ATTITUDES TOWARD LEARNING ABOUT AND WORKING WITH COMPUTERS OF STUDENTS AT UiTM

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Abstract

The purpose of this study was to assess the attitudes toward learning about and working with computers of Universiti Teknologi MARA (UiTM), Shah Alam students. Attitudes were studied in an attempt to ascertain factors such as anxiety, confidence, liking and, usefulness at the university level.

A total of 300 students at various stages of education from diploma to doctoral degrees participated in this study. Questionnaires were distributed to students and completed ones (100%) were collected by two research assistants.

The instrument used was a questionnaire designed by Loyd and Gressard (1984). The questionnaire solicited demographic information, and 40 questions or statements structured on a scale of one to four. They were then utilized to measure attitudes toward learning about and working with computers. Data were analyzed using SPSS version 11.0 for frequencies, mean, standard deviation and, cross tabulation.

The results suggested that UiTM Shah Alam students, especially the female students, have positive attitudes toward learning about and working with computers.

Keywords: computer attitude, computer anxiety, computer phobia.

INTRODUCTION
Background

University Technology Mara (UiTM) Shah Alam is the oldest and biggest public institution of higher learning in Malaysia. All the students enrolled at the university, including the 14 branch campuses are the indigenous people of Malaysia (Bumiputras). In the Shah Alam campus alone, the student population comes to about 42,000 (April 2002, Strategic Planning Center, UiTM). One of UiTM's objectives is to educate Bumiputeras to become professionals of high caliber who will be independent, knowledgeable and morally upright in the conduct of competing in business, trade, science and technology. With this objective in mind, it is crucial that UiTM students realize that computers have invaded all aspects of our lives and therefore, the anxiety, nervousness, computer phobia or any dislike towards computers should not be inherent in them.

Education in Malaysia

Malaysia looks to education as the key to its socioeconomic development. Furthermore, with the dawn of the new millennium a market-sensitive education system is evolving here in Malaysia. According to the web site of the Ministry of Education Malaysia (2002), "Our schools and universities are taking up the challenge of globalization by changing not only the content of curriculum and programs but more importantly the delivery systems. IT-enhanced teaching and learning are already making computers in schools, distance learning, video conferencing and Internet link a common place for interaction. We have to race ahead to achieve a significant transformation of our educational infrastructure in order to meet the next millennium as a technologically competent and scientifically adapt society." With this goal in mind, Malaysia hopes to become a fully industrialized country by the 21st century because by that time, the young person entering the workforce will be judged not so much on the knowledge and skills acquired, but on the capacity for lateral thinking, creativity and an integrated approach to learning. Again, according to the Ministry of Education's web site, "The university system is expected to bridge the fundamental shift from an information-based society to a knowledge-based one. Malaysia is therefore putting in place the 'hardware' and 'software' to equip students to take advantage of the opportunities offered by an increasingly interconnected world."

Technology and Change in Malaysia

In this Information Age, the world of work has changed considerably. The proliferation of personal computers throughout the business environment will continue to place demands on workers at all levels to

develop proficient computer skills. The nature of work will be more complex, and the demand will be for a new type of industrial worker, that is for one who will be able to deal with machines and computers in his daily work. The Knowledge Era has arrived and as Internet technology become pervasive and cheap, it will offer an enormous opportunity to diminish a different, but real divide (Compaine, 2001). This is the critical divide between those who can read well and take full advantage of the treasures of information that will be so widely available and those who are not fully computer literate and, cannot take advantage of easily accessible information resources provided by IT.

The information technology (IT) advantage as set out by the Ministry of Education in its web site states the science and technology, commerce and industry and even the arts and humanities have been swept along by the powerful currents of the Information Revolution. Therefore, the Ministry of Education has responded by implementing wide-ranging reforms to give schools, universities and other higher education institution skills and competence to ride the crest of the IT wave. "Already the education system is putting interactive IT at the core of the teaching and learning and, management process. Smart Schools are being set up where learning will be dynamic, lively and brimming with interaction through the use of multimedia technology and worldwide networking". (2002, Ministry of Education Home Page).

Capron (1987) made several statements relating to the computer in our future, which include: there will be a computer on almost every desk by mid-1990s; the computer will lead the way in increased productivity; and computer-based word processing will be the means of recording and transmitting the written word – typewriters will be in museums.

The effective application and exploitation of information technology for national socioeconomic growth and development in Malaysia is now at a critical state. Emerging cultural, social and economic trends arising from the pervasive use of information technology have indicated that information and knowledge of computers are also strategic factors besides land, labor, capital and entrepreneurship in determining the future potentials of our nation. Today, skills, concepts, information and knowledge are the new tools of competition. Human skills and knowledge of computer technology will play a significant role in the national drive to achieve a fully developed country status. The Information Technology advantage as written on the web site of the Ministry of Education - Malaysia, states that "Science and technology, commerce and industry and even the arts and humanities have been swept along by the powerful currents of the Information Revolution. The Ministry of Education has responded by implementing wide-ranging reforms to give schools, universities and other higher education institution the skills and competence to ride the crest of the IT wave." (2002, http://www.moe.gov.my/kualiti.htm).

Statement of the Problem

The problem of the study was: What are the attitudes of UiTM Shah Alam students toward learning about and working with computers? Specifically, this study will identify attitudes relating to age, area of specialization, gender, and computer experiences. The findings of this study would be relevant as one of the sources of reference for policy makers and curriculum planners in UiTM to improve the current condition of curricula so as to determine the needs and trends for computers, and to suggest recommendations for changes.

Research Objectives

The objectives of this study were designed to answer the following questions:
Do male students have different attitudes toward computers than female students with respect to computer anxiety, confidence, liking, and usefulness?

Is there a relationship between the age of UiTM students staff and his/her attitude towards computers with respect to anxiety, confidence, liking and usefulness?

Is there a relationship between the amount of previous computer experience of UiTM students, and their attitudes toward computers with respect to anxiety, confidence, liking, and usefulness?

Is there a relationship between the area of specialization of UiTM students and their attitudes toward computers with respect to anxiety, confidence, liking and usefulness?

Methodology
Sample Population

The purpose of this study was to gather information concerning the computer attitudes of UiTM Shah Alam students toward learning about and working with computers. Specifically, with regards to age, level of

education completed, major area of study, gender, and previous computer experience, the study was carried out to determine their attitudes toward computers with respect to anxiety, confidence, liking and usefulness.

The approximate sample population for this study is 300 consisting of students at UiTM Shah Alam campus. The population is random regardless of area of specialization, faculty or department.

Instrument Design

The instrument used in this study was the 1988 revision of the Survey of Attitudes Towards Learning About and Working with Computers which was developed by Dr. Brenda H. Loyd and Dr. Clarice P. Gressard in 1984. Permission was granted through Dr. Loyd's assistant, Sandra L. West at the University of Virginia. The 1984 version consisted of 30 statements and represented three main types of attitudes: (a) anxiety or fear of computers; (b) liking of computers or enjoying working with computers; and (c) confidence in one's ability to use or learn about computers. The 1988 revision expanded the instrument to 40 statements with the addition of a fourth subscale-usefulness.

The instrument used for this study has two sections: the first consisted of five questions to determine the respondent's age, level of education completed, major area of study, gender and previous computer experience. These questions provided data for categorical (nominal) analysis of student responses.

The second part of the instrument consisted of 40 statements which the student rated on a Likert scale from strongly agree to strongly disagree. Of these 40 statements, 20 were worded positively and 20 were worded negatively.

Procedure

Three hundred copies of the questionnaire were made and two research assistants were recruited to help with the gathering of data. The research assistants started collecting data from early to late June. Strategic areas on campus and a table was set up. 300 random samples were targeted and the researchers were successful in gathering 300 (100%) of the sample data. As a show of gratitude to the respondents for filling up the questionnaire, each respondent was given a souvenir in the form of a ballpoint pen. Due to this attraction, all three hundred (100%) usable surveys were collected.

Analysis

After the data were collected, they were analyzed using the statistical software SPSS version 11.0 for frequencies, percentages, cross tabulation and descriptive statistics. The population variables of age, level of education, major area of study, gender and previous computer experience were given numeric values to aid in data analysis. With the six variables and the 40 statement responses, a total of 46 entries were made for each survey. The subscores were tabulated when all the correct response values have been determined. The overall computer attitude was calculated by totaling the four subscores. The minimum score, maximum score, average score, standard deviation, and the number in the groups were calculated for each value of each variable using the statistical software, SPSS version 11.

Results

Of the 300 questionnaires distributed to randomly selected students at the UiTM Shah Alam campus, a total of 300 (100%) usable responses were collected and tabulated.

The gender distribution from the 300 responses were 127 male students (42.3%) and 173 (57.7%) female students. In terms of age, the largest number of respondents were from the age groups of 22 or less and 23-25. Overall, the respondents' ages ranged from 18 to 55. The faculties of: Office Management and Technology, Media Communication, Business Management, Applied Science, Law and Administration, Building/Town Planning and Engineering rated the highest number of respondents.

Results of the survey also show that females had a higher average on the usefulness subscore than did the males. Males averaged a score of 22.5 with a standard deviation of 3.33 for the usefulness subscore. The computer liking subscore results show that the age groups of less than 2 and 36-40 had the highest score with a maximum score of 30-31 and a standard deviation which ranged from 3.48 to 3.50.

The results of the anxiety subscores show a positive relationship among the respondents with more than one year to, 1-6 months' of experience respectively.

The results of anxiety subscores show that respondents from Office Management and Law & Administration had a maximum score of 38 and 31 respectively.

Recommendations
        Based on the research completed in this study, the following recommendations have been made:
a) Results of the study indicated a lowering of overall computer attitude for those students from the age group of 22 or less. A need's assessment should be conducted in order to determine computer training or revising the curriculum related to computers. The role of the school in preparing the students in the real workforce and technology-related workplace will continue to evolve as computers become more vital and necessary in the Knowledge Economy.
b) Female respondents have more positive computer attitudes than males did. Further research should be conducted to determine if gender differences occur in computer usage and to suggest methods of improving the computer attitudes of UiTM Shah Alam students.
c) Results of the survey indicated that students with no experience have more negative attitude toward computers. Further research should be conducted to determine the reasons for this and to suggest possible solutions.
d) The survey sought to determine if educational specialization made a difference in the attitude of students toward computers. Further research should be carried out in the areas of specialization to determine the causes of these attitudes.

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