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AL QUDS OPEN UNIVERSITY (QOU)

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2006

Tarikh

A Prototype of Web-Based Computer Skills Training Course for AlQuds Open University (QOU)

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A Prototype of Web-Based Computer Skills Training Course for AlQuds Open University (QOU)

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by Zakaria K. D. Al Kayyali 2006

Abstract

E-Applications become the most important proverb in the modern electronic world, which depend on computer based system in many fields in the world. It help links people, systems and others resources making life easier and better.

The purpose of this project is to develop a prototype of Web-based Training system for Al Quds Open University (QOU). This prototype used the Microsoft VB.Net and Microsoft SQL Server as Database. This project is important in order to make the training tasks easier than current way and to allow the QOU staff attending training courses anytime anywhere.

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LIST OF TABLES

Table 4-1 System Usefulness	49
Table 4-2 Information or Content Quality	
Table 4-3 Interface Quality	
Table 4-4 Overall satisfaction	

LIST OF FIGURES

3-1 Methodology Phases	17
3-2 Prototyping Process	19
4-1 System modules	24
4-2 The main screen	
4-3 The login form	31
4-4 Error login	32
4-5 Admin login	33
4-6 Add trainer	34
4-7 Add trainer	35
4-8 Add training course	36
4-9 Select trainee	
4-10 Trainer login	38
4-11 Upload material	39
4-12 login session	40
4-13 Sending email	41
4-14 Trainee login	42
4-15 Download material	43
4-16 Login session	44
4-17 Sending email	45
4-18 Login online quiz	45
4-19 Sending email	45
4-20 Usability evaluation	51

LIST OF ABBREVUATIONS

QOU Al Quds Open University

EVW Exeter Virtual Worlds

ECHOES Educational Hypermedia On-line System

WWW World Wide Web

WBT Web-Based Training

FPGA Field Programmable Gate Array

JTAG Joint Test Action Group

ISD Instructional Systems Design

ADDIE MODEL Analysis, Design, Development, Implementation, and Evaluation

IT Information Technology

APIS Application Programming Interfaces

CSUQ Computer System Usability Questionnaire

TABLE OF CONTENTS

ABSTRACT	·······]
ACKNOWLEDGEMENTS	I
CHAPTER 1 INTRODUCTION	3
1.1. BACKGROUND OF THE STUDY	3
1.2. PROBLEM STATEMENT	4
1.3. RESEARCH OBJECTIVES	4
1.4. SCOPE	5
1.5. SIGNIFICANCE OF THE STUDY	5
CHAPTER 2 LITERATURE REVIEW	6
2.1. WEB-BASED TRAINING	
2.2. BENEFITS AND LIMITATION OF WEB-BASED TRAINING	9
2.2.1. BENEFITS:	9
2.2.2. LIMITATIONS:	10
2.3. WEB-BASED TRAINING FIELDS	11
2.4. WHEN TO USE WEB-BASED TRAINING	13
2.5. DESIGN AND DEVELOPMENT OF WEB-BASED TRAINING:	
2.6. SUMMARY	15
CHAPTER 3 METHODOLOGY	16
3.1. PHASE ONE: INFORMATION GATHERING	17

3.2.1 IDENTIFY THE USERS BASIC REQUIREMENTS	18
	20
	20
	20
3.2.4. EXPERIMENTATION A PROTOTYPE	20
3.2.5. EVALUATE AS OPERATIONAL PROTOTYPE	2 1
3.3. PHASE THREE: PROTOTYPE TESTING	21
CHAPTER 4 FINDINGS AND RESULTS	22
4.1. PHASE ONE: INFORMATION GATHERING	22
4.2. PHASE TWO: PROTOTYPE DEVELOPMENT	23
4.2.1. IDENTIFY THE USERS BASIC REQUIREMENTS	23
4.2.2. DESIGN A PROTOTYPE	
4.2.3. DEVELOPMENT OF AN INITIAL PROTOTYPE	27
4.2.4. EXPERIMENTATION A PROTOTYPE	47
4.2.5. EVALUATE AS OPERATIONAL PROTOTYPE	48
4.3. PHASE THREE: PROTOTYPE TESTING	
CHAPTER 5 CONCLUSION	53
5.1. LIMITATION	53
5.2. FUTURE WORK	53
5.3. CONCLUSIONS	54
REFERENCES	55
APPENDIX	

CHAPTER 1

INTRODUCTION

1.1. Background of the study

Internet technology makes the world as small as a village. An important of an Information System development, is the implementation stage. Training is a vital factor to ensure success of a system, for staff especially after the implementation of the new system. Online training allows employers to train large numbers of staff across locations, and training is important to organizations. Training as it is effort to modify or develop knowledge, skills and attitudes through learning experiences, to achieve effective performance in an activity or a range of activities (Zuhaidah, 2004).

The organizations are rapidly becoming aware that training their personnel is not an option, but an essential aspect to survive technological advancements and global competition (Rice and Robin, 2005).

This project is to develop a prototype of web-based training system for AlQuds Open University (QOU) that facilitate training environment. This will make the training tasks easier than the current way. QOU is a governmental university in Palestine; it has more than 20 branches in Palestine and three branches in other countries. All branches have academic staff and

The contents of the thesis is for internal user only

References

Blake, C., Gibson, J.W. and Blackwell, C.W. (2003). Web-based training: What supervisors need to know. Supervision, 64(12), 3.

Dennis, A., Wixom, B. and Tegarden, D. (2005). System Analyses And Design With UML Ver. 2.0 An Object-Oriented Approach Second Edition

Chris B. and M. Lang (2001). A Survey of Multimedia and Web Development Techniques and Methodology Usage, 8, pp. 52-60.

Connolly, T.M., & Begg, C.E. (2002). Database system: A practical approach to design, implementation and management (3rd Ed.). USA: Addision-Wesley

DeLuca, R.J. (2002). Using the internet to achieve your workplace training objectives *Applied Occupational & Environmental Hygiene*, 17(12), 814

Driscoll, M. (1998). Web-based training: *Using technology to design adult learning experiences*.

San Francisco, CA: Jossey-Bass Pfiffer.

Driscoll, M. and Thomson, R.(1997). The Web as a learning environment. Enabling Technologies: Infrastructure for Collaborative Enterprises, *Proceedings Sixth IEEE workshops* on Enabling Technologies: Infrastructure for Collaborative Enterprises, , pp 333-339.

Grange, S.; Jones, G. and Bunker, T.(2000). Using Java to embed complex simulation media into surgical training environments. *Proceeding IEEE EMBS International Conference on Information Technology Applications in Biomedicine*, 2000 .pp190-196

Izurni, H., Murakoshi, H., Mori, H., Sakamaki, K., Hatano, Y., Shirai, T., Murayama, S. and Ugajin, T.(2001). Proposal of the web-based training system for the experiment of the digital circuit. *Proceeding Industrial Electronics Society, 2001. IECON '01. The 27th Annual Conference of the IEEE*.pp 1766 – 1770.

Kruse, K. and Keil, J. (2000). Technology based training- the art and science of design, Development and Delivery. San Francisco, Ca.: Jossey-Bass Pfeiffer

Laudon ,K.C.,& Laudon,J.P. (2000). Management information system: Organization and technology in network enterprise (6th Ed). New Jersey: Prentice Hall.

Laudon ,K.C., & Laudon, J.P. (2004). Management information system: Managing the digital firm.

New Jersey: Prentice Hall

Lewis, J. R. (1995) IBM Computer Usability Satisfaction Questionnaires: Psychometric Evaluation and Instructions for Use. International Journal of Human-Computer Interaction, 7:1, 57-78

Microsoft Corporation (2005). Testing Methodologies. Retrieved June 20, 2006 from http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dnpag2/html/mtf_ch02.asp

Minotti, J. and Giguere, P. (2003). The Realities of Web-based Training, The Journal, 30, p411

Pasquarelli, A., de Stefani, F., O'Hare, G.M.P. and Murphy, A.J. (1999). ECHOES: educational hypermedia on-line system. *Proceeding IEEE International Conference on Multimedia Computing and Systems*, 1999.pp1114-1116

Rice C. C. and Robin B. (2005). Comparing the comprehension of employees at Hewlett-Packard who have participated in interactive web-based training and the comprehension of employees at Hewlett-Packard who have participated in static web-based training

Zuhaidah Salleh (2004). An Assessment of training practices in SMEs in Kedah And Perlis. Master thesis, UUM