Published online 2019 November 3.

Letter



# Web-Based Learning in Internal Medicine: The First Step in Electronic Clinical Education of the Department of Internal Medicine

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Received 2019 January 01; Accepted 2019 January 27.

Keywords: Web-Base, Educational Site

## Dear Editor,

The internet created new situations in the educational arena and the application of the appropriate internet infrastructure for new electronic (e)-learning and computer-based learning methods is welcomed in recent years; however, the process and tool of knowledge transfer shifts toward e-learning-teaching. According to the provided definition, virtual learning is a new learning method with many advantages (1).

A great change is observed in the evolution of education and distance learning alongside the shifting from written texts to educational television. The distance learning was first launched in Europe and desirably welcomed (2).

Unlike other distance learning methods, e-learning provides a unique experience of simultaneous application of three teaching methods of traditional, visual, and audio. Another unique feature of this teaching method provided by the advancement of technology is the greater efficiency of education and audience not from a particular region or country, but throughout the world. In addition to the gradual conversion of traditional education to e-learning, the costs of publishing and distributing educational programs are significantly declined (3).

One of the undeniable benefits of virtual education is the evaluation. In this type of training, evaluation is performed more quickly, and a shift to self-evaluation, considered as an important educational goal, is developing here. The learners can have a better understanding of their achievements through self-evaluation, which definitely affects their promotion (4).

In a study conducted by Anna Kho et al., on the employment of mobile phones for medical education and the satisfaction of students and residents put the result on the

Medline database from 1993 to 2004, about 60% - 70% of medical students and residents used their mobile phones or other digital devices for educational or patient care purposes and the level of satisfaction was high; however, the level of satisfaction is attributed to the experience and skill of the learners in using such devices (5).

Results of a study by Auguste et al., on the development of an internet-based communication system for residency training programs showed that the internet is an effective and easy-to-use learning tool with low cost to educate residents, and owing to the rapid advancement of science, the content can be renewed by spending a low cost (6).

In recent years, given the many benefits of e-learning, there is a strong tendency toward knowledge transfer, especially in the medical field. E-learning, in addition to being very accessible and enabling many learners to use it with no need to attend training sessions, causes a much lower cost on educational systems and has the ability to update easily with low cost and high speed .Also, if learners do not learn a part of the content, they can go back to it at the right time and learn it. Due to the extensiveness of educational areas in internal medicine and to the best of authors' knowledge, there is no comprehensive reference to provide all of these fields electronically to the learners, the professors of the Department of Internal Medicine, Kerman University of Medical Sciences, decided to launch an educational site aimed at educating the learners in all of these areas.

A specific definition is provided for each of the contents of the site containing educational videos, OSCE (objective structured clinical examination) questions, multiple-choice questions, diagnostic and therapeutic approaches, and semiology. All of the contents were first provided and compiled by the professors according to the students and residents needs and then were uploaded

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following the review and quality confirmation by a group of professors. A feedback questionnaire scored based on a five-point Likert scale was designed to assess the satisfaction of learners at five levels from very weak to excellent.

Although the site is recently launched and still not informed to the learners extensively, there were a lot of contacts across the country with about 35,000 visitors. In addition, the site is at the initial stages of content loading and completion, and its contents are regularly updated. The survey box placed on the homepage, evaluating visitors' viewpoint by five questions, provided a desirable feedback. Please visit the site at http://www.kmu.ac.ir/fa/eduimd.

According to the many benefits of e-learning, and on the other hand, given the widespread knowledge of internal medicine and the difference in level of learners from students to interns and residents, there is a need for a reference to provide materials related to this field of study. Therefore, this site can be a very useful instrument for this purpose. Surveys conducted by professors, residents, and students indicated that along with their satisfaction with the content of the site, the manner of presentation and variety of contents were widely welcomed.

### **Supplementary Material**

Supplementary material(s) is available here [To read supplementary materials, please refer to the journal website and open PDF/HTML].

#### **Footnotes**

**Conflict of Interests:** None declared by the author. **Funding/Support:** None declared by the author.

#### References

- Aghakasiri Z, Fazelian P. [Evaluation of virtual education programs of Tehran universities from the perspective teachers and students]. Tehran: Tarbiat Moalem University; 2006. Persian.
- 2. Bani-Mahjoor M. [Teaching modern methods of distance education in higher education]. Kashan: Morsal Pub; 2004. 55 p. Persian.
- 3. Amirazodi A. [Teaching modern methods of distance education in higher education]. Kashan: Morsal Pub; 2004. 306 p. Persian.
- Horton WK. Leading e-learning. Virginia, USA: American Society for Training and Development; 2001.
- Menon AS, Moffett S, Enriquez M, Martinez MM, Dev P, Grappone T. Audience response made easy: using personal digital assistants as a classroom polling tool. J Am Med Inform Assoc. 2004;11(3):217-20. doi: 10.1197/jamia.M1468. [PubMed: 14764615]. [PubMed Central: PMC400520].
- Gillingham W, Holt A, Gillies J. Hand-held computers in healthcare: what software programs are available. NZ Med J. 2002;115(1162):U185.