SCIENCE-RELATED ATTITUDES AND ACHIEVEMENT OF FORM ONE STUDENTS

A Master Project submitted to the Graduate School in partial fulfilment of the requirements for the Degree of Master of Science (Management), Universiti Utara Malaysia

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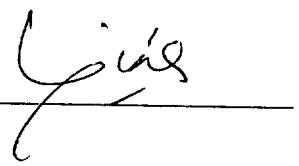
(Signature) : 

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ABSTRAK

Tujuan penyelidikan ini adalah untuk menentukan sama ada, dan setakat mana, suatu perhubungan wujud di antara sikap-sikap terhadap sains dan pencapaian dalam mata pelajaran sains di kalangan 346 pelajar tingkatan satu di empat-belas buah sekolah menengah di daerah Kubang Pasu, Kedah. Varians dalam sikap-sikap terhadap sains yang bersandar kepada faktor-faktor jantina, SES, rumah, dan sekolah juga ditinjau. Soalselidik yang digunakan untuk mengukur sikap-sikap itu telah direka oleh Skurnik dan Jeffs (1970) manakala pencapaian dalam mata pelajaran sains diperolehi dari keputusan UPSR. Penyelidik sendiri ini telah mengendalikan pengumpulan data melalui soalselidik tersebut. Suatu kajian printis yang telah dijalankan untuk menentukan kebolehpercayaan ketekalan antara item bagi sikap-sikap terhadap sains telah menghasilkan nilai 'Cronbach alpha' sebanyak 0.8843.

Keputusan-keputusan penyelidikan ini menunjukkan : (I) terdapat perhubungan yang positif dan signifikan di antara pencapaian dalam mata pelajaran sains dan (a) sikap terhadap mata pelajaran sains, (b) sikap terhadap guru, dan (c) sikap terhadap implikasi sosial bagi sains, (2) gabungan sikap terhadap sains menerangkan 9.4 peratus varians dalam pencapaian sains, (3j analisis 'stepwise multiple regression' menunjukkan sikap terhadap implikasi sosial bagi sains adalah peramal yang terbaik untuk pencapaian dalam sains, (4) perbezaan yang signifikan didapati di antara status sosio-ekonimi pelajar dan sikap terhadap sains, (5) walau bagaimanapun, tidak ada perbezaan yang signifikan diperhatikan di antara sains dengan (a) jantina, (b) sekolah, dan (c) rumah pelajar, (6) ujian 'chi-square' menunjukkan pencapaian sains bersandar kepada status sosio-ekonomi pelajar tetapi tidak bersandar kepada (a) jantina, (b) sekolah, dan (c) rumah.

ABSTARCT

The purpose of this study was to determine whether, and to what degree, a relationship existed between attitudes towards science and achievement in science among 346 Fonn one students in fourteen secondary schools in the Kubang Pasu district of Kedah. The variance in science-related attitudes with respect to demographic factors namely gender, SES, home, and school was also examined. The questionnaire developed by Skumik and Jeffs was used to measure students' attitudes towards science while science achievement was based on UPSR results. The researcher personally administered the self-reporting questionnaire throughout this study. A pilot test conducted using the questionnaire to determine the interitem consistency reliability of the science-related attitudes yielded a Cronbach alpha value of 0.8843.

The results of the study indicated : (1) there was a positive and significant relationship between science achievement and (a) attitude towards science subjects, (b) attitude towards science teachers, and (c) attitude towards the social implications of science, (2) the composite attitudes towards science explained 9.4 percent of the variance in science achievement, (3) a stepwise multiple regression analysis showed that attitude towards the social implications of science was best predictor in achievement in science, (4) significant difference was found between students' SES and attitudes towards science, (5) however, no significant difference was observed between attitudes towards science and (a) gender, (b) school, and (c) home, (6) chi-square tests revealed that science achievement was dependent on students' SES but independent of (a) gender, (b) school, and (c) home.

DEDICATION

The writer dedicates this study to his wife Loh Gaik Lan, and their children Yihui and Yongli, who made tremendous sacrifices which enabled him to pursue his educational goals.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

Introduction

By 2020, Malaysia is to become a nation that is fully developed along all the dimensions: economically, politically, socially, spiritually, psychologically and culturally (Mahathir Mohamad, 1991). One of the characteristics of Malaysia in the year 2020 is a society that is scientifically progressive, a society that is innovative and forward looking, one that is not only a consumer of technology but also a contributor to the scientific and technological civilisation. To achieve this, according to the honourable Prime Minister, the "people is our ultimate resource. Without a doubt, in the 1990s and beyond, Malaysia must give the fullest emphasis possible to the development of this ultimate resource".

The Seventh Malaysia Plan (1996 - 2000) provides the following strategies to develop a strong human resource base for nation building. They are:

- to improve the standard of education system and skill training system,
- to increase the supply of personnel in the field of research and planning, and,
- to encourage wider private sector participation in developing human resource effort.

Human resource development continues to be prominent in The Seventh Malaysia Plan because the transition from labour-intensive industry to big

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