and many other courses. The problem can be anticipated with mature age students who are often admitted to courses lacking formal entry qualifications, but younger students are increasingly involved.

The problem is not a static one but has been developing rapidly in recent years. This Field Study commenced by analysing the extent of the problem at CCAE, its past development and possible further developments in the near future. A search was then undertaken for instances of recognition of, and response to, the problem in other institutions.

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Instances of responses elsewhere, and of theory relating to adult learning and mathematical learning, were assessed for relevance to the CCAE situation. A response appropriate to the CCAE situation was designed, implemented, and its initial success evaluated. This response was based upon an individualised approach, involving diagnosis of individual problems and needs, self-learning materials in modular form, one-to-one tutorial assistance in a "Maths Lab", self-paced learning, testing for mastery of modules using criterion referenced tests.

The evaluation undertaken indicates that this response is basically successful in the CCAE situation. However, some recommendations for the future development of the response follow from the evaluation; the most important of these involves a requirement upon students with weaknesses in their basic mathematics, to use the Lab.

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