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**THE USE OF INTERACTIVE MULTIMEDIA-BASED LEARNING FOR
NETWORK CABLE INSTALLATION COURSE**

ABDUL AZIZ BIN AB NASIR

UNIVERSITI UTARA MALAYSIA

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**KOLEJ SASTERA DAN SAINS
(College of Arts and Sciences)
Universiti Utara Malaysia**

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Nama Penyelia
(Name of Supervisor) : **ASSOC. PROF. ABDUL NASIR ZULKIFLI**

Tandatangan
(Signature) : Abd. Nasir Tarikh (Date) : 28/2/11

Nama Penilai
(Name of Evaluator) : **MADAM SITI SAKIRA KAMARUDDIN**

Tandatangan
(Signature) : Siti Sakira Tarikh (Date) : 28/2/11

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ABSTRAK

Kajian ini dilakukan untuk menentukan keberkesanan pelaksanaan Interaktif Multimedia Courseware dalam mempelajari kursus Rangkaian Pemasangan Kabel di Kolej Komuniti, Kementerian Pengajian Tinggi (Mohe). Kelemahan dan masalah yang ada dalam pendekatan pembelajaran konvensional di Kolej Komuniti akan dijelaskan dan penyelesaian akan dicadangkan oleh penyelidik. Langkah pertama adalah merancang sebuah courseware yang berpadanan yang berkaitan dengan kursus Pemasangan Kabel Rangkaian yang boleh digunakan dalam proses pengajaran dan pembelajaran. Selanjutnya, courseware itu dilaksanakan di kelas dan kemudian dinilai kegunaannya dalam hal persepsi kegunaan, persepsi kemudahan penggunaan, kemampuan belajar dan penggunaan masa depan bagi courseware di kalangan pelajar dan pensyarah. Alat yang digunakan untuk penilaian adalah satu set soal selidik. Pengamatan pada pelajar selepas mereka menggunakan courseware juga dilakukan. Keputusan penilaian menunjukkan bahawa pelajar telah menilai courseware dalam hal kegunaan.

ABSTRACT

This research was conducted to determine the effectiveness of implementing Interactive Multimedia Courseware in learning the Network Cables Installation course at the Community College, Ministry of Higher Education (MoHE). The weaknesses and problems that exist in the conventional learning approach at the Community College will be described and the solution will be proposed by the researcher. The first step was to design a suitable courseware related to Network Cable Installation course that can be used in the teaching and learning process. Next, the courseware was implemented in the class and then evaluated for its usability in terms of perceived of usefulness, perceived of ease of use, learnability and future use of the courseware among students and lecturers. The instrument used for evaluation was a set of questionnaire. Observations on the students after they had used the courseware were also made. The results of the evaluation indicated that students have highly rated courseware in terms of usability.

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LIST OF ABBREVIATION

CCBD	Community College Bandar Darulaman
CD	Compact Disc
NCI	Network Cable Installation
GDC	General Design Cycle
ICT	Information and Communication Technology
IS	Information System
IT	Information Technology
MAP	Multimedia Authoring Process
MDP	Multimedia Development Process
MoHE	Ministry of Higher Education
PC	Personal Computer
SCORM	Sharable Content Object Reference Model
SDRM	System Development Research Methodology
SPM	<i>Sijil Pelajaran Malaysia</i>
SPSS	Statistical Package for Social Sciences
STP	Shielded Twisted Pair
UTP	Unshielded Twisted Pair

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Network Cable Installation is one of the courses offered in the Certificate of System Computer and Support Program at the Community College, Ministry of Higher Education. This program is offered to all candidates especially *Sijil Pelajaran Malaysia (SPM)* school leavers. The Network Cable Installation course consists of various topics which include; cable types, connectors, equipment, cable patching and network wiring. Two approaches will be used by lecturers in teaching their students; theoretical and practical. These two approaches are based on the syllabus requirements at the Community College where 25% is theoretical while 75% is practical. This course is offered to students during the last semester or fourth semester in order to complete the requirements of the program before they are able to graduate.

Teaching and learning process is the main focus of this study whether it is effective or less amongst students in Community College especially the Bandar Darulaman Community College, Jitra, Kedah. Usually, there are two lecturers conducting one class, with the average students from 25 to 30. The College also has

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