ADOPTION OF TECHNOLOGY IN MALAYSIAN EDUCATIONAL SYSTEM

By

CHRIS FOOK SHENG NG,
Lecturer, Department of Applied Statistics
Faculty of Economics and Administration
University of Malaya, Kuala Lumpur

Dr. NOOR AZINA ISMAIL
Department of Applied Statistics
Faculty of Economics and Administration
University of Malaya, Kuala Lumpur

ABSTRACT

This paper provides a brief understanding of the educational technology in the teaching and learning of mathematics to Form Two students (equivalent to the eighth-graders) in Malaysia. In particular, it attempts to understand the relationships between educational technology and mathematics achievement in both the urban and rural schools. The study draws its findings solely from the Trend in Mathematics and Science Study (TIMSS) 2003 which includes 5,314 students from 150 schools. The technology discussed in this paper is confined to the use of calculator and computers in mathematics learning and teaching. The use of computer for academic purpose was scarce among the Form Two students, which is reflective of the current curriculum that lacks the technological approach. However, it was found that students who used computers at home, library or friend’s home performed relatively better in the TIMSS mathematics test compared to those who did not. The findings also show that students in rural areas were less likely to own home computers but are more likely to use calculator as compared to their urban counterpart. Their achievement in TIMSS mathematics scores were significantly lower and were more likely from schools that had greater shortage of computer facilities. Although the findings implicated that the use of computers help in achieving higher mathematics scores, it was not conclusive since students’ socio-economics status, motivation and other factors related to achievement were not considered in this study. This study also found that teachers’ pedagogical style do not encourage mathematical creativity. However, the instructional approach of the teachers did not seem to affect students’ performance in mathematics.

Keywords: Educational technology, mathematics achievement, TIMSS, urban, rural

INTRODUCTION

The Malaysian education system is a highlight in the Ninth Malaysia Plan tabled recently. The second thrust of the plan shows the government’s relentless effort towards improving education and training in line with the aim to develop and enhance the human capital of Malaysia (Ministry of Finance Malaysia, 2006). A sum of RM33.4 billion representing 21% of the overall 2007 budget is allocated for this cause. From this amount, RM6.2 billion is for secondary education and RM10.1 billion is for training programs. Around 200 new schools including a few specialized ones will be constructed. About RM800 million would be allocated for teachers’ training while 101 million is for the housing projects for teachers in rural areas. Computer usage in schools is boosted with RM288 million for the purchase of computer equipment in 1,000 schools and all teachers’ training colleges. This budget has been lauded for its effort to increase capacity. It also paves a good way towards improving the quality of the educators and enhancing the current state of technological facilities at the schools as well as training centers.

While it seems right on path with these mega measures, a