



A Study on the suitability of project based teaching and learning for the advanced level classes in a Sri Lankan context

A dissertation submitted in partial fulfillment of the requirements of MSc in Chemistry Education

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May 2012**

ABSTRACT

A gradual drop in the interest shown by the students in selecting chemistry for their advanced level examination curriculum had been observed by teachers all over the world. This downward trend during the past decade has roused the concerns of them. Although a subject such as chemistry could impart to future generation the vivid skills that are required to take up the challenges of the 21st century, the traditional system of teaching and assessment methodologies in practice to assess the standards achieved are unable to extract these potentials in full.

In consideration of the requirements of the millennium project based learning has been introduced to enhance the learning process. Although it has been going through a rediscovery process since 1965, there is no evidence that it has been in use or practice in Sri Lanka. Project based learning (PBL) is a model that organizes learning around a project where the project is the central teaching strategy. As a theory project based learning confirms that it is capable of providing the quality learning and the endeavor of this experiment is to find out the adoptability in a Sri Lankan context at the advanced level classes while the limitations and potentials of the methodology could be properly understood thus the benefits of it could be properly reaped.

The study was planned to assess the suitability of project based learning through the results obtained for the following seven principle objectives outlined in the study,

1. Can students be motivated and make chemistry interesting?
2. Can meaningful, quality learning be provided?
3. Can the next generation be better prepared to face the challenges of the 21st century?
4. Can examination results be improved?
5. Is the method applicable to any kind of student?
6. Can it be used by any teacher?
7. Can it be used to teach any topic in the curriculum?

The PBL model adopted was presented by the Buck Institute of Education of UK. The student sample represents students of years 12 and 13 preparing for Edexcel examinations. As per the study program the students had to go through five lessons under the traditional methodology followed by five lessons under Project based learning (PBL) which was a new experience for them. They were exposed to further four lessons under traditional

methodology and had to complete a questionnaire consisting of 21 questions designed to get a feed back on the following aspects,

- 1) The instructional methodology
- 2) Group work and motivation
- 3) The difficulty of project components

The findings were quite encouraging which revealed that there were substantial positive contributions towards the motivation of students, providing of quality learning, providing requirements of 21st century skills and better performance at the public examination. Also it has helped the professional development of the teaching staff. Limitations of the methodology too were identified related to its implementation.

The duration of the study has to be restricted to a period of six months, but it was observed that the study could yield better results and understanding had the study could have been extended over much longer periods and should expose to vivid categories of schools in Sri Lanka. Further it should be noted that the teachers should have proper trained background to proceed with the methodology.