



MAURITIUS RESEARCH COUNCIL

HALF-DAY SEMINAR

MRC Unsolicited Research Grant Scheme:

***Investigating the Common Core Constructs in
Student's Acquisition of Logico-Mathematical
Concept in Physics at HSC Level***

*Presented by: Dr Y Ramma, Mauritius Institute of Education
and Mr V K P Parmessur*

PROGRAMME

Venue: Mauritius Research Council

Date: 31st May 2007

Time: 09:15 hrs

Mauritius Research Council
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Investigating the Common Core Constructs in Student's Acquisition of Logico-Mathematical Concept in Physics at HSC Level

SYNOPSIS

It is a common fact that mathematics forms the basis of physics and it is also a known fact that physics is considered as one of the most difficult subjects in the school curriculum. A number of research studies carried out in the local or international contexts do confirm that many students are not able to bridge the gap between mathematics concepts and physics.

Teachers have a very important role to play in enabling students to link mathematics with physics in a systematic process whereby students' pre-conceptions of concepts are logically examined. It is imperative that the teaching of physics does not concentrate on the body of knowledge but on development of process skills which forms the basis of conceptual understanding.

This research examines the process of teaching and learning and the development of cognitive skills of learners using an innovative strategy which incorporates core-constructs and cognitive dissonance.

AIMS AND OBJECTIVES

This study aims at addressing a fundamental problem linked with the integration of mathematics and physics knowledge in students' acquisition of logico-mathematical concepts.

Objectives:

- (i) To determine the state of physics teaching with respect to conceptual difficulty in understanding of abstract concepts.
- (ii) Investigate the degree of awareness of logico-mathematical concepts in physics from the teachers' and students' perspectives.
- (iii) Investigate and address students' logical problem solving skills.

PROGRAMME

09:15 – 09:30 **Registration of Participants**

09:30 – 09:35 **Welcome Address**
*Dr A Suddhoo, Executive Director,
Mauritius Research Council*

09:35 – 09:40 **Address**
*Prof S Jugessur, Chairman
Mauritius Research Council*

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09:40 – 10:30 **Presentation of Research Findings**
*Dr Y Ramma, Mauritius Institute of Education
Mr V K P Parmessur*

10:30 – 10:50 **Questions and Answers**
*Dr H Bessoondyal, Dr A Ramdinny,
Mr V K P Parmessur, Dr Y Ramma*

10:50 – 11:00 **Vote of Thanks**
*Dr H Neeliah, Research Officer,
Mauritius Research Council*

11:00 **TEA BREAK**