

## ROLES OF E-LEARNING IN HIGHER EDUCATION

RAMSHANKAR VARMA

Assistant Teacher, Chemistry Department, Shri SK Somaiya Vinay Mandir and  
Jr. College of Arts, Science and Commerce, Vidyavihar, Mumbai (MS)

### ABSTRACT

The vast uses of the Internet and the increasingly widespread access to the latest technologies have become the main reason for the development of remote teaching services. In an effort to modernize the educational offer, higher education institutions placed, in their programs of studies, different possibilities of teaching using distance learning. This trend is already very common in the world's largest universities. The Polish higher education system, keeping the pace with current trends, has created a legal foundation for the use of modern forms of teaching. The current approach to teaching is also a response to the offer of leading universities of the world and thus the search for competitive advantage in the international educational market. The aim of the article is to present main objectives of the teaching method of e-learning and at the same time, to present the legal status and the rules for the use of e-learning in Polish higher education.

**KEYWORDS:** E-learning, remote teaching, Moodle learning platform, online teaching

### INTRODUCTION

E-learning is being introduced as a fundamental part of the student learning experience in higher education. It is no longer a core business for those universities with a mission for distance education; its affordances are being systematically integrated into the student learning experience by predominately campus-based universities. Evidence of this widespread uptake can be seen in reputed research journals and on the websites of national bodies responsible for leading learning and teaching in higher education forward.

There is comparatively little research into how both online and face-to-face contexts play a relational role in helping students achieve their learning outcomes. A growing use of e-learning to support face-to-face experiences presupposes there is an understanding of what the key aspects of e-learning are, how they are internally constituted and externally associated with each other and how they are related to key aspects of the face-to-face experience. Without these fundamental understandings, the quality of the student experience of learning comprising online and face-to-face experiences is likely to be put at risk.

There is a need for more evidence-based research to inform the ways we think about creating and designing such experiences so that the quality of learning is likely to be enhanced.

E-Learning is construed in a variety of contexts, such as distance learning, online learning and networked learning (Wilson 2001). In the context of this paper all of these instances will be considered to describe learning that utilizes information communications technology (ICT) to promote educational interaction between students, lecturers and learning communities (Holley 2002).

## DEFINITIONS OF E-LEARNING

E-learning is a multidimensional concept that receives attention from different perspectives. Conceptual ambiguity can result in biased in-depth studies and policy failures. This section gives a comprehensive view of the definitions of e-learning derived from past studies, so as to establish a scope of the concept of e-learning, which would be suitable for proposing policies on e-learning development in Vietnam. E-learning is the abbreviation for electronic learning, which refers to the learning and training based on information technology and communication.

### TECHNOLOGY DRIVEN DEFINITIONS

This category emphasizes the importance of technology application over other factors. For example: (i) E-learning is the use of electronic means for various learning purposes. It varies from an auxiliary function in conventional classrooms and replaces completely face-to-face learning by online contact; (ii) E-learning is an online course empowered by a modem, wired or wireless connection that allows access to learning materials from a computer, phone, or handheld device; (iii) E-learning is distance learning based on remote access to learning resources; and (iv) E-learning is the use of technology in delivering training and coaching programs.

### DELIVERY-SYSTEM-ORIENTED DEFINITIONS

These definitions present e-learning as a means of accessing knowledge (through learning or teaching) and focus on the accessibility of resources rather than results. For example: (i) E-learning is the provision of education (all educational activities associated with instruction, teaching and learning) via diverse electronic means; (ii) E-learning is a form of online education defined as the delivery of education and training (self-study or real-time) via the internet and end-user devices; and (iii) E-learning is the provision of educational, training or learning programs via electronic means. It is defined as the education or learning delivered or carried out via web technology.

### COMMUNICATION-ORIENTED DEFINITIONS

Communication-oriented definitions see E-learning as a tool of communication, interaction, and collaboration. For example: (i) E-learning is an educational method that uses computer-aided communication systems as a medium for communication, information exchange, and interaction between learners and instructors ; (ii) E-learning is learning based on information technology and communication that exists in the educational interaction between learners and content, between students and instructors as well as among students via web; and (iii) E-learning is learning supported by technology and digital content, which contains various patterns of interaction including online interaction between learners and teachers or among learners.

### EDUCATIONAL-PARADIGM-ORIENTED DEFINITIONS

Educational-paradigm-oriented definitions typically underline e-learning as a new method of education or improvement of the existing educational model. For example: (i) E-learning is the use of new multimedia technologies and the Internet to enhance learning quality by supporting access to resources and services, as well as distance exchange and cooperation; (ii) E-learning refers to the broad combination of processes, contents, and infrastructure using computers and networks in scaling up and/or improving partly or substantially the learning value chain, including management and delivery;

(iii) E-learning is defined as the application of information technology and communication to help learners improve their learning.

### **ROLE OF E-LEARNING IN HIGHER EDUCATION**

This section delves into the roles of e-learning, including distance, formal, and open education, in higher education.

### **E-LEARNING IN DISTANCE HIGHER EDUCATION**

Distance education is an education process where most of the teaching is done indirectly, which means that the communication between teachers and learners is primarily enabled by artificial means such as printed materials or electronic means. Distance education has experienced four stages of technological development: (1) Printing (paper materials), (2) Broadcasting and television, (3) Multimedia; and (4) the Internet. E-learning is the most recent and developed stage technology development in distance education. The application of information technology and communications at this level advances remote higher education as follows: (i) E-learning facilitates a significant improvement of distance education through interactive and collaborative activities in learning as well as learner personalization; (ii) Thanks to a powerful information technology infrastructure, the advantages of e-learning-based distance education can be provided on a mass scale, cut down costs, and facilitate learners better compared to the earlier stages of distance education; (iii) Government confidence has increased, which has led to more incentive policies on distance education, in general, and distance higher education, in particular.

E-learning strategies and policies must be adapted to new contexts, which creates financial and personnel pressure.

Infrastructure investment requires generous sources of funding both publicly and privately. State financial support has often been limited, while cooperation with private businesses requires difficult to negotiate win-win agreements.

Actions must be taken to convince teachers and incentivize them to participate in setting up courses and guiding learners through the e-learning process.

The lack of regulations on e-learning leads to difficulty in quality control.

Getting social acceptance of distance education quality and qualifications in Vietnam.

### **E-LEARNING IN FORMAL HIGHER EDUCATION**

Formal higher education is the principal task of most universities in the world. Universities have the duty to train national and international human resources, to bring about new knowledge through scientific and technological activities, and have international cooperation and community association. The world's advances in the fields of technology, economy, and society in the 21st century have created important tasks for universities. E-learning is an important solution for the achievement of new higher education goals:

- (I) First, it enables the flexibility in training by removing the spatial and temporal obstacles while decreasing costs. This reinforces the need for universities to ensure equal access to

higher education and diversification of training forms.

- (ii) Second, an advantage of e-learning is that training programs can enhance professional competence or assist in the transformation of jobs. These programs can keep learners current in a dynamic economic context, thus meeting the world's ever-changing demands.
- (iii) Learning helps learners build their digital competence, and lifelong learning skills, as well as the ability to grasp rapid changes in technology and society while adapting to the dynamic of globalization and technological changes.

E-learning benefits universities in several ways, including:

- (i) It optimizes management methods: E-learning makes examinations and assessment of teachers, learners, and training institutions' competence fair and transparent. This facilitates the educational institution to make timely support measures and promote and improve quality and effectiveness.
- (ii) Learning resource management is strengthened: The application of learning management systems provides new chances to manage courses and provide learning materials as well as learning instruction in a quick and effective manner.
- (iii) Increases enrollment: A sharp increase in enrollment is one of the first benefits that educational institutions gain from online training or e-learning, thanks to its openness. Online courses and programs target all students and overcome all geographic barriers. The implementation of online training programs has been drawing attention from new students of all ages and in all parts of society.
- (iv) Promotes the reputation of universities: Online training deployment promotes the reputation of educational institutions at a local, regional, and on a global scale. Many major universities around the world have become a symbol of the online training era when their online courses or programs, infrastructure, policies, etc., are consulted and applied by many other universities. This escalation of reputation can be attributed to the efforts to build partnerships among educational institutions, companies, and groups. For teachers, the application of e-learning in teaching and setting up learning management systems has aided their teaching and improved their planning and lesson preparation.

In addition, it has stimulated teachers to have a more positive attitude about work and improves the effectiveness of the management of the student learning process.

In particular:

- (i) Productivity increases. Teachers' performance is enhanced by the use of e-learning in teaching as well as learning management systems for training. Martín-Blas and Serrano-Fernández found that about 56% of teachers said their classes were better organized when they combined training methods.
- (ii) Access to endless and open resources of knowledge. The job market has become fiercely competitive in the modern globalized society, hence the need for lifelong learning. This prompts individuals not only to improve their competitiveness to meet their work needs

but also to broaden cultural and social knowledge. Therefore, the need for knowledge improvement is not only for students but teachers, too. E-learning allows teachers to access and tap a new knowledge-sharing model that emphasizes innovative learner-centered teaching methods.

- (iii) Improve and innovate teaching methods. The transformation from traditional teaching to online teaching usually requires a change in the course content and teaching methods. That is why teachers and course guidance designers need to spend more time researching the course structure and knowledge delivery methods that promote interactivity, and learner-centeredness. E-learning adoption in teaching enables the teachers to improve their professional qualifications and their technical knowledge and skills.
- (iv) E-learning is a time-saver. E-learning's meaningful benefits for teachers can be measured by the reduction of time consumption and workload. For example, using a learning management system allows teachers to compile tests and questions quickly by using the banks of preset or continuously expanded questions or situations. The learning management system also enables the automation of electronic lecture preparation and delivery to students. E-learning's practical benefits also include the automatic and speedy students' learning process supervision, scoring and evaluation, and reuse or production of new courses based on available data.
- (v) Access to new training methods: E-learning-based teaching is seen as a means to refresh and sharpen one's expertise, thereby turning professional development into a daily habit. Moreover, the biggest benefit of e-learning is that teachers can fully concentrate their capabilities on pedagogical functions. The preparation of electronic lectures and oversight of students' academic progress with the help of information technology makes education an innovative and contemporary industry. While its significance has been admitted by most educators, e-learning faces many challenges of challenges. For example, predicaments still incur during e-learning applications; and, often there is a gap between the perception, theory, and practice of policymakers, education managers, teachers, and students.

Noteworthy issues include:

- (i) Low participation rate: E-learning has shortcomings in activities that require specific interactions that can only be done in traditional classes, for example, training soft skills, communication skills, or presentation skills. In these courses, body language, facial expressions, face-to-face conversations, and experience sharing are vital to the success of the learning process and help students reach their goals.
- (ii) Student attitudes: A certain percentage of students have learning styles that do not fit e-learning. These are students who need direct experience and interaction with the teacher rather than a computer. Moreover, e-learning requires high self-study awareness. Further, the influence of traditional learning in e-learning, are among the most challenging barriers.

- (iii) Issues with thinking: Attitudes and awareness of teachers and students in the application of e-learning affect the success of training programs.
- (iv) Technical issues: Technical difficulty is an important aspect of the implementation and integration of information technology and e-learning in education. Today, as everyone uses electronic devices such as computers, I Pads, and smartphones, their knowledge about electronic devices is defined as the understanding of their characteristics, capabilities, and ability to apply them cleverly and effectively. Confidence in the skills and capabilities to use e-learning training will significantly escalate the use of technology. The more experience with using the Internet and computers users have, the more likely they are to accept and use e-learning.
- (v) Recognition: One of the most interesting issues in e-learning is the quality achieved. According to accreditation bodies, the standards for assessing online course quality are no different from those applied to conventional programs. However, the biggest challenge is to raise the awareness of educational institutions about the variety of quality standards and to ensure the application in their programs. Further, e-learning programs have not gained recognition and social acceptance in many countries, which poses a great challenge for e-learning deployment.

#### **E-LEARNING IN SHARING KNOWLEDGE FROM UNIVERSITIES TO THE COMMUNITY**

Following the vogue of open education and sharing learning resources, several training institutions and universities have uploaded their courses and learning resources online for everyone to use free of charge. This triggered the birth of open educational resource banks. Some for-profit or non-profit organizations built platforms to gather and deliver free online courses via the Internet, forming the concept of massive open online courses (MOOC). MOOC became a world phenomenon in 2013. MOOCs can be considered as a branch of e-learning that serves the community. They are free online courses and learners can access and learn from anywhere on the learning management system of the MOOCs provider, as long as they have an internet connection. E-learning delivers knowledge from universities to the community through MOOCs: (i) These courses satisfy the learning needs and can increase the welfare of workers in all social sectors. Indeed, technology is driving the movement of workforces across countries and organizations; companies tend to recruit those having global skills and knowledge. Higher demands for skills and knowledge mean higher needs for education. Thanks to MOOCs, learners of all social backgrounds have chances to access knowledge, improve their competence, and increase the ability to find jobs, bridging the gap between and within countries, especially between rural and urban areas, women and men, the poor and the rich, while overcoming the limitations of traditional education. (ii) MOOCs are appraised as able to take a bridging role in society.

#### **EFFECTIVENESS, BENEFITS AND DOWNSIDES OF E-LEARNING**

Through its complex characteristics and diverse features, E-learning can enhance the educational process. However, in order to positively influence collaboration and performance, teachers and students must know how to effectively integrate it into the teaching and learning process. The effectiveness of E-learning is determined, according to Tham and Werner, by three elements:

institution—which refers to teachers knowing how to use the tools in order to enhance learning, how to interact with students and create a comfortable learning environment and how to creatively bring students closer and capture their attention, students—that may feel isolated because of the absence of physical colleagues, a case in which teachers should know how to establish connections and relationships with them, and technology.

## CONCLUSION

E-Learning is a modern training method based on information technology. It is understood as a learning environment in which the interaction between teachers and learners is supported by information and communication technology. E-Learning is also an effective and feasible method and helps learners to reduce costs, save time, and are proactive in higher education. In higher education, e-learning has its own problems stemming from its role. This paper points out opportunities and challenges of e-learning in the specific context of many educational forms (i.e. formal, distance higher education, and community), an understanding of which education policymakers need to consider in e-learning development policy in higher education.

## WORKS CITED

- Abrami, PC., Bernard RM., Bures EM., Borokhovski E. & Tamim RM. 'Interaction in Distance Education and Online Learning: Using evidence and theory to improve practice,' Journal of Computing in Higher Education [Internet]. Springer Science and Business Media LLC; 2011 Mar 2;23 (2-3): 82–103. Available at: <http://dx.doi.org/10.1007/s12528-011-9043-x>
- Bermejo, S. 'Cooperative Electronic Learning in Virtual Laboratories through Forums,' IEEE Transactions on Education [Internet]. Institute of Electrical and Electronics Engineers (IEEE); 2005 Feb.; 48 (1): 140–9. Available at: <http://dx.doi.org/10.1109/te.2004.837045>
- Cantoni, V., Cellario M, Porta M. 'Perspectives and Challenges in e-learning: towards natural interaction paradigms,' Journal of Visual Languages & Computing [Internet]. Elsevier BV; 2004 Oct; 15 (5): 333–45. Available at: <http://dx.doi.org/10.1016/j.jvlc.2003.10.002>
- Cechella, CD., Generali da Costa S, Colomby RK. 'The Evolution of E-Learning in the Global Context and the Influence of Motivational Factors,' Advances in Electronic Commerce [Internet]. IGI Global; 132–52. Available at: <http://dx.doi.org/10.4018/978-1-5225-2826-5.ch007>
- Oblinger, D. G. and B. L. Hawkins. "The myth about e-learning," Educause Review, vol. 40, no. 4, pp. 14-15, 2005.
- Ellis, RA., Ginns P, Piggott L. 'E-learning in Higher Education: Some key aspects and their relationship to approaches to study,' Higher Education Research & Development [Internet]. Informa UK Limited; 2009 Jun; 28 (3): 303 – 18. Available at: <http://dx.doi.org/10.1080/07294360902839909>
- Guri-Rosenblit S. 'Distance education and e-learning: Not the same thing,' Higher Education [Internet]. Springer Science and Business Media LLC; 2005 Jun; 49 (4): 467–93. Available at: <http://dx.doi.org/10.1007/s10734-004-0040-0>
- Govindasamy, T. 'Successful implementation of e-Learning,' The Internet and Higher Education

- [Internet]. Elsevier BV; 2001 Jan; 4 (3-4): 287–99. Available at: [http://dx.doi.org/10.1016/s1096-7516\(01\)00071-9](http://dx.doi.org/10.1016/s1096-7516(01)00071-9)
- Kickert, W. 'Steering at a Distance: A New Paradigm of Public Governance in Dutch Higher Education,' Governance [Internet]. Wiley; 1995 Jan; 8 (1): 135–57. Available at: <http://dx.doi.org/10.1111/j.1468-0491.1995.tb00202.x>
- Lee, T and Lee J. 'Quality Assurance of web based e-Learning for statistical education,' Compstat 2006 - Proceedings in Computational Statistics [Internet]. Physica-Verlag HD; 429–38. Available at: [http://dx.doi.org/10.1007/978-3-7908-1709-6\\_34](http://dx.doi.org/10.1007/978-3-7908-1709-6_34)
- Markopoulos, AP., Dossis MF, Fragkou A & Kasidiaris PD. 'Gamifying e-learning as a Means of Overcoming its Deficiencies,' Proceedings of the South-East European Design Automation, Computer Engineering, Computer Networks and Social Media Conference on - SEEDA-CECNSM'16 [Internet]. ACM
- Vlachopoulos, D., Sangrà A., and Cabrera N. 'The Conceptual Framework of e-Learning: A View from Inside,' The International Journal of Learning: Annual Review [Internet]. Common Ground Research Networks; 2012; 18 (4): 93–104. Available at: <http://dx.doi.org/10.18848/1447>

PURVA MIMAANSA