

# **The Challenge of the Transition from Online Delivery to Online Teaching and Learning**

Henrique Teixeira Gil  
Escola Superior de Educação do Instituto Politécnico de Castelo Branco  
Centro de Investigação em Educação da Faculdade de Ciências da Universidade de Lisboa  
Portugal  
hteixeiragil@ese.ipcb.pt

**Abstract:** This paper aims to discuss the challenge of the transition from on-line delivery to on-line teaching and learning. At the present e-learning constitutes the main digital support to promote an effective distance education. However it is necessary understand “what can I do with e-learning and that I can not do with e-learning”. Due to the fact that the discussions around e-learning are almost focused on technology its pedagogical importance may be considered as a secondary problem. This paper reflects the importance of the use of e-learning in the process of teaching and learning (institution, teachers and students). The main obstacles and difficulties are considered as a catalyst for reflection in order to find ways, strategies and innovative process for the implementation of e-learning. Recommendations and future trends (e.g. m-learning) are also discussed in order to find new ways to promote an ubiquitous education.

## **Distance learning: brief comments of its technological evolution**

Niccolo Machiavelli (1513) stated that: «It must be remembered that there is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage, than the creation of a new system. For the initiator has the enmity of all who would profit by the preservation of the old institutions and merely lukewarm defenders in those who would gain by the new ones.»

Distance learning has been around for 100 years and its first form was done through correspondence courses started in Europe (Valentine, 2002). The main aims of distance learning was the hope to save money by delivering education to students that are unable to attend classes because of time and distance and to reach those that would by any other means be unreachable. During the middle of the XX century instructional radio and television became the most popular way for distance learning. The next step was the use of audio and videotape for professional courses during the last two decades. The idea of putting training on video was thought as a good idea but some constraints were found as: the customization based on needs of users; very expensive to maintain; and the difficulty to be upgraded easily. When it was felt that video was not the best and adequate option a new form of training was tried with the use of computers (CBT – Computer Based Training) with the emerging of multimedia and CD-Rom. Today Internet and the use of compressed video took the lead and allowed a new dimension by promoting the possibility that distance learning occur in real time.

As argued by White (2000) the application of technology for use in the process of teaching and learning is not new but early uses of educational technology were shaped by the nature of computer architecture, and prevailing beliefs about learning. Due to this fact the learning technology agenda was shaped where the early model that was developed was predominantly one of the delivering learning. In the early 1990s the predominant model was that delivering learning via computer but the transition to multimedia computers saw an emergence of constructivist views of education. This change of views has been accompanied by greater emphasis on uses which exploit the potential of the technology to enable and enhance communicative and collaborative interactions. As stated by Dearing (1997) the focus putting in learning was replaced by the focus on teaching.

## **E-Learning: general characterization**

E-learning constitutes the last proposal to promote distance learning. Using e-learning platforms means self-motivation, good communication, efficiency, and appropriate technology. Because of the isolation intrinsic of e-learning it is required that students must communicate with each other and the instructor/teacher frequently to accomplish their assigned tasks. Whenever possible blended learning is chosen because it includes the possibility to have real face-to-face communication in combination with the use of two way video and/or two way audio. Schedule may be synchronous and/or asynchronous. Synchronous allow real time communication: chat, video-conference, and tele-conference. Asynchronous communication includes: e-mail, lists, blogs, and forums. Flexibility can be seen as the major benefit of e-learning because it takes the advantage of taking class anytime anywhere i.e. education is available when and where is needed. It is also argued that e-learning is affordable, saves time and is more cost effective than traditional learning because less time and money is spent traveling. One important thing is to clarify the real aim(s) of e-learning and the concern presented by Dutton, Cheong and Park (2004) may resume a general concern: «Should e-learning seek to be a catalyst for new educational paradigms, or essentially provide more efficient support for traditional approaches?»

## **Constraints and obstacles about the use of e-learning**

Several factors affect the rate of use and adoption of technology by including many variables: economic, sociological, psychological, and organizational. The understanding rate of adoption in any given situation requires analyzing factors that may facilitate the adoption and those that may operate as barriers to adoption (Butler & Sellbom, 2002). Key issues to consider when considering the introduction of technology into learning and teaching is the ways it is supposed to be integrated into existing activities.

There is a general consensus that three factors are responsible for the main barriers to the adoption of technologies for the process of teaching and learning: lack of institutional support, lack of financial support, and, maybe the most important, the lack of time to learn new technologies. It may be referred that there is a general tendency in academic culture to believe that training solves problems of learning. Most of the times training is useful for some faculty however faculty sometimes feel hard to use technologies because of bad design. Several examples may be stressed as: things do not work the way students and teachers expect, controls are hard to figure out, controls map poorly to the devices they control, the change of procedures, the existence of different systems running at the same time.

As Pallof and Pratt (2000) argue “(...) technology does not teach students; effective teachers do.” This means that the discussion must be centered on education and not in technology. The mistake relies on the assumption that one of the most common thoughts from many institutions is that, just by using an online system to deliver the course, that it will simply just make the course better, efficient and successful. It must be remembered that more needs to be done than simply making the course available online to make the course a success. Most of the cases showed that teachers do not design their lessons taking in account the advantage of the technologies which often represents poor quality of the instruction because teachers are unfamiliar with the technologies themselves (Jennings, 2004). According to those findings it is suggested that the effectiveness of distance learning (e-learning platforms) is based on preparation, i.e. the teacher must understand the needs of the students. Ozuzu (1994) already claimed that it is very common that the e-Course design is based on the traditional question and answer model, where the information is delivered by the teacher and echoed back by students. The main problem here is the fact that to assure success with e-learning courses it is necessary move towards the promotion of open investigation allowing personal knowledge generation. Appropriate instruction may requires a four way match between the technology, the nature of the content and how is presented, the objectives that must lend themselves to the medium, and the approach taken to produce learning. Due to this complex number of factors Rogers (1995) reinforced the idea that change will not be adopted by all at the same time and that a variety of strategies should be called upon to suit the different levels of predisposition to change amongst academic staff. Several authors as Edmonds (1999), Betts (1998), Oliver and Dempster (2002) cited by Goolnik (2006) argued that a clear vision should be in place at the most senior levels so that staff can gain understanding of why change is important and necessary. If the administration and teachers are lacking in true commitment, it is bound to have a negative influence on the entire distance learning experience. For some institutions e-learning is be understood as a way to offer to distance students an experience as much lie of traditional face-to-face instruction. On the contrary, we agree with Valentine (2002) that instead of using

technology to replicate traditional methods, it should be used to improve instruction. Those two viewpoints have different consequences and the teacher must decide which attitude they will adopt because it has a great impact on their approach to teaching.

Teachers have to define how e-learning will change their role in education. Some worries presented by Guber (1998) if teachers rely too much on distance learning techniques there is a potential risk of losing a clear vision of the aims of the subject(s) in the rush to convenience, cost-effectiveness, and accountability. Another worry is about putting teachers' materials online because once there, there is a huge possibility that the knowledge and course design skill in that material is out of their possession. Singh and Doherty (2004) also agreed that the plagiarism is a serious problem inherent in the e-learning environment.

It is a general consensus that e-learning courses are expensive. The cost of online courses is affected by how they are implemented: as an enhancement or as the primary teaching medium. But another issue may be added that besides the cost of technology it is also the possibility of not utilizing all its potential. Those problems may be a consequence from a lack of training, some teachers' attitudes about using technologies and others by software and hardware problems.

Another problem presented by Edler (2006) corresponds about the debate concerning the use of e-learning for students younger than middle school. Opponents of e-learning claim that students who are younger than 12 do not have the necessary cognitive abilities to learn via strict e-learning environment. Opponents are also concerned about the social development of young students and claim that young students in an e-learning environment may fail to develop appropriate social skills.

Resistance to change may be overcome if academics are fully involved and have full ownership in the design, development and carrying out of these changes and also have an understanding of their new roles. It is not expected that academics will embrace new teaching and learning initiatives only with verbal encouragement or through the idea that "build it and they will come" (Bower, 2001). Butler and Sellbom (2002) also stated that there is a general tendency in academic culture to believe that «training» solves problems of «learning». No doubt training is needed and useful for some faculty for some systems and for some contexts. However more must be done because sometimes academics have a hard time learning to use new devices only because of its bad design. White (2000) recognizes that it is important the assessment and assurance of quality sometimes may act as an inhibitor to the growth and development of effective use of e-learning. Because the fear of failing short of the highest standards may encourage the retention of old methods and discourage experimentation with new.

## **Strategies for the Future**

Teachers must be comfortable with the medium (technology) and we agree with Valentine (2002) that students needed more guidance on how to fully take advantage of it. The technician is very important within this scenario and teachers must treat them as such. As argued before teaching a distance learning class involves new roles for teachers the institution must provide them with the tools, time, and the adequate training in order to meet those new responsibilities. White (2007) referred that the progress of using e-learning might be slow and its use vary across discipline areas and she identified that managers and key decision makers influencing progress in their institutions. According to White (2007) research showed that new strategies must be aligned with institutional culture if they are to succeed. It may be related to the need of academic to encourage faculty to assess and evaluate the impact of technologies on learning.

Butler and Sellbom (2002) suggested several recommendations in four different ways: improving quality control to raise reliability of technologies (convince staff that reliability is really important; purchase just only high reliable technologies); simplifying learning to use technologies (classrooms technologies' must be similar and setups must also be tested before their installation; promote discussions and encourage faculty discussions about teaching, learning, technology, and their relationship and consequences); helping faculty to find out if learning and using technology are really worth it (organizing workshops and seminars about the results of assessment and evaluation of the impact of technologies); improving institutional support (find a rapid response(s), identify behaviors and attitudes that were found as poor or inadequate). According to the opinions of Chen, Lin and Kinshuk (2004) learner satisfaction in the digital environment is very important. A high level of satisfaction reflects that students are more willing to continue in online programs evidenced by lower attrition rates, more referrals from enrolled students, greater motivation, better achievement and increased commitment. The maintenance of a higher level of involvement is very crucial so interaction between teacher and students has

a strong effect on overall satisfaction because learners expect and demand that deep and continuous interaction (Burnett, 2001 & Parker, 1999). Teachers must effectively manage discussions boards to better facilitate interaction in different levels: learner-teacher, learner-learner, and learner-content.

We agree with White (2000) to suggest that a greater transparency in the quality assessment processes under subject review will encourage the integration of the use of technology (e-learning) into the whole range of processes associated with learning and teaching. This will allow the possibility, despite assessment pressures, for academics and students to find sufficient space for developmental and reflective uses of e-learning in the process of teaching and learning.

## Conclusions

The prevalence of technology and learning tools does not directly result in effective use and integration with existing processes. E-learning programs can overlook this fundamental and crucial element by focusing only on the technology and the infrastructure.

Technology based activities which are simply bolted on to existing learning and teaching program are unlikely to make any impact. To avoid this it is very important to schedule a period of trialing and evaluation of the innovations, and to prepare new practices in the light of feedback from both staff and students who are involved with the new system (White & Davis, 2003). The presence and the intervention of an external evaluator may be very important because he/she can act as a «critical friend». However the institutions which have achieved a greatest extent of the use of e-learning are more able to reflect a more consistent understanding of the objectives and benefits of using technology in **their particular context**. The challenge for the key decision makers lies in identifying the reality of the local circumstances and working with the existing strengths. While data is still being collected on the success of e-learning, proactive schools must prepare for the future by investing in the technology and teacher training necessary to develop and implement e-learning. It must be assumed that newer technologies are not inherently better than old ones and many of the lessons learned from the application of older technologies will still apply to any newer technology. Again the instructor should be trained to take advantage of both their experience and being able to adapt that experience to the new environment of distance learning. According to Palloff and Pratt (2000) the instructors must be trained not only to use technology, but also to shift the way in which they organize and deliver material.

Mobile learning (m-learning) may be considered a new trend... not because it is the newest but because it can add new and different possibilities. The portability is bigger, almost everyone has a cellular phone, PDAs are cheaper, live communication is immediate, and it is in the palm of our hands. Since the last few years we have seen the processing power of handheld devices grow exponentially while becoming more affordable and even more ubiquitous due to demand for games, business communications, and in general the connected lifestyle of the present wireless society. M-learning is reaching a new kind of user through: convenience (is accessible from anywhere: bus, class, supermarket); contents may vary including journal entries, quizzes, learning games, balance sheets; collaboration is enhanced because it is consensual that best learning takes place when we share and get immediate tips and feedback; can engage and be more fun by combining gaming and learning for a more entertain and effective experience. In resume there several features of m-learning that must be tested and investigate as: an increased interaction among participants in virtual communities; more portable because PDAs and phones are lighter than books and enable students to take notes or input data directly into the device regardless of location either typed, handwritten or just using voice; new generation likes mobile devices; be the owner of the handheld devices seems to increase commitment to using and learning from it; may assist learners with some disabilities; and, because it is just-in-time increases work/learning performance and relevance to the learner.

Besides those advantages some disadvantages are also found (limited storage, small screens, battery life, lack of common operating system, hardware and software, difficulties with printing...). However we must know all or almost all the technological offers in order to assess, discuss and reflect about their pedagogical potential for teachers and learners... But not just to deliver information because teaching and learning are the real key factor!

## References

- Bower, B. (2001). Distance Education: Facing the Faculty Challenge. *Online Journal of Distance Learning Administration, IV (II)*.
- Burnett, K. (2001). Interaction and student retention, success and satisfaction in web-based learning. *67<sup>th</sup> IFLA Council and General Conference* (pp 1-12).
- Butler, D. & Sellbom, M. (2002). Barriers to Adopting Technology for Teaching and Learning. *Educase Quarterly, Number 2*.
- Chen, N., Lin, K. & Kinshuk (2004). Assessment of e-learning satisfaction from critical incidents perspective. In: Seruca, I, Filipe, J., Hammoudi, S. & Cordeiro, J. (Eds). *Proceedings of the 6<sup>th</sup> International Conference on Enterprise Information Systems* (pp 27-34). Portugal: Porto (ISBN: 972-8865-00-7).
- Dearing, R. (1997). *Higher Education in the Learning Society*. UK: London.
- Dutton, W., Cheong, P. & Park, N. (2004). An Ecology of Constraints on e-Learning in Higher Education: The Case of a Virtual Learning Environment. *Prometheus, Volume 22, No. 2, June*, pp 131-149 (ISSN 1470-1030).
- Edler, A. (2006). *E-Learning in the Pre-K-12 Market*. Spring Book.
- Goober, P. (1998). Distance learning and geography's soul. *AAG Newsletter, 33, (5), pp 1-2*.
- Goolick, G. (2006). Effective Change Management Strategies for Embedding Online Learning within Higher Education and Enabling the Effective Continuing Professional Development of its Academic Staff. *Turkish Online Journal of Distance Education – TOJDE, January 2006, Volume 7, Number 1, ISSN 1302-6488*.
- Jennings, M. (2004). E-Learning – Disadvantages. *New Media Technologies: Creative Industries*.
- Ozuzu, C. (1994). Problems in the Management of Distance Education. *Journal of Distance Education, Number 2 (1), pp 239-249*.
- Palloff, R. & Pratt, K. (2000). Making the transition: Helping teachers to teach online. *EDUCASE: Thinking in through*. USA: Nashville.
- Parker, A. (1999). Interaction in distance education: The critical conversation. *Educational Technology Review, 12*, pp 13-17.
- Rogers, E. (199). *Diffusion of Innovation*. New York: The Free Press.
- Singh, P. & Doherty, C. (2004). Global Cultural Flows and Pedagogic Dilemmas: Teaching in the Global University. *TESOL Quarterly, 38 (1) pp 9-42*.
- Valentine, D. (2002). Distance Learning: Promises, Problems and Possibilities. *Online Journal of Distance Learning Administration, Volume V, Number III, Fall 2002*.
- White, S. & Davis, H. (2003). Harnessing IT for Learning. *The Effective Academic: A Handbook for Enhanced Practice*. The Times Higher Education Supplement (ISBN-0-7494-3570-4).
- White, S. (2007). Organizational Management of e-Learning in Universities – Significant issues (Poster). *Second European Conference on Technology Enhanced Learning “Creating new learning experiences on a global scale”*: Greece: Crete.

White, S. (2000). Quality assurance and learning technologies: intersecting agendas in UK higher education. *Quality Assurance in Education*, Volume 8, Number 1, pp 7-15 (ISSN 0968-4883).