



UNIVERSITI PUTRA MALAYSIA

**INFORMATION AND COMMUNICATION TECHNOLOGY USAGE
AMONG HIGH SCHOOL TEACHERS IN TEHRAN, IRAN**

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FPP 2010 15



**INFORMATION AND COMMUNICATION TECHNOLOGY USAGE AMONG
HIGH SCHOOL TEACHERS IN TEHRAN, IRAN**

**By
NAHID SHAHVERDIAN**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra
Malaysia, in Fulfilment of the Requirement for the Degree of Master of
Science**

September 2010



DEDICATION

The completion of this study is dedicated to the following persons:

To my husband, Mostafa Langarizadeh, without whose love and support this task would not have been neither possible nor desired, his passion, honesty, and strength of character have made our life together my single greatest accomplishment.

To my son Mohammad Hossein, my love for you is without bound, you are my word finder and reader without peer.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in
fulfilment of the requirement for the degree of Master of Sciences

**INFORMATION AND COMMUNICATION TECHNOLOGY USAGE AMONG
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Chairman: Shaffe Mohd Daud, PhD

Faculty: Educational Studies

Level of ICT usage may affect the rate of successful ICT implementation in education, and in the long run, the achievement of the goals of the fifth Iranian national socio-economic development program. The Iranian government has decided to offer ICT training courses for teachers to help them improve their ICT knowledge and skills. Thus, one of the most relevant objectives of this study was to determine the current level of ICT usage among high school teachers.

This study had four main purposes: (a) To determine the level of ICT usage among high school teachers; (b) To determine the significant difference in ICT usage according to selected socio-demographic factors (gender, age, teaching experience, and subject taught); (c) To determine the level of perceived ease of use and perceived usefulness towards ICT usage among high school teachers; and (d) To identify barriers to the use of ICT among high school teachers.



These issues were addressed using a self-administered survey questionnaire with a sample of high school teachers (n=395). Out of the 410 questionnaires, a total of 395 valid responses were returned. Data were analyzed using descriptive statistics, Analysis of Variance (ANOVA), and independent sample t-test. This study was conducted in 41 high schools located in two districts of Tehran.

The finding of the study showed that the majority of high school teachers were categorized in low level ICT usage, and it accounted for 66.3% of the respondents. Results indicated that: (a) The level of ICT usage among high school teachers is low (b) there is significant difference in the mean score of ICT usage according to age and teaching experience while there is no significant difference in the mean score of ICT usage by the gender and subjects taught ; (c) the level of teachers' perceived ease of use and usefulness is high ; (d) lack of time, lack of effective training, technical problems and inadequate access to resources are major barriers to ICT usage among high school teachers.

The results showed that despite majority of teachers are in low level of ICT usage in their teaching but they have high level of perceived ease of use and usefulness. Participants indicated to have faced some problems when using ICT, and this needs to be given a serious consideration. Four major barriers such as lack of time, lack of effective training, technical problems and inadequate access to resources were identified. The present study proposed



potential recommendations to teachers and Ministry of education to overcome these barriers.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Master Sains

**PENGGUNAAN TEKNOLOGI MAKLUMAT DAN KOMUNIKASI ANTARA
GURU SEKOLAH TINGGI DI TEHRAN, IRAN**

Oleh

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September 2010

Pengerusi: Shaffe Mohd Daud, PhD

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Tahap penggunaan ICT mungkin menjejaskan kadar kejayaan pelaksanaan ICT dalam pendidikan, dan dalam jangka panjang, pencapaian matlamat-matlamat program pembangunan sosioekonomi kebangsaan kelima Iran. Kerajaan Iran telah memutuskan untuk menawarkan kursus-kursus latihan ICT untuk guru-guru bagi membantu mereka meningkatkan ilmu dan kemahiran ICT mereka. Maka, salah satu daripada objektif-objektif yang paling berkaitan dengan kajian ini adalah untuk menentukan tahap semasa penggunaan ICT di kalangan guru-guru sekolah menengah.

Kajian ini mempunyai empat tujuan utama: (a) Untuk menentukan tahap penggunaan ICT di kalangan guru-guru sekolah menengah; (b) Untuk menentukan perbezaan signifikan dalam penggunaan ICT berdasarkan faktor-faktor terpilih sosio demografi (jantina, umur, pengalaman mengajar, dan mata



pelajaran yang diajar); (c) Untuk menentukan tahap persepsi kemudahan dan persepsi kebergunaan terhadap penggunaan ICT di kalangan guru-guru sekolah menengah; dan (d) Untuk mengenalpasti halangan-halangan kepada penggunaan ICT di kalangan guru-guru sekolah menengah.

Isu-isu ini dialamatkan dengan menggunakan satu kajian soal selidik yang dilakukan sendiri ke atas satu sampel guru-guru sekolah menengah (n=395). Daripada 410 soal selidik, sejumlah 395 jawapan sah telah dipulangkan. Data telah dianalisis menggunakan statistik perihalan, Analysis Variance (ANOVA), dan sampel bebas ujian-t. Kajian ini dijalankan ke atas 41 buah sekolah menengah yang terletak di dua daerah di Tehran.

Penemuan kajian menunjukkan majoriti daripada guru-guru sekolah menengah masih berada di tahap yang rendah dalam soal penggunaan ICT mereka, dan ia jelas ditunjukkan oleh 66.3% daripada responden-responden. Keputusan menunjukkan bahawa: (a) Tahap penggunaan ICT di kalangan guru sekolah menengah adalah rendah (b) ada perbezaan yang signifikan dalam skor rata-rata penggunaan ICT sesuai dengan umur dan pengalaman mengajar sementara tidak ada perbezaan yang signifikan dalam nilai rata-rata penggunaan ICT oleh gender dan mata pelajaran yang diajarkan; (c) tahap kefahaman penggunaan yang mudah (PEOU) dan kefahaman kegunaan (PE) terhadap penggunaan ICT guru-guru adalah tinggi; (d) kekurangan masa, kekurangan latihan yang berkesan, masalah teknikal dan kurang akses kepada



sumber-sumber merupakan halangan-halangan utama kepada penggunaan ICT di kalangan guru-guru sekolah menengah.

Keputusan menunjukkan bahawa walaupun guru-guru tidak menggunakan ICT sepenuhnya dalam pengajaran mereka tetapi mereka mempunyai tahap kefahaman penggunaan yang mudah dan kegunaan yang tinggi. Peserta-peserta menyatakan bahawa mereka menghadapi beberapa masalah apabila menggunakan ICT, dan masalah ini perlu diberi pertimbangan yang serius. Empat halangan-halangan utama seperti kekurangan masa, kekurangan latihan yang berkesan, masalah teknikal dan kurang akses kepada sumber-sumber telah dikenalpasti yang mungkin menyebabkan tahap penggunaan ICT yang rendah di kalangan guru-guru sekolah menengah. Untuk mengatasi halangan-halangan ini, beberapa cadangan telah disarankan kepada Kementerian pendidikan dan guru-guru.



ACKNOWLEDGEMENTS

The completion of this study would not have been possible without the support and guidance of the following:

Dr. Shaffe Mohd Daud, who provided direction, guidance, encouragement, and immeasurable assistance throughout the process.

Dr. Rosnaini Mahmud, who shared anecdotes and experiences enabling me to see the world of education in a broader perspective and provided encouragement and guidance



I certify that a Thesis Examination Committee has met on 22 September 2010 to conduct the final examination of Nahid Shahverdian on her thesis entitled "Information and Communication Technology Usage among High School Teachers in Tehran, Iran" in accordance with the Universities and University College Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The committee recommends that the candidate be awarded the Master of Science.

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DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been acknowledged. I also declare that it has not been previously and is concurrently submitted for any other degree at Universiti Putra Malaysia or other institutions.

Nahid Shahverdian

Date: 22 September 2010



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