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CRITICAL EVALUATION ON CONDUCTING PRACTICAL SESSIONS OF G.C.E. A/L PHYSICS: CASE STUDY IN SABARAGAMUWA PROVINCE

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Hands-on experience is beneficial for better understanding the theoretical concepts in Physics. Therefore, a practical component is included in G.C.E. (A/L) Physics syllabus in Sri Lanka. This research aims to evaluate the G.C.E. (A/L) process of conducting Physics practical lessons at schools in the Sabaragamuwa Province, Sri Lanka. Sixty-five schools (Grade - 1 AB) from the Sabaragamuwa Province were selected for the study. Data were collected through two questionnaires, one for teachers who taught Physics in G.C.E. (A/L) classes and another for the Grade 12 students who follow Physics as a subject in Biological or Physical Sciences streams. All schools considered in the study have separate Physics laboratories. Although laboratories are equipped with sufficient instruments and other resources, the support from the Laboratory Assistants was not satisfactory, thus considered a barrier for the teachers to conduct practical sessions in a productive manner. However, teachers were able to complete all the practical sessions in the syllabus within the two years though student participation was poor in the last two terms of Grade 13 classes. In addition, both teachers and students have a good perception of conducting practicals in school laboratories. Despite poor attendance, all students had the experience of performing laboratory experiments during the two years. Teachers motivated students by giving them a chance to perform missed practicals and correct students' practical reports. After conducting practicals in school laboratories, students demonstrated better knowledge, skills, and attitudes towards the subject. Both teachers and students were highly satisfied with the conduct of Physics practicals in schools of Sabaragamuwa Province. There was no relationship between the student gender and the satisfaction level of conducting Physics practicals in school laboratories. The study revealed that the necessary support needs to be improved further with the help of school administration on conducting Physics practicals to meet the stipulated educational goals through meaningful learning.

Keywords: G.C.E. (A/L), Laboratory Assistants, Laboratory Experience, Physics, Practical Camps