

**EFFECTIVENESS OF INFORMATION AND COMMUNICATION
TECHNOLOGY APPLICATIONS FOR ADVANCED LEVEL
SCIENCE EDUCATION**

A PROJECT REPORT PRESENTED BY

KANDUAHA RALALAGE KUMUDU SHANTHI OLAGAMA

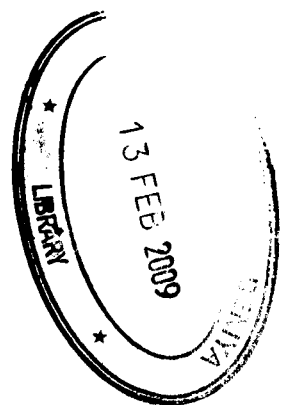
to the Board of Study in Science Education of the
POSTGRADUATE INSTITUTE OF SCIENCE

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

MASTER OF SCIENCE IN SCIENCE EDUCATION

of the

**UNIVERSITY OF PERADENIYA
SRI LANKA
2008**



620219

EFFECTIVENESS OF INFORMATION AND COMMUNICATION TECHNOLOGY APPLICATIONS FOR ADVANCED LEVEL SCIENCE EDUCATION

K. R. K. S. Olagama

Postgraduate Institute of Science

University of Peradeniya

Peradeniya

Sri Lanka

Information and Communication Technology is a strong catalyst for educational innovation and improvement. The first phase of ICT introduced to schools in Sri Lanka in 1983. Computer Assisted learning is presently been implemented in teaching mainly in science subjects. Though computers were located in laboratories most of the students were unable to learn even the basic skills of operating computers. Even most the teachers in science Advanced Level were not fluent with computer literacy and they had no chance to use Computer Learning Centres (CLC) in schools.

The reason why such a topic of effectiveness of ICT applications for A/L science education was selected, that the required computer culture was not adequately developed in schools up to now.

Objectives of this study were to identify the difficulties to implement ICT for A/L science education in current education system in schools and forward suggestions. All the ten 1 AB schools in Kegalle educational zone were selected to carry out this study. To evaluate the effects of ICT for both students and teachers in teaching - learning process, a combine sample of 50 grade 13 students, 30 teachers and ICT centre managers were selected for the pilot study. Analyzing the responses to the questionnaires modifications were made to minimize the weak points in the questionnaires.

After identifying the weakness of three given questionnaires the main study was done. A sample of 327 science students from grade 13, all science teachers and all ICT centre managers of respective schools were selected to the survey study. The samples were given three separate questionnaires. A wide area of the subject was taken into consideration in questionnaires to scan about the effects of ICT for education and ICT in education.

Finally results were analyzed. Constraints of prevailing system were identified from the analysis of questionnaires. Percentage of results indicated that, use of ICT at teaching - learning process had only a little impact on outcomes of both students and teachers as well.

Most of the teachers and students may be unable to reach the goals of implementation of ICT for A/L science education due to above reasons.

Finally it was found out though the government introduced ICT with all facilities with clear objectives, schools were unable to reach the goals due to obstacles when implementing in education system.