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**ENHANCING STUDENT ACHIEVEMENT ON MAJOR
BIOLOGICAL PROCESSES IN LIVING ORGANISMS THROUGH
PROBLEM BASED LEARNING**

**A PROJECT REPORT PRESENTED BY
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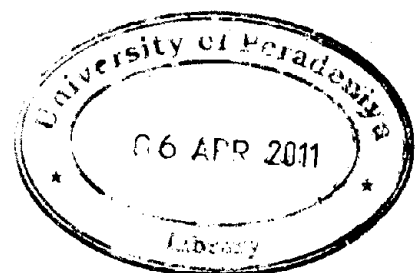
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ABSTRACT

ENHANCING STUDENT ACHIEVEMENT ON MAJOR BIOLOGICAL PROCESSES IN LIVING ORGANISMS THROUGH PROBLEM BASED LEARNING

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According to the current situation of teaching and learning science most of the teachers spoon feed students in both theory and practical classes. Normally teachers depend on the formal lecture method for teaching and learning. Students become overly dependent on information selected and provided for them by their teachers. Understanding of the unit 'Major biological processes in living organisms' in grade 10 syllabus make students aware of the importance of green plants. Majority of the teachers use traditional methods to develop this lesson which makes science a difficult subject. Therefore the objective of my study focuses on to enhancing students' achievement on 'Major biological processes in living organisms' through problem-based learning in grade 10 syllabus.

The problem-based learning process was implemented through five major steps. In the first step the existing situation of teaching learning process was identified by the teacher questionnaire administrated to 40 science teachers in Vavuniya district. In the second stage students' prior knowledge was identified by using pretest paper for grade 10 students from the selected schools in rural and urban areas. A brief unit plan and six lesson plans were prepared in the third stage. In the fourth stage the students in the experimental group was taught by using prepared unit plan and lesson plans. Problem based learning method was used to the experimental group and traditional learning method was used for the control group. Students were given an opportunity to develop science process skills through implemented lessons. In the final stage the effectiveness of the achievement was measured by assessments and post tests. The data were analyzed by the two sample 't' test. Mini tab computer package was used for statistical analysis.

The mean marks of the pre test indicated that the control and experimental groups were at the same level. The results of the post test and the assessments indicated that the new methodology enhances the achievement level of students. Students were able to develop science process skills in the problem-based learning method.

Problem based learning is an effective method, to teach the unit 'Major biological processes in living organisms' in grade 10 syllabuses and enhances student's achievement level and develop their science process skills. Therefore when teaching the unit 'Major biological processes in living organisms' in grade 10 syllabus students should be given more opportunities to develop their achievement level using problem-based learning.