# DEVELOPMENT OF DESIGN-ORIENTED EVALUATION TOOL: A HCI PERSPECTIVE

A dissertation submitted to the Faculty of Information Technology in partial of fulfillment of the requirements for the degree

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By

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### ABSTRAK

Penilaian berorientasikan reka bentuk merupakan satu alternatif baru untuk menilai projek multimedia berbanding penilaian berorientasikan pengguna. Projek ini mengenal pasti kriteria dan dimensi dalam penilaian berorientasikan reka bentuk. Berdasarkan kriteria dan dimensi yang dikenal pasti ini, satu borang telah dicipta untuk membantu para pensyarah menilai projek multimedia yang dihasilkan oleh pelajar. Borang ini telah diuji dari segi kesahihan dan kebolehpercayaannya untuk menghasilkan satu borang yang kukuh dan stabil untuk diguna. Cadangan dan komen daripada pakar (pensyarah multimedia) telah diambil kira semasa penghasilan borang ini. Keputusan menunjukkan bahawa majoriti pensyarah multimedia telah menerima borang ini tanpa sebarang masalah.

## **A**BSTRACT

Design-oriented is an alternative method in evaluating multimedia applications based on general usability criteria (as opposed to user-oriented evaluation which is commonly applied in usability testing). This paper identifies the criteria and dimensions for the design-oriented evaluation. Based on the identified criteria, two versions of tool (long and short) were created to assist multimedia lecturers to assess their students' projects. Reliability and validity test were conducted to ensure the tool is valid and accurate to use. Suggestion and comments from experts were taken into consideration during the validation test. Certainly, the results show that majority of the experts accept the created tool as a good help in evaluating students' projects without hesitation.

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# LIST OF ABBREVIATIONS

Usability Engineering

HCl Human Computer Interaction

EUSCI End User Computing Satisfaction Instrument

TAM Technology Acceptance Model

SUMI Software Usability Measurement Inventory

QUIS Questionnaire For User Interface Satisfaction

PSSUQ Post Study System Usability Questionnaire

CUSI Computer User Satisfaction Inventory

MUMMS Measuring Usability In Multimedia Systems

# CHAPTER 1 INTRODUCTION

#### 1.1 Introduction

Multimedia is one of the fastest emerging field that have spread worldwide. The various components in multimedia have attracted many users to explore into this application. Multimedia can be defined as any combination of two or more of the following elements: text, image, sound, speech, video, and computer programs (Acab, 1996). For Yilmaz (2000), a complete multimedia is an involvement of all five human senses: sight, sound, touch, smell and taste. However, according to Heller *et al.* (2001), multimedia is a seamless integration of two or more media.

Schools and higher education have started to emphasize multimedia for teaching and learning to keep pace with the current development in this technology. Consequently, the students and teachers have been exposed to various multimedia components almost routinely. Students, especially in higher education, who are taking courses in multimedia design are required to produce multimedia projects to assess their understanding of the multimedia design concept. As such in the case of the final year

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