

Level of Satisfaction among Continuing Medical Education Participants of e-Learning Programs at Tabriz University of Medical Sciences in 2010

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ABSTRACT

Introduction: Modification in medicine and medical education has led to the use of new teaching methods and learning-based tendency in education. Continuing medical education, as an indispensable part of a physician's life, is one of the best fields of medical education that can use electronic learning. Regarding the increasing development of these programs, this study aims to examine the satisfaction of the participant with the program. **Methods:** This descriptive, cross-sectional study includes 50 participants. A questionnaire including questions about personal characteristics and satisfaction of the participants with the program was distributed. The gathered data was analyzed by SPSS. Reliability of scale by Cronbach's alpha was 0.90. **Results:** Using Friedman test the highest score was for the clarity of educational objectives, advantage of electronic programs and satisfaction with registration method and the cost and the lowest one was that of the cost compared to classroom programs. No significant difference between men and women satisfaction level was observed ($p=0.265$). There was significant correlation between satisfaction and degree of study ($p=0.038$). **Conclusion:** Based on the results of the study the participant were satisfied with the program. If there is a well designed e-learning program, it will motivate the learners to be active participants.

Introduction

Modification in medicine and medical education has led to the use of new teaching methods and learning-based tendency in education. Distance learning especially e-learning is considered as a solution for these changes.¹ Education through computer is a type of e-learning for educating and learning. Learning is an individualized experience, we learn because we want to learn. A well designed e-learning program can change a competent learner to an active participant and consequently it results in learning more. Learning changes the inactive teacher-based learning into active learner-based one. Innovation in e-learning has led to a revolution in education. This branch of knowledge gives the learners a new prospect based on adult learning theory. Since this theory mixes the new and old experiences, the learners try to learn the needed and applicable methods of learning. This is applicable in e-learning.² The issue of continuing medical education is a necessity in the medical sciences.³ In addition to the use of useful and modern technology in diagnose and treatment of disease and society health, the employed in any medical field

can have undeniable role in achieving this goal. The efficiency and knowledge of the health and treatment team cannot be ignored so that promoting and preserving such abilities must be of importance.

Continuing medical education, as an indispensable part of a physician life, is one of the best fields of medical education that can use electronic learning.^{1,4} E-learning bridges the old and new processes.⁵ Some advantages of e-learning are adjusting individualized learning speed, learning-based, using various education methods, removing geographical and time obstacles and saving time and money.⁶ The use of web by doctors as an education method is in progress. It was reported that internet-based continuing education programs had 38% increases between the years 1998-2005.⁷

The results of a research about the program done in 2004 by Wutoh et al showed that the programs were effective in promoting knowledge as well as continuing education programs. More studies are needed to show if these positive changes in knowledge also means changes in function.⁸ A research done by Fordis et al in 2005 was

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found that if these programs were well designed and evidence-based, they would lead to changes in behavior as well as knowledge which can be compared to classroom programs or can be better than them.⁷ The results of the study of Hugenholtz et al in 2008 on the effect of e-learning in continuing medical education showed that e-learning can be as effective as lecture-based learning in increasing the knowledge for general practitioners.⁴

Tabriz Continuing Education has made significant progress with providing e-learning programs. It provides the participants with various programs in the form of multimedia and online. Less or no attention was paid to the evaluation which is considered as one of the important programs in education.⁹ Since the participants believe that evaluation is very effective at the development of the quality of the programs and it results in the use of qualified methods in designing the programs, this study aims to examine the level of the participants' satisfaction with e-learning programs in Tabriz. This evaluation was done only on the satisfaction of the learners with the programs. In order to evaluate the level of learning and the effect of education on clinical function, more studies are needed to be done.

Materials and methods

This descriptive-cross sectional study was done in Tabriz Continuing Education Center in 2010. The medical continuing education participants worked in the fields of children infectious breathing problems, breast feeding, breast cancer, and nicotine. The data was gathered in a period of three months, September, October and November. A questionnaire was given to the participants who were among the target groups of the programs. Only 50 complete questionnaires were reviewed. The questionnaire based on the study and regulations of the program was drawn up. It included some questions about participants' characteristics and 18 closed questions and an open one about the satisfaction of participants with the e-learning program. It was on the Likert scale of 5 to 1, i.e. completely agree and completely disagree respectively. The aim of the research and the willingness of the participants to answer the questions were explained. It also assured them that all information was confidential and no need to write their names. SPSS 15 was used for data analysis.

Results

Results showed that 51.1% of the participants were female and 48.9% were male with the mean age of 39.12 and with average of 10.27 job experience. Majority of the participants were general practitioners (66.7%). 34% of the participants took part in breast cancer 1 program and 22% in breast feeding one. The average satisfaction with the programs was 71.07 ± 13.92 .

Using Friedman test the highest score was for the clarity of the objectives (11.65). Satisfaction with e-learning programs compared to classroom ones (11.49) and satisfaction with registration and pay method (11.30) were scored respectively. The lowest score was that of spent cost (Table 1). There was significant correlation between satisfaction and degree of study ($p=0.038$). No significant difference was between the satisfaction of the men and women ($p=0.265$).

Discussion

The results showed that the participants were relatively satisfied with the e-learning programs. The highest level of satisfaction with the programs was that of clarity of objectives. The data conforms with Knowles' theory in which he emphasize on adults' need to know why they need to learn something and their interest in learning subjects that have immediate relevance to their job or personal life.¹⁰ In a research done by Curran et al the participants were satisfied with internet-based educational programs. Their highest satisfaction was for the clarity of content, simplicity of comprehension and meeting educational needs.¹¹ Fordis et al reported that the result of their studies showed that 94% of the participants with online educational experiences found it very good or excellent.⁷ Compared to classroom education, e-learning education is second to it. In evaluation of internet-based continuing education Curran et al found out that general practitioners were satisfied with the program and in some cases they were more satisfied than the current continuing education programs.¹¹ The results showed that the participants were satisfied with the registration and pay method. It seems that Tabriz Continuing Education has worked effectively on the program. Regarding the cost of registration, the determined score and conformity of registration cost with the program and its score, the participants were less satisfied with. Karimzadegan et al in their research on e-learning in Medical Education in Iran and World concluded that there was too far to go for creating efficient e-learning programs in our universities. More attention is needed to stabilize a successful e-learning system in the universities. The officials must encourage the e-learning in medical education by creating some facilities about.¹

Conclusion

Since e-learning in continuing medical education specially the use of adult learning theory with its emphasis on learning-based aspect of it, the change of the role of lecturer to learning facilitator, advantages of e-learning and satisfaction of the participants with e-learning programs were useful, a need is felt for more attention to the quality of educational programs and some facilities for performing them.

Table 1. Scoring the participants' answers about programs using Friedman test

Items	Average Score
Were the educational programs objectives clear enough?	11.65
Were the educational content based on your objectives?	10.30
Did the educational content meet the needs of your job?	09.43
Was the education method useful for comprehension?	10.02
Was there a coherency among the different subjects of the program?	09.62
Were the sources useful?	09.35
Were you satisfied with the competency of the tests in evaluating your level of learning?	09.07
How successful was the program in promoting your professional knowledge?	09.24
Were you satisfied with the quality of the programs?	10.21
Was the determined score of the program appropriate?	07.32
Were the tuition and related score compatible?	07.59
Were you satisfied with registration and paying method?	11.30
How do you evaluate the cost compare to the classroom programs?	06.84
Were you satisfied with the method of announcing the scores?	08.78
Was there any software problem?	09.50
How do you evaluate your level of satisfaction with e-learning programs compared to classroom ones?	11.49
How effective was the program in saving your time?	10.68
Was this program better than other similar virtual programs?	08.60

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Ethical issues

Participants' information was kept confidential.

Competing interests

No competing interests to be declared.

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