

**SUGGESTIONS FOR OVERCOMING THE LEARNING
DIFFICULTIES OF GRADE TEN STUDENTS IN THE CHEMISTRY
UNIT ONE**

A PROJECT REPORT PRESENTED BY

MOHAMED MARAIKKAR MUZAMMIL

to the Board of Study in Science Education of the
POSTGRADUATE INSTITUTE OF SCIENCE

*in partial fulfillment of the requirement
for the award of the degree of*

MASTER OF SCIENCE IN SCIENCE EDUCATION

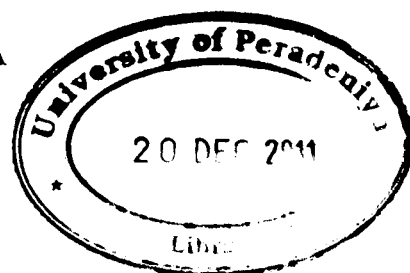
of the

UNIVERSITY OF PERADENIYA

SRI LANKA

2011

652161



SUGGESTIONS FOR OVERCOMING THE LEARNING DIFFICULTIES OF GRADE TEN STUDENTS IN THE CHEMISTRY UNIT ONE

M.M.Muzammil

Postgraduate Institute of Science

University of Peradeniya

Peradeniya

Sri Lanka

Basic knowledge of Chemistry is essential to understand the real world phenomena and appreciate the physical world. The scientific finding of structure and magnitude of matter was introduced as a unit in the grade 10 Chemistry new syllabus after integrated Science to disintegrated Science in 2007. Part of this unit was taken by the previous study of G.C.E (A/L) Chemistry. This research study has been done for grade 10 students to understand the learning difficulties of students. This unit exist very basic concepts of Chemistry. This research study was based on the identification and determination of learning difficulties, effectiveness of remedial teaching methodology and some suggestion and recommendation to overcome them.

The research study was launched to the 170 students in the selected three schools in Mutur Educational Zone in Trincomalee district to understand the learning difficulties and 12 teachers were selected to understand the learning difficulties of students in the teachers' point of view.

Whole area of the unit was used to prepare the pre-test. According to the results of teachers' questionnaire and pre-test, students were divided into two groups as matching method. Remedial teaching method is used as traditional learning method in Sri Lanka and student centered learning method. At the end of teaching, post test was done and analyzed. The results showed progress. Compared to the remedial teaching methods supported to reduce the learning difficulties of the students, student centered learning method result was better than the traditional learning method used in Sri Lanka. In these analysis two groups

of students in each school, hypothesis was formulated as Null hypothesis (H_0) and Alternative hypothesis (H_A). "There is no significant difference between pre-test and post test and, also two methods of teaching". The sample of each school was compared the test score percentage of two groups statistically and the P value was found to be less than 0.05. The hypothesis has significant and Null hypothesis (H_0) was rejected. The outcome revealed that the post test and student centered learning method had positive effect on students.

However still some students face some difficulties and misconception in Plum putting model, conversion of units, calculation of Relative atomic mass, different parts of the cathode ray tubes, equation of atomic number in ions, ionic bond, structure of ionic bond and concept of mole and it's calculation.