

PREPARATION OF A STUDY PACKAGE ON TISSUE CULTURE FOR G.C.E. ADVANCED LEVEL BIOLOGY CURRICULUM (UNIT 10)

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Tissue culture is an important study area in the G.C.E. (A/L) Biology curriculum. It is a multi-faceted technique thus its significance in the domains of biology is almost intense. It was revealed that the teachers as well as students confronted with problems in the teaching-learning process of tissue culture. Under these circumstances, teachers are compelled to stick to the conventional lecture method which does not lead to meaningful learning. Hence, many students tend to perceive the concepts of tissue culture incorrectly.

The aim of this study was to find the difficulties of the G.C.E. (A/L) biology teachers and students and determine the effect of a study package on tissue culture in delivering the concepts to the students. In order to validate the importance of the study package on tissue culture, questionnaires were administered to 30 G.C.E. (A/L) biology teachers from the central province and 100 students from the University of Peradeniya. For the evaluation of the effectiveness of the study package, a sample was selected from two schools of the central province. The control group consisted of 15 female and male students each, while the experimental group consisted of 15 female and 18 male students. A pre-test was conducted for both groups to investigate the prior knowledge of the students. Pre-test marks revealed that the prior knowledge of the two groups were similar. After the preparation of the study package, the tissue culture unit was delivered with the aid of the study package for the experimental group and by employing the lecture-based method to the control group. The post-test was conducted for both groups where the control group obtained a mean mark of 41.93 while the experimental group obtained 82.61. Based on the post-test marks, it can be concluded that there is a significant effect of the study package. These type of study packages can be incorporated into the curricula in order to uplift the standard of the Sri Lankan education.