# EVALUATING SCHOOL EFFICIENCY USING DATA ENVELOPMENT ANALYSIS

#### PREPARED BY:

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600-UiTMKS(UPP.5/2/40/SKK)

Head

Institute of Research, Development and Commercialisation (IRDC)

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40450 Shah Alam

Dear Professor,

## FINAL RESEARCH REPORT "EVALUATING SCHOOL EFFICIENCY USING DATA ENVELOPMENT ANALYSIS"

With reference to the above matter, enclosed herewith are three (3) copies of the final research report entitled "Evaluating School Efficiency Using Data Envelopment Analysis" by the research team from UiTM Samarahan Campus for your action.

Thank you.

Yours sincerely,

Dr. Paul Lau Ngee Kiong

Leader

Research Project

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#### **ABSTRACT**

This report presents the findings of a research project, which examined the determinants contributing to school efficiency based on the 'High Standard Quality Education' framework compiled by the Malaysian School Inspectorate and the relative efficiencies of the secondary schools in the Sri Aman/Betong Division for the year 2002.

This study collected the secondary data through the working manual of 'High Standard Quality Education' (PKSBSTKP) for the year 2002 of all the secondary schools in the Sri Aman/Betong Division. A set of forms was also prepared by the researchers and given to the principals and form teachers for obtaining additional inputs and outputs to capture the effects of non-discretionary variables on school efficiency. On top of these, a questionnaire was also designed and given to the principals to be distributed to students and teachers to gather their perceptions on their schools. The data was analyzed using SPSS version 11.0 and BANXIA Frontier Analysis Software.

The research reveals that the PKSBSTKP performances of all the 16 participating schools were average, ranging from the highest score of 69.03 by SMK Lubuk Antu to the lowest of 44.27 by SMK Engkilili. The 6 inputs and 6 outputs of the PKSBSTKP were reduced to 3 input variables (student quality, managerial quality and school facilities) and 3 output variables (students' academic performance, change of academic performance and co-curriculum performance, and school uniqueness and other performances) in order to increase the discriminating power of DEA.

#### CHAPTER 1

#### INTRODUCTION

#### 1.0 Introduction

Schools were a product of the industrial age. Minimum competencies in reading, writing and arithmetic were expected of all students, and more advanced academic training was reserved for the elite. The schooling of yesterday will have no more than marginal effects on students' psychological development (Rutter and Maughan, 2002). Today, education is for everyone and it is doubtful whether the above is the appropriate conclusion in considering the effects of schooling. That is to say, the issue is whether the amount and quality of schooling students receive can raise their overall levels of academic achievement or affect their general levels of behavioural attitudes.

In this modern era, many countries depend on their educational systems to help them address a variety of social issues. It is believed that schooling can help to bridge the gaps resulting from family disadvantages, but it cannot be expected to eliminate biological inequalities of students. Hence the development of different educational strategies and tactics are important in providing effective education to students. In a meta-analysis of school effectiveness findings, Rutter and Maughan (2002) confirm the reality and potential importance of schooling.

To date, research into the effectiveness of educational system has become a massive bewildering field of enquiry. The studies range from quantitative enquiry such as identifying the characteristics of a school climate conducive to