



Proceedings

PLE Conference 2012 that was held on Aveiro, Portugal and Melbourne, Australia (11th-13th July 2012)



Title: **The PLE Conference Proceedings**

Editors: Luís Francisco Pedro
Carlos Santos
Sara Almeida

University of Aveiro
Campus Universitário de Santiago
3810-193 Aveiro, Portugal

ISSN: **2182-8229**

This work is part of the Shared Personal Learning Environments
(ref: PTDC/CPE-CED/114130/2009))
project funded by FEDER funds through the Operational Programme for
Competitiveness Factors - COMPETE and National Funds through
FCT - Foundation for Science and Technology (Portugal)



Pedagogical Practices, Personal Learning Environments and the Future of eLearning

Rui Páscoa, Sérgio Lagoa, João Brogueira and José Mota

Universidade Aberta, Portugal

{ruipascoa, mpel5.sergiolagoa, josecmota}@gmail.com,
joao.brogueira@usj.edu.mo

Abstract. Historically, elearning has adopted the most common pedagogical models in Distance Education and it has been gaining increasing importance, as Higher Education Institutions are offering more and more online degrees. However there is a gap between theory and practice. What are the actual pedagogical models followed by the teachers online? Do they follow the theoretical models or do they adopt a mix of different models? What is the role of the services and tools available in the pedagogical practices, namely the Personal Learning Environments (PLEs)? How are Higher Education Institutions adapting themselves and which are the future trends for elearning? This paper tries to shed some light on these questions based on two interviews: one to Prof. Graham Attwell and the other to Prof. José Lagarto. Showing some skepticism about the adoption of elearning by Universities, the interviewees consider that PLEs are indeed capable of bringing a quality increase in the learning process. They also consider it is necessary to adopt several pedagogical models in elearning.

Keywords: elearning, pedagogical practices, personal learning environments, future of elearning, lifelong learning

1 Introduction

In one of the tasks of the curricular unit “Pedagogical Processes in Elearning”, of the 5th edition of the Master’s program in Elearning Pedagogy of Universidade Aberta, Portugal, under the supervision of lecturer José Mota, the students were challenged to do an interview to an online teacher or trainer. Based on that interview, they should then write an academic paper on pedagogical practices in elearning, adding other resources that had been studied in the curricular unit. The group of three students who are presenting this paper invited Graham Attwell (Wales) and José Lagarto (Portugal) to get a wider perspective on elearning practices in different contexts. After having outlined the scripts of the interviews, these were sent to the interviewees, who answered by video (Graham Attwell) and in writing (José Lagarto).

Graham Attwell is an Associate Fellow, Institute for Employment Research, University of Warwick and a Gastwissenschaftler at the Insitutut Technik und Bildung,

University of Bremen. His recent work has focused on research and development of new applications and approaches to e-Portfolios and Personal Learning Environments.¹

José Lagarto is Professor and pedagogical coordinator of the master's degree in educational sciences, specialization in educational computing (informatics) at Universidade Católica Portuguesa. He is the author of several books and papers related to issues of the teaching and training in distance learning contexts.²

The full interviews are available online (see references).

2 Pedagogical Practices in eLearning

The way an online course is pedagogically designed cannot be similar to the organization of the traditional classroom approach. Gautreau, Street & Glaeser (2008) remind that in the latest years there are many studies comparing classroom learning with online learning. The results prove that the differences between the learning outcomes in both contexts are not significant. The challenge lies in finding out how knowledge is acquired or produced. The distinctive feature of online learning is the existence of a learning community which works in collaboration/cooperation. Some important studies support the idea that the virtual learning communities are essential in the building of effective online courses (Hiltz, 1998; Johnson & Johnson, 2004, in Mason & Rennie, 2008; Garrison & Anderson, 2003, Palloff & Pratt 1999, 2005).

However, none of these contributions solve the problem: which pedagogical models should be used to design an online course or study program? Andersen & Dron (2011) identify three generations of pedagogical practices in Distance Education: cognitive-behaviorist, social-constructivist and connectivist. The behaviorist and cognitivist theories usually lead to distance teaching models which are based on the teacher centered transmission of knowledge and on the subject matter. The teaching processes are strongly structured and learning is an individual process where social interaction is limited to scarce communication, synchronous or asynchronous, between the teacher and the learner. Constructivist models of distance teaching highlight the social interaction based on synchronous or asynchronous communication through the diverse technological means available to the teacher and the students. The learning process is more important than the contents and experimentation is assumed as the primary source of knowledge acquisition. Learning is an active process and the acquisition of new knowledge is based on the already acquired knowledge. The connectivist approach depends largely on the students' access to knowledge networks with frequent and intense social interactions. Learning needs are defined by the students themselves according to their goals and expectations. Teachers and students are simultaneously responsible for the production of content and learning results from diversified connections in networks and the recognition of emerging patterns within them.

¹ Pontydysgu - bridge to learning - Graham Attwell. Available at <http://www.pontydysgu.org/pontydysgu-and-people/graham-attwell>

² Universidade Católica Portuguesa, Faculdade de Ciências Humanas - Corpo Docente - José Reis Lagarto. Available at http://www.fch.lisboa.ucp.pt/site/custom/template/ucptpl_popup.asp?sspageid=885&artigoID=4847&l_ang=1

Attwell (2012) considers himself a constructivist, but he adopts a critical view on all these approaches: “these days I can state that I follow a constructivist model although I am quite critical about all these models”. Lagarto (2012) follows the same view, stating that he has his own communication style with the students, adapting his message to different contexts. He considers that “the reasons for these approaches are related to the personal perception that everybody learns in different ways but we learn better certain contents by doing and collaborating with others, while in other situations a more functional learning is more effective and makes us attain our goals faster without losing quality.”

Attwell (2012) adds that he is interested in mixed or combined models, which can be placed somewhere between behaviorism and constructivism, quoting as example the CBLM (Collaborative Blended Learning Methodology) based on the concept of webquests 2.0 and which has been developed by Maria Perifanou at Pontydysgu (Attwell, 2011). He clearly states that the processes are far more important than the models: it is not worth following a specific model if you don't give the students the freedom and the support to achieve autonomy. Moreover, according to Attwell (2012), “PLEs are not a mere tool, they are part of a process of learning practice.”

3 The Influence of PLEs in Pedagogical Processes

The concept of PLEs may have been born in 2001 (Mota, 2009) in a paper by Bill Olivier & Oleg Liber, who proposed the integration of the learning institutional contexts with a peer-to-peer model, which would be centered on personal learning and lifelong learning. With the evolution and the complexity of Web 2.0, there has been an enormous advance in the working environments, in the communications and in the publishing and sharing of resources. One of the consequences of this evolution is the availability for anybody to access a huge volume of information, whether through the consultation of online documents and media or through direct or indirect communication with others, thus increasing exponentially the learning opportunities.

The concept of PLE has also evolved and, although it can be seen in a technological perspective, i.e. a set of tools and services that each one personalizes, organizes and makes the most of for one's learning, it is also an ecosystem of relationships, interactions, cultural and social values. No two PLEs are equal. According to Mota (2009) the notion (or notions) of Personal Learning Environment *represents, in a way, the embodiment of many of the aspects which characterize the social and cultural changes provoked by the technological development, namely with Web 2.0, and which inevitably have a strong impact on education and on the conception of learning.*

Terry Anderson (2006) lists some of the advantages of a PLE, highlighting the identity and the availability, the social presence and the capacity and quickness of innovation. To Anderson, the PLE can be used in both formal and informal learning and even in lifelong learning. In a conceptual map designed by Adell (2010), the author underlines that a PLE is not an application or a learning platform, not even a way of teaching, it is a way of learning. Unlike many others who place the user in center of the map, Adell stresses that learning is the focus or the center of all activity and the reason of being of the PLE. Downes (2008) refers that the PLE can be a world of resources for the students who, at the

same time, have the roles of information consumers and content producers, while the teachers will have a crucial role as mentors and learning facilitators.

How can PLEs be relevant in the construction of knowledge and enable effectiveness of learning processes? Attwell (2012) has no doubts that PLEs are crucial for any learning process involving technologies: PLEs represent the way in which we take advantage of technology, how we shape it and the learning opportunities it offers. The German word is *gestalten*, this is how we design and shape the PLEs for our own learning process. Attwell adds that the PLEs, as he understands them, are part of that process of shaping and taking hold of the things that were not conceived for the learning process, and use, design and develop them for that goal, cooperating with others while we are doing it. For him this is the future of online learning; he even wishes again that in 2012 we get rid of the “e”, the “b” and the “i” which we place before learning.

But there is another advantage in PLEs: the democratization of the access to knowledge, that supports lifelong learning of an ever increasing number of individuals. Attwell (2012) strongly believes that education should be considered a right and not merely a business, that is, a profitable activity like any other. Well, if this happens, the fact prevails that technology can give more opportunities to the ones that already have them, leading to social inequalities. The introduction of technologies in education can lead to the appearance of some info excluded with little access to formal education and even less access to technologies in education, thus opposing them to the ever socially privileged.

Bearing this in mind, and as long as technologies are affordable and widely used, Attwell (2012) considers that PLEs could be extremely important since they may be a “part of the change in the learning process”. He adds that “technologies, in the workplace and in the community, allow everyone to have access to ideas, knowledge and online spaces to debate and increase their own knowledge”. Thus, “the learning process and, therefore, education becomes a full part of society as a whole instead of hiding itself behind the walls of the institutions of our schools and universities”.

4 Preparation / Adequacy of Institutions of Higher Education to eLearning

António Dias de Figueiredo (Miranda, 2009) underlines that online education is a “strategic process” for the future because the trend will be an increase in the demand of distance or combined (b-learning) courses mainly for Master students who are already working and have little time to attend face-to-face classes. Simultaneously, Higher Education Institutions will be fully interested, he states, in moving forward to teaching projects and online training as there are several trends which point to that direction, such as the need of lifelong learning, the changing of the social profile of the students, the increasing use of technologies to support learning and even the financial viability of the universities. Gautreau, Street & Glaeser (2008) also believe so: in the last few years, the number of enrolments in online courses outnumbered the enrolments of students in regular courses. Therefore universities need more and more to conceive online courses to attract new students.

José Lagarto (2012), however, is more skeptical about the needs of implementing

online courses, considering that only a minority of higher education institutions are aware of this problem and that fact will restrict the effectiveness of the Bologna Process. He also stresses that it is necessary to change the paradigm, which implies “a big effort of all the actors involved”, in a context where he believes students themselves are less used to autonomous work and to self regulation of their learning processes. He also questions if today’s students, as online natives, can keep on learning with the use of technologies of the 19th century.

Attwell (2012) doesn’t seem very optimistic either, saying that students are “less confident and competent than it would be expected in the use of technologies, which ruins the concept of digital generation and the concept of a new generation with a completely different interaction with technologies”, showing difficulties in the use of those technologies to develop learning processes.

5 The Future of eLearning

We are going through some big changes. Fueled by the rapid technological development, our social and cultural patterns are evolving, with a strong impact on our daily life: the ways we communicate, deal with information and learn. But do we realize how dramatically and how fast the world has been changing? And do we realize that, 10 years from now, our students will consider many current technologies obsolete? The “top ten” jobs of 2010 didn’t exist in 2004 (IBM & IEEE, 2010); will many of the skills learned or developed today at school be still relevant in a few years’ time?

The number of jobs people have throughout their lives is increasing and will continue to do so, including more career changes than in the past. Education must adapt to this new context: learning in the 21st century needs to be adapted to each learner, student centered, available 24 hours a day, seven days a week, continuous, with a strong social dimension, and PLEs are a key element in this process.

The role of the teacher also needs to change, becoming more diversified and spanning across a variety of functions (Downes, 2010) - model, mentor, facilitator, moderator, curator, enabler, to name a few – along with the traditional function of instructor and evaluator. Teachers need to make the most of the affordances of these technologies and be aware of the emergent pedagogies that can effectively support learning in this new context.

Lagarto (2012) also refers to these trends, believing that “the teaching strategies are gradually changing their paradigms and today they already offer a wide range of options”. The teacher will probably have the function of being a good manager of online contents conceiving at the same time learning environments that fit his or her students: case studies, project-based learning, webquests, guided research, contents created by the users (user-generated content) are just a few examples of the ways of supporting learning processes in controlled environments, technologically enriched and run by the teacher.

As it was already mentioned, online teaching seems to have a major role not only at the level of education / training strategies but also at the level of training models. José Lagarto (2012) states that “under the perspective of Rosenberg, in his book *Beyond Elearning*, elearning will be useful for both formal education and training approaches as

well as to self-learning processes tied to the leisure activities of each citizen. The enormous versatility of elearning systems will be the paradigm of future learning, even if it is not called elearning”. Attwell (2012) has a similar view: the future of elearning may not include necessarily or exclusively formal education. One of the most promising areas seems to be, without a doubt, lifelong learning. Attwell refers that he is at the moment working with a group of counselors whose corporations “are looking for new ways of providing access to learning opportunities to their workers and that are particularly less expensive to fulfill.”

6 Conclusion

Both Attwell and Lagarto are open to different pedagogical approaches in elearning and critical of the use of only one methodology. They prefer to give more importance to the adaptation of the message to the contexts, as there isn't only one pedagogical model for elearning: one should adapt the strategies and methodologies according to the contexts. Therefore they both emphasize the processes and the specific contextualization of each learning community.

The same with PLEs: more than simply a tool, they are part of the learning process and have the necessary potentialities to fuel change in the learning communities. There is, however, some discussion about whether they may be part of the solution or part of the problem when it comes to promoting digital inclusion. If they constitute part of the solution and not of the problem, PLEs have the necessary capabilities to promote effective change in learning communities.

That is not an easy process as universities tend to stay inside their own walls. Although elearning is strategic for the universities, both interviewees are quite skeptical about the immediate generalization of elearning. These institutions have difficulties in realizing the importance of elearning and the students lack, in many cases, technological competences. In spite of the difficulties and the natural setbacks in the process of changing paradigms, elearning, even if it isn't called that, has a promising future mainly in the context of lifelong learning.

References

1. Adell, J.: Que es um PLE - Personal Learning Environment? [Video]. Entrevista concedida a Conocity – Ciudad del Conocimiento. Available at <http://conocity.eu/jordis-personal-learning-environment> (2010)
2. Anderson, T.: PLE's versus LMS: Are PLEs ready for Prime time? Virtual Canuck. Available at <http://terrya.edublogs.org/2006/01/09/ples-versus-lms-are- ples-ready-for-prime-time> (2006)
3. Anderson, T., Dron, J.: Three generations of distance education pedagogy. Irrodl. Available at <http://www.irrodl.org/index.php/irrodl/article/view/890.%5> (2011)
4. Attwell, G.: Interview by João Brogueira, Rui Páscoa and Sérgio Lagoa. Available at <http://ppel5.weebly.com/questions-asked-to-professor-graham- attwell.html> (questions) and <http://ppel5.weebly.com/reflections-on-personal-learning- environments-by-graham-attwell.html> (video response) (2012)
5. Attwell, G.: Webquests 2.0 and Collaborative Blended Learning. Pontydysgu: brigde to learning. Blog

- post (15-02-2011). Available at <http://www.pontydysgu.org/2011/02/webquests-2-0-and-collaborative-blended-learning/> (2011)
6. Downes, S.: The Role of the Educator. Huffington Post, December 6. Available at http://www.huffingtonpost.com/stephen-downes/the-role-of-the-educator_b_790937.html (2010)
 7. Downes, S.: Personal Learning Environments. Presentation at the conference Brandon Hall Innovations in Learning 2008, San Jose, California. Video and slides available at <http://www.downes.ca/presentation/198> (2008)
 8. Garrison, R., Anderson, T.: eLearning in the 21st Century: A Framework for Research and Practice. London & New York: Routledge Falmer (2003)
 9. Gautreau, C., Street, C., Glaeser, B.: Best Practices in Graduate Online Teaching: Faculty Perspectives. International Journal of Instructional Technology & Distance Learning, 5 (6). Available at http://www.itdl.org/Journal/Jun_08/article01.htm (2008)
 10. Hiltz, R.: Collaborative Learning in Asynchronous Learning Networks: Building Learning Communities. Invited presentation at WEB98, Orlando, Florida. Available at http://web.njit.edu/~hiltz/collaborative_learning_in_asynch.htm (1998)
 11. IBM & IEEE: Final report of the Conference Transforming Engineering Education: Creating Interdisciplinary Skills for Complex Global Environment, April 6- 9, Dublin, Ireland. Available at http://www.ieee.org/education_careers/education/university_programs/tee_conference/index.html (2010)
 12. Lagarto, J.: Interview by João Brogueira, Rui Páscoa and Sérgio Lagoa. Available at <http://ppel5.weebly.com/professor-joseacute-reis-lagartos-interview.html> (2012)
 13. Mason, R., Rennie, F. E-Learning and Social Networking Handbook. New York: Routledge (2008)
 14. Miranda, G.: Ensino Online e Comunicação Multimedia. Lisboa: Relógio d'Água (2009)
 15. Mota, J.: Personal Learning Environments: Contributos para uma discussão do conceito. In: Educação, Formação & Tecnologias; vol.2 (2); pp. 5-21. Available at <http://eft.educom.pt/index.php/eft/article/view/105/66> (2009)
 16. Palloff, R., Pratt, K.: Collaborative online learning together in community. San Francisco: Jossey-Bass (2005)
 17. Palloff, R., Pratt, K.: Building Learning Communities in Cyberspace: Effective Strategies For The Online Classroom. San Francisco: Jossey- Bass Publishers (1999)