UNIVERSITI TEKNOLOGI MARA

THE RELATIONSHIP BETWEEN INDIVIDUAL FACTOR, LEARNING ENVIRONMENT FACTOR, SOCIO-CULTURAL FACTOR AND DIGITAL LITERACY TOWARDS STUDENT PERFORMANCE IN 21ST CENTURY LEARNING

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ABSTRACT

21st century learning requires students to develop skills, knowledge and attitude in order to meet the demands of future jobs in the digital era. Thus, most of schools' curricula have been embedded with technology elements to facilitate students' competencies that will help them prepare for the digital economy. However, studies found that despite the benefits of using technology in the educational setting, students still lack digital literacy skills. Digital literacy is a must for the current education settings as students need to be able to organize, manage and evaluate information using digital technologies in responsible ways. Digital literacy also seems to boost student performance. Therefore, this research aims to explore the status of digital literacy among students in Klang Valley, Malaysia and to investigate whether the individual factor, learning environment and social factor correlate with digital literacy. Besides, this research also measured whether Digital Literacy significantly affects student performance in 21st century learning. Preliminaries studies were done amongst Computer Science teachers in secondary schools, and a research framework was developed using three dimensions namely the individual factor, learning environment factor and socio-cultural factor. These factors are considered as the independent variables that may influence digital literacy and in turn, student performance. Altogether, five variables and seven dimensions were included in the research framework, and four hypotheses were tested. The research was conducted in secondary schools around Klang Valley, Malaysia. A quantitative approach to the study was performed and involved secondary school students (Form 1, 2 and 4) through the distribution of an online survey questionnaire. Based on the Raosoft calculator, 386 was the suggested sample size, with the convenience sampling method selected for data collection. 579 respondents to the questionnaire and the data was analysed using the statistical programme SPSS version 28, while SmartPLS version 3 software was used to test the hypotheses. From the findings, it is found that the descriptive results indicate status of Digital Literacy show positive indication with the mean value of 3.97. Further analysis with SmartPLS shows that all hypotheses were supported where the individual factor, learning environment factor and socio-cultural factor have a positive relationship with students' level of digital literacy. Furthermore, digital literacy was also shown to have a positive effect on student performance. The results are well supported by previous studies, thus are expected to make significant contributions theoretically, methodologically, and practically, to the field of education and technology. The findings from this research may help teachers in preparing students for 21st century learning and striving in the digital economy. This research also supports the initiative taken by Malaysia's Ministry of Education (MOE) in preparing the Guidelines on Digital Literacy in Malaysia and aligning the nation's education system with Malaysia's Education Blueprint 2013–2025

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CHAPTER ONE
INTRODUCTION

1.1   Overview

This study was conducted to investigate and explore the relationship between the individual factor, learning environment factor, socio-cultural factor, and digital literacy with student performance in 21st century learning. This chapter provides an overview of the entire research through explaining the background of the study, followed by problem statement, research questions and research objectives. An overview of the research approach and framework is then discussed, followed by scope of the study, operational definitions, limitation of the study, and key findings. The chapter concludes by outlining the structure of the thesis.

1.2   Research Background

In this new "digital world", information is available almost anywhere at almost any time - computer power is ubiquitous, communication of vast amounts of information is almost instantaneous, and storage capacities seem infinite. But these powerful capabilities only benefit those who have learned to use them effectively. Through the process of globalization, our societies have experienced a profound transformation from reliance on an industrial to a knowledge base. This scenario also affects the economic sector, political sector and education sector. Nowadays, in all types of schools, the curriculum has been embedded with technology for 21st century learning. In 21st century learning, critical issues regarding competencies are discussed: the flexibility and capacity to make creative connections, deep understanding, good team-working, etc. All over the world, a key factor in establishing today's industrial society has been to include fundamental scientific disciplines such as mathematics, physics, chemistry and biology as compulsory subjects in the secondary school curriculum, with some preparation during primary school. Recent demand for science, technology, engineering and mathematics (STEM) subjects now become the foundation of the industrial and corporate world. This shows that these elements need to be highlighted and should been introduced at the school level as preparation for future job