

E-Learning to Enhance Educational Competitiveness in the Sultanate of Oman

Subrahmanian Muthurman^{a*}, Rengarajan Veerasamy^b, Mohammed Al-Hazaizi^c, ^{a,b,c}Faculty Members, Arab Open University, Muscat, Sultanate of Oman, Email: ^{a*}subrahmanian.m@aou.edu.om

E-Learning will address the needs of the learners and provide quality programs which enable a basic understanding of the modern world. At present, most universities and colleges in Oman have either introduced an e-learning plan or have implemented it. Current e-learning programs are severely limited in scope simply because they continue to operate within classroom-based educational paradigms. Diverse digital environments should be created in universities where academics can experiment with technology enhanced learning tools and discuss the pedagogy underpinning their uses, in order to facilitate student engagement. Traditional universities and colleges must transform themselves by adopting e-learning systems which will enable people to study at any university in the world, from home. Recent strategic decisions in the Ministry of Education in Oman have led to plans for developing some online content for every subject in education sectors. These high-quality exemplar modules will inspire future developments and improvement.

Key words: *E-Learning, Higher Education Institution, Education, Technology, Digital Environment.*



Introduction

The impact of globalisation and challenges of the new millennium has brought in a revolution in education spurred by the development of the computer. The rapid pace of the occurrence of new information leads to the need of the professional adaptation to new knowledge and competences required by the labour market. The traditional teaching and learning methods cannot face the knowledge amount and the dispersion of the qualifications, jobs and activity domains, which become more and more specialised and interconnected. Today, universities all over the world use the e-learning system and the number of students enrolled in distance programs is rising (Dragomir et al., 2013). Traditionally the role of universities is to produce, distribute, and apply knowledge to various contexts (Brown & Duguid, 2000, Duderstadt, 2017). Unquestionably, research, education, and service to the larger academy and greater society are major functions of most universities. In the present era of knowledge-based societies, however, there remains a great need to move beyond the traditional roles for universities (De Alva, 1999, Duderstadt et al., 2002).

E-Learning Concept

E-Learning is not about taking a course and putting it on the desktop. It is about a new blend of resources, interactivity, performance support and structured learning activities (Masie, 2006). E-Learning will address the needs of the learners and provide quality programs which enable a basic understanding of the modern world. This system emphasises independence of the learner and places the responsibility for learning on the learner. E-Learning stimulates the ability to discover new ideas and it promotes construction of new knowledge (Dragomir et al, 2013). Online discussions allow students to enter comments whenever it is convenient for them. This makes it possible for more discussion to take place and much more information will be exchanged in the group than if only one person can speak at a time, like in the traditional classroom environment. The most important aspect of e-learning is interaction, which leads to the creation of online learning communities that diminish isolation by bringing people together in a common venture to increase the exchange of ideas, collegiality and networking (Sabau, 2008).

Higher educational institutions have been using the Internet and other digital technologies to develop and distribute education for several years, but the e-learning concept offers the prospect of a radical new approach to the higher education process focused on opening up traditional universities for those unable to attend on-campus and face-to-face forms of teaching, and for lifelong learners in the workforce at a time when the effective use of knowledge is seen more and more as the key to economic success (Blin & Munro, 2008).

Factors of E-Learning

The many factors affecting e-learning as a new teaching-learning tool have added significant value to the learning and development process globally. Notwithstanding the benefits offered by e-learning there are several factors that are instrumental in affecting the e-learning set-up of an organisation (Chakraborty et al, 2013). Some of these factors are listed below:

- A higher educational institution culture that encourages the usage of technology as a major learning enabler.
- Academic staff who encourage blended learning more than the routine chalk and talk method.
- The ability of the major stakeholders to learn, unlearn and relearn as technology driven learning would have less shelf life and is prone to alterations.
- The learner necessarily has to be motivated for self-paced learning which in turn depends on the learning environment prevailing within the organisation.
- The culture of continuous learning which in turn makes the major stakeholders have a proactive 7x24x365 approach which forms the backbone to e-learning

E-Learning to Enhance Education

Technology continues to gain ground in higher education and has already enhanced the on-campus student experience, through student portals, Internet access, digital libraries, and the availability of laptops, handhelds and other portable devices. E-Learning is becoming part of the mainstream of educational programs. Digital technologies have also dramatically changed academic research, thanks to the rapid acceleration of computer and network performance, which has allowed researchers to access and manipulate massive data sets, to simulate, model and visualise more complex systems, and to strengthen international communication and collaboration in research (Chitiba, 2011).

The dramatic growth and rapid expansion in providing online courses together with the increasing interest in distance learning and budget restrictions, have resulted in increasing adoption of various kinds of online learning systems in Higher Education (HE) institutions. As the technology becomes increasingly reliable, accessible and user-friendly, higher education institutions are looking to exploit the full potential of the Internet (Al-Fraihat et al, 2017). E-Learning facilitates the process of learning by increasing the accessibility and availability of learning materials, up to date content, personalised instructions, cost effectiveness, self-paced learning, multimedia, and interactivity. It plays a vital role to convert an organisation into a learning organisation; moreover, it is accelerated in higher education institutes to support effective learning in the context of lifelong learning (Wong & Huang, 2015).



Using e-learning systems, course lecture contents such as those delivered in traditional classroom settings, can be saved to the 'knowledge server' to add to the cumulative knowledge stored by a university. Such content can then be used by students, as well as others who may be interested. Furthermore, the quality of the 'knowledge server' will likely only get better with time, especially as more information and data is gathered and archived. Clearly, e-learning goes beyond the limitations imposed by time and space (such as typical in traditional educational systems) to provide learning opportunities for all members of the general public. E-Learning can also enable one to enjoy high quality academic programs. Moreover, since e-learning is based on self-regulated learning, universities should evolve to become learner-centred educational entities, further contributing to the continued innovation in the Higher Education institution (Leem & Lim, 2007).

Several key technologies have merged to support education. Together they form the tools of e-learning, in other words, using the Internet and various computer programs to enhance traditional education. Some of these technologies are identified under general categories such as 'Learning Management Systems' (LMS), 'Content Management Systems' (CMS) or e-learning Systems. Within these are more specialised tools such as chat rooms, discussion boards, quiz or testing systems, collaborative or general document management tools and student tracking tools, to name just a few.

E-Learning can disconnect and reconnect many things in the educational process. For instance, it can disconnect the student from being physically present in the place where the educational material is delivered. It can also disconnect the student from having to lock into a common learning time with a lecturer and students. At the same time the electronic environment of e-learning reconnects the student in two key areas. First, e-mail or messaging puts them more directly in touch with their lecturer at any time. Questions are raised when they are relevant to the student. Students can be connected to one another through discussion boards and collaborative tools. These are continuously available so that the student interacts at personally convenient times. They also remove the time pressure of having to vocalise questions and answers quickly in front of other people. More dreams are realised. E-Learning disconnects students from dependence on paper notes and textbooks. Instead they can be connected to continually updated data sources and can grow their personal set of references and notes in a way that is readily portable and available on into their working career (Hall, 2005).

Education Institution to Adopt E-Learning

Traditional universities and colleges must transform themselves by adopting e-learning system which will enable people to study at any university in the world, from home (Morris, 2008). To achieve this transformation, universities will have to introduce strategies and

policies which implement flexible academic frameworks, innovative pedagogical approaches, new forms of assessments, cross-institutional accreditation and credit transfer agreements, institutional collaboration in development and delivery, and, most crucially, commitment to equivalence of access for students on and off-campus (Chitiba, 2011).

The pressures on higher educational institutions to adopt e-learning are substantial; however, the ability to do so can be constrained by numerous barriers, not least the availability of funding. The pressure to adopt e-learning should also be seen in the context of the pressure on higher education systems to reform and modernise in terms of curricula, teaching methods, expanded learning outcomes, new types of students, qualifications' frameworks, quality assurance etc. (Chitiba, 2011).

In the present economic context, universities and colleges need to grasp more directly the challenges and opportunities presented by the lifelong learning potentials. The two key drivers underlying the adoption of e-learning are:

- the need to up-skill the population to meet the challenge of the information and knowledge society;
- the need for accessible and flexible access to tertiary education to meet the changing nature of society and the lifelong learning agenda.

The e-learning strategy is aimed to support the higher education sector as it moves towards adopting e-learning appropriately, using technology to transform higher education into a more student-focused and flexible system, as part of lifelong learning for all who can benefit (MacKeogh & Fox, 2009).

The main reasons for adopting e-learning at the higher educational level is:

- enhancing reputation;
- developing information skills/literacies;
- widening access;
- supporting the disabled students;
- improving quality of teaching and learning;
- increasing flexibility;
- reducing cost/improving cost-effectiveness.

Tutors Knowledge on E-Learning

Academic staff acceptance and engagement is a key factor in the successful implementation of the institutional e-learning strategy. The support of senior management is essential for the wider adoption of new practices, but innovations cannot be adopted without buy-in from rank and file academic staff that, in their role of subject matter experts, and in accordance with the

tradition of academic freedom, can often choose whether to change their teaching practice (Dragomir et al, 2013). At the higher education institutional level, staff attitudes to e-learning are ranging from highly sceptical, to highly supportive, particularly about the pedagogical effectiveness of fully online programs.

It is quite clear nowadays that for e-learning to become a dominant learning pattern, technology alone will not suffice. Students need digitally confident academics. The new technologies require the academic faculty to assume new responsibilities and to develop a range of new skills. Many studies specify a long list of roles which teachers are expected to undertake when utilising the new technologies in their teaching (Alexander et al, 2017, Benson, & Brack, 2009 & Wilson et al, 2004). Wilson (2004) and his colleagues for instance, specified the following tasks which teachers are expected to perform in online teaching: provide syllabi, instructional resources, communication tools, and learning strategies; monitor and assess learning and provide feedback, remediation, and grades; identify and resolve instructional, interpersonal, and technical problems; and create a learning community in which learners feel safe and connected and believe their contributions are valid. Definitely this is a long list of responsibilities which most of the professors have not been prepared for in their socialisation processes into the academic world (Guri-Rosenblit, 2018).

E-Learning Practice in Oman Higher Educational Institutions

Diverse digital environments should be created in universities where academics can experiment with technology-enhanced learning tools and discuss the pedagogy underpinning their uses, in order to be able to facilitate student engagement (Alexander et al, 2017 & Johnson et al, 2016). New tools and practices will confront both teachers and students with the possible needs for new skills.

Sultanate of Oman, being a developing country, has gone through many social changes that have, in turn, altered the Omani society needs. Technology, on the other hand has exerted a tremendous impact on the Omani societal setting and contributed to even more needs. Sultanate of Oman is one of the important countries in the Middle East with rapid progress in education with advanced teaching and learning technologies. The universities and colleges in Oman have introduced the latest e-learning in order to keep the pace of the technological revolution in the field of higher education (Nair & Patil, 2012). There is a need for the improvement from the university management side to improve the pleasant e-learning environment for learning (Muthuraman, 2018).

At present, most universities and colleges in Oman have either introduced an e-learning plan or have implemented such a plan. Moreover, many students have taken fully online courses or have experienced Internet-based classes. New and unexpected problems have emerged



with the increase in e-learning. Such problems include: the development and maintenance of infrastructure; stabilisation, enhancement, and standardisation of operational systems; management of academic records and policy issues; quality and management of course contents; increased faculty workload; and the general lack of support for learning, to name a few. Further, current e-learning programs on offer are severely limited in scope simply because they continue to operate within classroom-based educational paradigms. Broader educational strengths of e-learning are not yet being fully realised (Leem & Lim, 2007)

Conclusion

An e-learning system is nothing without educational content. Just like the early days of the world wide web, the initial content in e-learning will likely be simple copies of lecture notes and references. However, it will soon go well beyond this. Anyone can see that an online book store is vastly different to just reading a book store's inventory list. Similar enrichment of the learning process is expected as educators learn to develop material in a way that exploits the special features of the online environment for educational advantage. This does not happen without commitment. Recent strategic decisions in the Ministry of Education in Oman have led to plans for developing some online content for every subject and every age group in the primary and secondary education sectors. These high-quality exemplar modules will inspire future developments and improvement (Hall Bret, 2005)

The process of the lecturer verbally delivering educational content to a roomful of students has changed. E-Learning is rapidly becoming an essential component of Oman's educational process in all the universities and colleges and brings with it the most significant changes. With its rapidly growing workforce of adaptable and well-educated graduates, Oman could have a unique role to play with e-learning in the region. Oman may be able to position itself as a leader in developing and providing high quality e-learning material with a true flavour of Arabic culture (Hall Bret, 2005). The successful implementation of an e-learning strategy at higher educational institutions requires not only adoption by enthusiastic innovators but also institutional structures must be put in place to support the sustainability and mainstreaming of e-learning initiatives.



REFERENCES

- Alexander, B., Becker, S. A., Cummins, M., & Giesinger, C. H. (2017). *Digital literacy in higher education, Part II: An NMC Horizon project strategic brief* (pp. 1-37). The New Media Consortium.
- Al-Fraihat, D, Joy. M & Sinclair. J. (2017). "Identifying Success Factors for e-learning in Higher Education", Academic Conferences International Limited, Kidmore End, 06, 247-255.
- Benson, R., & Brack, C. (2009). Developing the scholarship of teaching: what is the role of e-teaching and learning? *Teaching in Higher Education*, 14(1), 71-80.
- Blin, F., & Munro, M. (2008). Why hasn't technology disrupted academics' teaching practices? Understanding resistance to change through the lens of activity theory. *Computers & Education*, 50(2), 475-490.
- Brown, J., & Duguid, P. (2000). *The Social Life of Information*. Cambridge, MA.: Harvard Business School Press, 2000.
- Chakraborty, M., Al Rashdi, S., & Hashim, V. (2013). A Case Study to Understand the Behavioral Issues Affecting E-Learning with Reference to IHL, Sultanate of Oman. *Journal on School Educational Technology*, 8(3), 39-45.
- Chițiba, C. A. (2011). E-Learning—A Potential Answer for Higher Education' S Challenges. *Euromentor Journal-Studies about education*, (04), 112-118.
- De Alva, J. K. (1999). Remaking the academy in the age of information. *Issues in Science and Technology*, 16(2), 52.
- Dragomir, C. C., Pânzaru, S., & Stefanescu, R. (2013). Realities and opportunities of e-learning in higher education system from Romania. *The International Scientific Conference eLearning and Software for Education* (Vol. 1, p. 315). " Carol I" National Defence University.
- Duderstadt, J. J. (2017). *A University for the 21st Century: Twenty Years Later, Millennium Project*, 2017.
- Duderstadt, J. J., Atkins, D. E., Van Houweling, D. E., & Van Houweling, D. (2002). *Higher education in the digital age: Technology issues and strategies for American colleges and universities*. Greenwood Publishing Group.



- Guri-Rosenblit, S. (2018). E-Teaching in Higher Education: An Essential Prerequisite for E-Learning
- Hall Bret, (2005) “e-learning – Applying Technology to Education”. Digital Oman, issue 3, available at http://www.digitaloman.com/indexead5.html?issue=3&lang=en&id=14_1.
- Johnson, L., Becker, S. A., Cummins, M., Estrada, V., Freeman, A., & Hall, C. (2016). *NMC horizon report: 2016 higher education edition* (pp. 1-50). The New Media Consortium.
- Leem, J., & Lim, B. (2007). The current status of e-learning and strategies to enhance educational competitiveness in Korean higher education. *The International Review of Research in Open and Distributed Learning*, 8(1).
- MacKeogh, K., & Fox, S. (2009). Strategies for embedding e-learning in traditional universities: Drivers and barriers. *Electronic Journal of E-Learning*, 7(2), 147-154.
- Masie.E. (2006). The Technology and Learning Think Tank, The Masie Center, 132.
- Morris, D. (2008). Economies of scale and scope in e-learning. *Studies in higher education*, 33(3), 331-343.
- Muthuraman, S. (2018). Quality of Blended Learning Education In Higher Education. *The Online Journal of Distance Education and e-learning*, 6(4), 48-56
- Nair, S. C., & Patil, R. (2012). A study on the impact of learning management systems on students of a university college in Sultanate of Oman. *International Journal of Computer Science Issues (IJCSI)*, 9(2), 379.
- Sabau, I. (2008). Critical thinking in online learning environments. Distance learning is here to stay: accept it, improve It, use it appropriately. In *Proceedings of The 3rd International Symposium e_CEL3, Effects of continuing learning on the labor market and organizations competitiveness* (p. 243).
- Wilson, B. G., Ludwig-Hardman, S., Thornam, C. L., & Dunlap, J. C. (2004). Bounded community: Designing and facilitating learning communities in formal courses. *The International Review of Research in Open and Distributed Learning*, 5(3).
- Wong, W. T., & Huang, N. T. N. (2011). The effects of e-learning system service quality and users' acceptance on organizational learning. *International Journal of Business and Information*, 6(2).