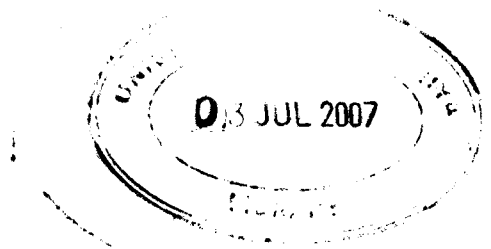


**THE INFLUENCE OF
STUDENTS' MATHEMATICS KNOWLEDGE IN LEARNING
ADVANCED LEVEL PHYSICS**

A PROJECT REPORT PRESENTED BY

K.A.P.P. KARUNANAYAKE



to the Board of Study in Science Education of the
POSTGRADUATE INSTITUTE OF SCIENCE

*in partial fulfillment of the requirement
for the award of degree of*

MASTER OF SCIENCE IN SCIENCE EDUCATION

of the

UNIVERSITY OF PERADENIYA

SRI LANKA

2006

607504

C
370.7
KAR

**THE INFLUENCE OF
STUDENTS' MATHEMATICS KNOWLEDGE IN LEARNING
ADVANCED LEVEL PHYSICS**

K.A.P.P. Karunanayake
Postgraduate Institute of Science
University of Peradeniya
Sri Lanka

Opportunities for entering to universities are very limited. Advanced level students in school today are under great pressure because of high competition. There is a general belief that the performances of physics by biological science students are at a lower level than physical science students. Especially, biological science students are scared and are reluctant to study physics. Is this true or false? This study was focused on it.

During the two-year period in advanced level classes, physical science students are exposed to mathematics concurrently. But biological science students are not exposed to it.

In this study an attempt was made to assess whether the prior or concurrent exposure to mathematics improves the level of understanding advanced level physics concepts. A sample of hundred and sixty advanced level students in Minu/ President's College were participated in the study. Statistically compared the physics performance levels between mathematics exposed and non-mathematics exposed groups.

The study shows that physics performances of mathematics exposed group are better than non-mathematics exposed group. Though there were few exceptions, it concludes that concurrent exposure to mathematics improves the level of understanding physics concepts.

This is a specific problem to be investigated. The physics performances of biological students may be affected by this problem within a highly competitive circumstance. Therefore, this important fact is to be paid special attention by the educational experts and reformers.