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**AN INTERNET BASED STUDY PACKAGE TO ENHANCE THE  
UNDERSTANDING OF THE CHEMISTRY OF POLYMERS  
AT G.C.E (A/L)**

**A PROJECT REPORT PRESENTED BY**

**DAHAMPRIYA BALASOORIYA**

**to the Board of Study in Science Education**

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**for the award of the degree of**

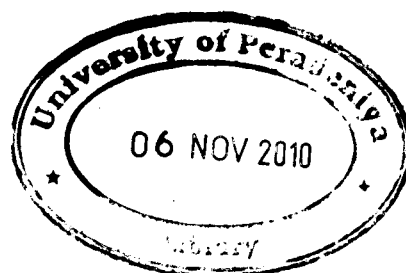
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## **Abstract**

### **AN INTERNET BASED STUDY PACKAGE TO ENHANCE THE UNDERSTANDING OF THE CHEMISTRY OF POLYMERS AT G.C.E (A/L)**

Dahampriya Balasooriya

Postgraduate institute of Science

University of peradeniya

Sri lanka

At the time like the present day, when the usage and significance of using polymers has risen to a high level in the world; the importance given to it in Sri Lanka appears to be low. Thus, the purpose of this research is to find a mechanism in order to make polymers popular in relation to the A/L chemistry syllabus among the teachers and students. Therefore, for this research, a group of students following chemistry in A/L and a group of teachers teaching the subject in A/L were selected from the Galle district.

At the very outset, information was collected from both A/L chemistry students and teachers through a pre-questionnaire on both, the existing teachers used in learning and teaching and those they prefer to apply although such teaching techniques are not in the current use. Based on the information gained through the pre-questionnaire, a study package in relation to the chemistry syllabus that would fulfill the needs and aspiration of the teacher-pupil combination was designed. Also, the present knowledge about the polymers of the selected crowd of A/L science students was examined by a post test applying the randomized group pre-post test technique. The variations of the knowledge about polymers of control and experimental groups and the teaching effectiveness when using the study pack were examined through a post test.

After making the selected group of both students and teachers aware of my study package on the polymers through an introduction to it, their feedback/response was gained through a post questionnaire.

This research indicates that the present day students prefer multifunctional teaching methods when learning polymers to traditional teaching methods. It was also revealed that the students' attention and motivation to the lesson is low when the traditional teaching methods are applied in teaching polymers. It was apparent that both teachers and students had a great tendency towards computer-based teaching methods with regards to polymers. Poor computer literacy of the students was highlighted as a handicap in accessing the computer based multifunctional learning methods. In relation to the teachers, their insufficient computer literacy, high age, reluctance to involve to new scientific teaching techniques accounts their dislikes in opting new teaching techniques.

Both teachers and students pointed out the necessity of computer programmes, in the Sinhala medium. It is envisaged that there will be a very high possibility to popularize polymers among the A/L science students and teachers if the related facilities like IT literacy, internet are developed in schools, while increasing Sinhala medium IT programmes and giving a training to students and teachers on designing study programmes in both Sinhala and English media.