

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT OF INTERACTIVE
MULTIMEDIA COURSEWARE
WITHIN COLLABORATIVE
LEARNING ENVIRONMENT FOR
COMPUTER NETWORK
EDUCATION**

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IT Project submitted in partial fulfillment
of the requirements for the degree of
Master of Science in Information Technology

Faculty of Computer and Mathematical Sciences

January 2015

AUTHOR'S DECLARATION

I declare that the work in this IT Project was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as reference work. This IT Project has not been submitted to any other academic institution or non-academic institution for any other degree of qualification.

I, hereby acknowledge that I have been supplied with the Academic Rules and Regulation for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

The development skill to produce a well-trained and competent vocational and technical trainee is the aim for *Kolej Komuniti Masjid Tanah*. As to enrich the learning process and provide a discussion medium to students, the lecturers are expected to be creative and innovative to integrate the ICT approaches in teaching and learning. The aim of this research is to develop Computer Network Education Courseware for Computer Network subject within collaborative learning environment called CNEC in the Moodle Learning Management System (LMS) together with Collaborative Tools in Moodle which is Forum. The methodology of this research was based on the Instructional Design Model (ADDIE). The courseware was developed in *Bahasa Melayu* and SCORM compliant environment. It is made up of 9 learning modules: *Pengenalan, Objektif Pembelajaran, Pengenalan kepada Rangkaian, Pengalamanan Rangkaian, Pengiraan Alamat Rangkaian, Rekabentuk Rangkaian, Kuiz, Rumusan* and *Rujukan*. In order to test whether the courseware is suitable in terms of usability, try-out was done to a sample of 25 semester 1 students that enrolled Computer Network subject. The respondent strongly agree by the percentage of 36% to 68% and 28% to 40% agree that the CNEC courseware is acceptable to use for real usability in learning of Computer Network subjects. Therefore, the results from the try-out received positive feedback which signifies the courseware is considered acceptable for effectiveness study. As for further improvement of the CNEC courseware need the evaluation for the effectiveness, efficiency, learnability through appropriate case study among the lecturers and students from Community College in Malaysia.

Keywords: Kolej Komuniti Masjid Tanah, Information Technology (ICT), Sharable Object Content Reference Model (SCORM), Learning Management System (LMS), MOODLE, ADDIE

ACKNOWLEDGEMENT

First and foremost, the deepest gratitude of all shall be bestowed to Allah the Almighty and The Merciful for all the insight which He gave to us that lead to the completion of this research. Without His blessings and consent, I might not have enough courage and determination to complete this research. All my thanks and appreciation will be lay upon Him.

My deepest gratitude is extended to Dr. Emma Nuraihan binti Mior Ibrahim, for all assistance, advice, guidance, encouragement, new ideas and invaluable support given as my project supervisor for a better quality in my research. Thank you for being such a great mentor. I also would like to express my gratitude and sincere appreciation to Dr Natrah binti Abdullah @ Dollah for her invaluable knowledge, comment and recommendation on how to enhance my research.

Not forgetting very special thanks to all staff of *Kolej Komuniti Masjid Tanah* (KKMT), participant and all the lecturers, friends also colleagues of Master Science (Information Technology) for their support and encouragement during the process of completing this research. I also would like to thank to my friend Sharifah Nadiyah Bt Syed Razali for giving me an opportunity and permission for using her Moodle web hosting.

Finally, I would like to express my deepest gratitude to my beloved husband and sons, parents and families for all support and courage towards my success. Without their personal sacrifices and being a constant source for encouragement, especially in the final stages, this thesis would not have been possible.

Thank You.

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