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**INVESTIGATION ON THE EXTENT OF SUCCESS IN  
IMPLEMENTING ADVANCED LEVEL BIOLOGY  
PRACTICAL WORK IN SCHOOLS IN THE  
KURUNEGALA DISTRICT**

A PROJECT REPORT PRESENTED BY

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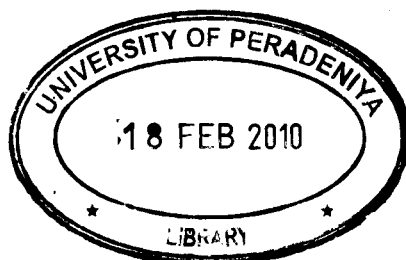
To the Board of Study in Science Education of the  
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# **Investigation on the extent of success in implementing Advanced Level Biology practical work in schools in the Kurunegala District**

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**Abstract**

Science education in Sri Lanka has undergone major reforms since independence. The subject Biology was introduced instead of Zoology and Botany and practical work was made compulsory in Advanced Level science stream with the educational reforms in 1997. However, Biology practical activities in Advanced level classes have not been investigated so far to determine the success of implementing Biology practical work in A/L science classes in Sri Lanka. The purpose of this study was to examine the success of implementing Biology practical work in schools in the Kurunegala District.

Both primary and secondary data were collected for this study. Questionnaires, informal interviews and observation of selected practical lessons were used for collecting primary data. Data were collected from type 1AB schools in all educational zones: Kurunegala, Kuliypitiya, Nikeweratiya, Maho, Giriulla and Ibbagamuwa in the Kurunegala District. The sample consisted of randomly selected 30 Biology teachers and 40 students who sat for the G.C.E. A/L examination in 2007. In addition, Laboratory assistants were interviewed if present in selected schools. Relevant circulars issued regarding new reforms and Biology examination papers were used as secondary data. Paper I and II of the Biology examination paper from year 2000 to year 2007 were reviewed separately to examine the number of questions appeared related to practical work.

Results reviewed that, the availability of human and physical resources were satisfactory, however lack of proper training for teachers and lab assistants and inadequacy of better-quality laboratory equipment defectively affected the success in implementing practical work in schools. Biology practical work can be conducted successfully in schools as teachers and students have already accepted their

importance. However, the lack of proper evaluation of Biology practical work in government examination limits the interest on conducting practical activities in schools. Lack of coordination, supervision and constant dialogue among policy makers, teachers and students were found to be important factors which affected negatively in implementing the Biology practical scheme. Poorly motivated and insufficiently trained lab-assistants were another constraint for the successful completion of a practical class.

Therefore, all teachers should be given a thorough training on hand-on-practical skills without considering their teaching experiences and academic qualifications to make sure that they are competent enough to provide basic techniques and handle a practical class confidently. Similar attention should be given to employ laboratory assistants for all schools and upgrade the skills and knowledge of lab-assistants since they are important partners of practical classes. There was a mismatch between the number of practical activities and the allocated time. Due to this weakness most practical activities could not be completed within the stipulated timeframe. The solution would be to prioritize practical activities.

A sufficient number of questions from Biology practical lessons should be included in the G.C.E. A/L examination papers. This inclusion will automatically lead to motivate and create an interest among both teachers and students on practical activities.

