

Introducing Interactive Teaching in Electronic Learning Process

Asis. Prof. Nuri Abraham Elshamam

Dep. of Information Technology

Asmarya Islamic University

nurishammam67@gmail.com

الخلاصة

لقد غيرت التكنولوجيا كيفية وصول الأشخاص إلى المعلومات وجمعها ودراستها ومحاكاتها ونقلها، وقد وفرت الأدوات والتطبيقات والعمليات التي تمكن أفراد مجتمع المعلومات من ذلك. يعتقد العديد من المعلمين أنه يمكن استخدام شبكات الكمبيوتر والاتصالات بشكل منتج لدعم وتمكين الإصلاح المطلوب في العملية التعليمية. يمكن لتقنيات المعلومات الجديدة أن تمنح المعلمين والطلاب مزيدًا من الدعم خلال الفصل الدراسي، بحيث يحصل المعلم على فرص إضافية للنهج الإبداعي لتنظيم العملية التعليمية، والتعاون التربوي، لإشراك الطلاب في عملية تطوير البيئة التعليمية للمعلومات الإلكترونية. ويتم لعب الدور الرئيسي في العملية التعليمية من قبل الطالب الذي لا يمكن أن يكون على علم فقط بل قادر أيضًا على اكتساب المهارات والقدرات العملية. ويتم تحقيق فعالية التعليم عالي الجودة من خلال تفعيل الطالب نفسه. لا يركز التعليم المهني الحديث في الانتقال إلى نظام متدرج من تدريب المتخصصين على نقل المعرفة الجاهزة ولكن على التدريس للعثور على هذه المعرفة وتطبيقها في حالات قريبة من الواقع. إن العملية التعليمية التي تعتمد على استخدام أساليب التدريس التفاعلية، والتي يتم تنظيمها بمشاركة جميع طلاب المجموعة دون استثناء في عملية التعلم، تسهل ذلك. وسوف يتم النظر، خلال هذه الورقة، في إدخال أشكال تفاعلية للتدريس في العملية التعليمية لمؤسسات التعليم العالي.

Abstract

Technology has now changed or altered how people access, gather, study, simulate, and transmit information. Today's technologies provide the tools, applications, and processes that empower information society individuals. Many educators believe that

computer and communications networking can be employed productively to support and enable needed reform in educational process. New information technologies can give teachers and students more power in classroom. Teacher obtains additional opportunities for creative approach to organization of educational process, educational collaboration, for involving students in the process of Electronic Information Educational Environment (EIEE) development. The main role in the educational process is played by a student who can be not just definitely informed but also is capable to acquire practical skills and abilities. The effectiveness of high-quality education is achieved by activization of a student himself. Modern professional education in the transition to a tiered system of specialists training is focused not on the transfer of ready knowledge but on teaching to find this knowledge and to apply them in situations close to the professional conditions. The educational process, relying on use of interactive methods of teaching, which is organized with involvement of all students of the group, without exception, in the learning process, facilitates this. Introduction of interactive forms of teaching in the educational process of higher education institutions will be discussed in this paper.

Keywords: Interactive forms, interactive teaching, electronic educational resources (EER), electronic learning material, distance learning

Introduction

Along with educational organization internal resources, web-services are the effective mechanism for e-learning environment development (Golitsyna, 2015b). Particularly, “Wikipedia mainly plays an introductory and/or clarificatory role in student’s information gathering and research” (Selwyn & Gorard, 2016). Online information transmission can be done via websites or using communication techniques, it could be ranging from the Internet as a research environment to having online lectures. Sometimes Internet techniques can be used also to supplement instruction using the internet-website to transfer information to students who are studying in a face-to-face classroom. The online lectures are courses that given completely via Internet websites, but so called hybrid

courses are those which combine both online and traditional classroom courses. Distance education or learning, is a term given to the lectures that are delivered to learners who are not studying in the same classroom. These lectures might be delivered using online techniques, interactive television, or videotapes. E-learning may be used to describe any learning that is electronically mediated by transaction software.

Interactive teaching

Interactive teaching can be characterized as an efficient procedure followed to find out a convenient learning environment in which students can be easily communicate with their teachers and between each other. Social media are widely used by students in educational process, expanding learning experience beyond limited class time (Lee, Bonk, 2016). This way of communication simplifies learning process for the students or participants of the perception operation. Using interactive teaching procedure decreases the teacher's role in the learning process, which becomes not central, but as a coordinator of the teaching process; so that he prepares important tasks or courses for group discussion, creating of initiatives conditions and controlling time and consultation process for communication plan (Manca & Ranieri, 2016). On the same way, by using interactive teaching, students can improve their practical abilities and acquire their knowledge skills to achieve the effectiveness of high-quality education. Interactive teaching can be considered as one of the modern professional techniques that are used to transfer information and knowledge to participants via communication atmosphere under specified conditions (Seaman & Tinti-Kane, 2013).

Advantages of interactive teaching forms

- Creation of communication procedure for teaching process.
- Finding a convenient environment for studies.
- Improving student's skills and abilities.
- Engaging students in the learning operation.
- Improving of motivation for studying a discipline.

- Enforcing student's self-guided work instead of classical work.
- Activization of student's cogitative activities.
- Using and controlling development skills of modern technical devices and information processing techniques.
- Finding an information transformation procedure between members.
- Using interactive teaching, students become full participants of perception process.
- Constructing an efficient knowledge background.
- Formation of ability for students to find out and build information independently.
- Determination of information level of reliability.

As teachers gain experience with technology, they can improve their professionalism and discover ways it can help them carry out their varied duties better, faster, and more efficient (Manca & Ranieri, 2016).

Electronic Educational Resources (EER)

It is essentially important to recognize that - **EER** - can be illustrated, on one hand, as a combination of different information forms, such as (text, graphic, music, video, photo, etc.) as well as a printed form of a user documentation, in which the resource could be placed in a computer network or be operated on any electronic medium. On the other hand, it can be an information component of any educational system administrated by teachers, students or educational institution staff (Seaman & Tinti-Kane, 2013).

Regardless of EER contents and volume, there are a three main users' demands that should be taken in consideration;

- Adequacy of the contents: which means working according to the state educational standards; presentation and preparation of learning material needed for educational purposes; providing different types of studying materials (theoretical, practical or laboratory works); supporting different types of educational processes (collective or individual, full-time tuition or by correspondence); supporting different forms of knowledge control (mid-term

examination, final examination or self-assessment); searching information and finding out the latest trends in science and technology.

- Effectiveness of a presentation information procedure that should support the following requirements: simplicity of the material and its convenience for learners, a student's activity supporting, communication simplicity between a teacher and learners, protection against information damage and destruction, and opportunity to restore the lost or damaged information.
- Economic effectiveness of the educational system which depends on the properties of EER that illustrated as follows: cheapness and low price, improvement possibilities of the educational process and configurability of the necessary technical means (Moore & Anderson, 2012).

Electronic learning materials used in e-learning

Materials used in e-learning, so called - electronic learning material - could be classified as purely electronic or hypertext driven learning materials, used for the implementation of the distance learning via electronic learning medium. They are illustrated to achieve smooth communication in an electronic atmosphere, either by using hyper-link text layout or wide-range multimedia components, to stimulate the student's perception as much as possible. Electronic learning materials should be constructed of the text and the components that are able to draw the participant care to achieve important information and to retain his attention by multimedia means; like sounds, photos, videos, etc. Therefore, it consists of different multimedia components like blocks notes, definitions and examples that are implemented directly into a hypertext, and also of other components illustrated in the form of web destinations and records. Multimedia components could be put in a local place so that it can be used later into the electronic learning material text. To increase the effectiveness of the e-learning materials, the electronic educational resources (EERs) should be provided with an additional electronic material (like electronic textbooks, links to video lessons and courses, links to the Internet resources) which can be put in an

appropriate course sections as separated documents or links used by the external sources when needed (Lee & Reigeluth, 1994).

One of the important characteristic attributes of such structured electronic learning materials is that their architecture is supported by different multimedia elements (videos, records, simulations, sounds etc.). In this extension of dynamic interactive elements and multimedia extensions we can see the main difference between electronic learning materials for study in the form of e-learning and the printed study materials used in another form of distance learning (Kopecky, 2006). E-learning materials used in distance learning process represents a functional link between the documentation and multimedia elements to achieve an efficient learning support. The structure of electronic learning material therefore is based on the nature of individual structural components, with an emphasis on their static information (text, photos, electronic textbooks, etc.) or dynamic information (video, simulation, graphic, animation, etc.) character (Anisimova & Krasnova, 2013).

For the distance learning to be efficient and baneful in the educational process, it must provide the following goals:

- High level of teachers' education and training.
- Presentation of the new information technologies and efficient communication tools in the educational process.
- Development of favorable conditions needed for learning activities of teaching personnel.
- Sharing of students self-guided task during a learning process.

Advantages of distance learning

- A teacher is given the opportunity to improve his teaching skills without any interruption from the primary activity.
- Individualization of learning process occurs.
- Development process becomes more flexible, open, and continuous.
- Opportunity to achieve information and get continuous entry to the lectures.
- Choice of learning rate and individual programs are possible and free at any time.

- Sharing and getting knowledge for the learners becomes more flexible and easier.
- Cutting the expenses of experts financing down dealing with advanced training courses.

Conclusions

Nowadays, it is becoming very common to use communication technologies to achieve information at all types of schools, which makes a recognizable effect on the learning procedure that can appropriately support and complement the educational process. This is mainly illustrated using e-learning techniques via distance learning, in which the educational process is controlled, guided and evaluated by the use of specified electronic learning materials and computer technologies with complicated software systems. Furthermore; the electronic educational resources (EER) that use interactive technologies for learning are becoming very popular, either for learners of full-time tuition or for those by correspondence, especially if they are dealing with sophisticated educational materials, so that they have the opportunity to listen to the lectures explanation many times and to revise and repeat difficult parts of individual tasks. Excluding live communication between learners and teacher, lectures via EER technologies have a number of advantages over traditional classroom ones. This makes the educational process flexible, efficient and simpler. Finally, we find out that the use of advanced information-achievement technologies makes lectures expressive, effective and interactive.

References

- Anisimova, T., & Krasnova, L. (2013). Distance Learning as One of Interactive Forms of Specialists Training in Higher Education Institution. Collection of Scientific Works Sworld. Materials of the International Scientific and Practical Conference “Modern Trends of Theoretical and Applied Researches 2013”. *Odessa, 1*(16), 78-81.
- Golitsyna, I.N. (2015b). Formirovaniye professional'nykh kompetentsiy IT-spetsialistov v elektronnoy obrazovatel'noy srede [Formation of professional

- competence of IT specialists in e-learning environment], *Mezhdunarodnyy elektronnyy zhurnal "Obrazovatel'nyye tekhnologii I obshchestvo (Educational Technology & Society) "*, 18(4), 744-752. – http://ifets.ieee.org/russian/depository/v18_i4/pdf/17.pdf
- Kopecký, K. (2006). *E-learning (nejen) pro pedagogy* (1th. ed.). Olomouc: Hanex.
- Lee, I. & Reigeluth, C. M. (1994). Empowering teachers for new roles in a new educational system. *Educational Technology*, 34 (1), 61-72.
- Lee, J., & Bonk, C. J. (2016). Social network analysis of peer relationships and online interactions in a blended class using blogs, *The Internet and Higher Education*, 28, 35-44.
- Moore, M., & Anderson, W. (2012). *Handbook of Distance Education* (2nd ed.). Psychology Press. Retrieved October 1, 2014, from http://www.books.google.ru/books?id=_IqeYfDpWGIC&printsec=frontcover&hl=ru&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false
- Manca, S., & Ranieri, M. (2016). “Yes, for sharing, no, for teaching!”: Social Media in academic practices, *The Internet and Higher Education*, 28, 63-74.
- Seaman, J. , & Tinti-Kane, H. (2013). *Social Media for Teaching and Learning*. Pearson Learning Solutions and Babson Survey Research Group. - <http://www.pearsonlearningsolutions.com/assets/downloads/reports/social-media-for-teaching-and-learning-2013-report.pdf#view=FitH,0>
- Selwyn, N., & Gorard, S. (2016). Students' use of Wikipedia as an academic resource — Patterns of use and perceptions of usefulness, *The Internet and Higher Education*, 28, 28-34.