

## E-LEARNING USES. RISKS AND PERSPECTIVES

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### Abstract

*With the development of Information Communications Technology (ICT) we have observed an extraordinary opportunity in cultural and communication processes, with relevant effects on the education system and educational, pedagogical and teaching models that govern this relationship. The potential of these techno-social environments for educational systems, but not only, raises new questions for a sociological reflection more attentive to new social dynamics produced by these technologies. We start from the idea that, despite widespread criticism, the immobility of the education system and the absence of an overview regarding the use of these new devices in teaching practices, we note a significant tendency towards change. Therefore, we attempt to: highlight any differences in perspectives and models in use among the e-learning systems and teaching practices; draw a reflection of risks and opportunities, strengths and weaknesses associated with the use of such instruments / techno-social environment in educational processes.*

**Key words:** sociology of education, e-learning, university, school, education, internet, technology

### 1. INTRODUCTION

The essay presents the incorporation process in the reconstruction of distance education in Italy. The paper tries to highlight the transition from modern to postmodern society, focusing both on this extraordinary change in the landscape of cultural and communication processes, and outcomes for the education system and educational and pedagogical models that govern this relationship.

The reflection aims to understand, on the one hand, the potential of these techno-social environments for educational systems, and on the other, raises new questions for a sociological reflection more attentive to new social dynamics produced by these technologies.

The essay is an extract of a wider search<sup>2</sup> interested to understand the effects triggered by the advent of ICT on persons and learning systems.

We start from the idea that, despite widespread criticism, immobility of the education system and the absence of an overview about the use of these new devices in teaching practices, we note a significant tendency towards change.

On the basis of these considerations, the research attempts to:

- highlight any differences in perspectives and models in use among the e-learning systems and teaching practices;
- draw a reflection of risks and opportunities, strengths and weaknesses associated with the use of such instruments / techno-social environment in educational processes. So, the essay presents a brief reconstruction regarding the use of technology in teaching (§ 2); some results connected with these uses (§ 3); a reflection regarding strengths, weaknesses, risks and opportunities to consider using these instruments and environments in education processes and a brief conclusion (§ 4) on the relevance of technology in the education system but also on the responsibility of policy makers in relation to the necessity to promote e-learning policies able to ensure a vision of system.

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<sup>2</sup>The search, realized on data of secondary nature shows the ICT equipment in Italian schools and the variety of uses practiced in schools and universities of these tools and e-learning platform (Capogna 2014/a; 2014/b).

## 2. TEACHING AND TECHNOLOGY

With the transition from modern to postmodern society there is an extraordinary change in the landscape of cultural and communicative processes, with clear outcomes for the educational system and educational and pedagogical models which govern this relationship. These processes, thanks to the development of modern communication technologies, more and more versatile, inexpensive and easy to use, have been incorporated by the systems of distance learning.

The work of theoretical reflection and empirical research of which we present a brief extract is organized around three main themes closely interconnected:

- a) the evolution of Information Communication Technology (ICT);
- b) the evolution of pedagogical theories and their effect on learning systems mediated by technological devices;
- c) the recognition of the experiences of e-learning in educational systems (schools and universities).

With regard to the changes which have affected the communication system in recent decades, we can observe a paradigmatic change from a concept of communication conceived as "information" to another considered as "participation".

In fact, communication is the essential medium for any form of relationship; the basic for any learning experience, and inextricably linked to the developments introduced by new telecommunication technologies. Then, the communication appears as a multidimensional and polysemic concept. Moreover, it can be studied from different perspectives with various semantic variations. (M. McLuhan, 1989; D. Mc Quail, 1983; W. I. Ong, 1986; M. Wolf, 1985) and different disciplinary approaches.

Today, there is a widely shared opinion about the evolution of ICT and enhancement of communication as a social space. These relevant changes have had an impact on the evolution of Open Distance Learning (ODL), so the most significant theories of learning have been incorporated in this separation process that characterizes the learning transfer by the presence of the teacher. We may recognize diverse theoretical approaches to learning, and different seasons of the evolution of distance learning, due to the progress of information and communication technology, that modified through practices and experiments aimed to promote learning processes mediated by computer. Today, we are in a phase of in-depth review but only overcoming ideological and sectoral position can we reach a real positive development.

Through a brief reconstruction based on secondary data, we try to sketch a picture of various experiences spread in the Italian context. On this theme, in fact, among the most significant delays which the Italian educational system faces, at different levels, there are the informative dimension, at local level, and the resulting lack of knowledge or vision system. This produces a lack of structured links between center and periphery, with negative outcomes also on decision making processes that accompany each debate on the education system.

Today, we can distinguish three main types of technologies in use in the university, open source; proprietary and free environments. From a cursory survey on web portals Universities, we can observe a significant spread of e-learning platforms open source in Italian universities, in particular Moodle.

We can also distinguish, in summary, three main approaches in the design of learning environments and e-learning by universities:

- the first is the blended solution to support and integrate the traditional education; it is oriented to the expansion of markets, targets and students;
- the second is the e-learning solution, based on the electronic communication, which involves the construction of the course entirely in distance learning; generally it is oriented to specific groups of students (e.g. workers, adults etc.);

- the third one is the model of open course wares and free diffusion, which does not release formal titles, differently to the two models above. These kind of courses respond to specific information needs or auto-update of persons who, regardless of their spatial location, are interested in precise content. This appears like a communication strategy can have multiple purposes: to make known their areas of intervention, to do self-promotion, to attract students, to expand markets, to enhance possibilities to build networking and bridging with the broader socio-economic context.

In this type we can include massive open online courses (MOOCs) around which there is a spread debate about the sense, the value and quality of these learning instruments teaching. But we think that the creation of platforms through which to connect an increasing number of learners and teachers does not solve the problem of knowledge construction or, even less, that of translating them into innovative models of teaching. The risk, we run, is to create an education market where the only goal is the certification more than the formation and its socio-cultural impact on subjects and contexts. The change triggered by ICT within education and training systems is indeed far-reaching. It stands at the intersection point between technology, education and the market. Often, e-learning is considered as a way to respond to requests from market which come from a growing and articulated demand for training, posed by the knowledge society and developing countries. It is also the way to incorporate within formal education organizations (schools and universities), non-formal education organizations (government and public and private companies), and informal education organizations (media, Internet), new contents and services for learning, so, accompanying economic development and social inclusion policies.

### **3. RESULTS**

One of the most significant problems affecting the development of old and new media in education systems, and the necessary critical-evaluative reflection that should accompany every learning context in Italy, is given by the absence of a vision system of different levels of education, and lack clear empirical data on the use of these tools in teaching practices.

Although the Italian university arrived late to e-learning, since 2003 there has been a steady growth in the supply of educational courses, supported by e-learning systems. Italian universities that provide training courses organized based on e-learning systems increased from 24 to 45 out of a total of 77 (58,4%) .

In 2006 six new telematic universities were established bringing the total to 11, evidencing, in this way, an Italian anomaly on e-learning universities, compared to more advanced European countries in which there are about one or two per country.

In most of the universities there are dedicated centers or facilities, although not all universities devote full visibility to this training method, which is not always readily available on the home page of the University. This shows a certain weakness in the universities policies regarding abilities and strategies to adopt an integrated communication plan, that can enhance and present the learning environment chosen.

In just two years, we registered a strong increase in the offer of Degree Courses in Distance learning. There has been a proliferation in the number of students who choose to study in an e-learning environment. The e-learning offered by telematic universities assume an increasing importance in the wider area of the university offer (CNSUV, 2010). In 2007-2008 the 11 telematic recognized universities had a total of about 14,000 members, rising to 17,000 members in 2008-2009 a.y. However, this is about 1% of all students enrolled in the Italian university system. Only three of these universities registered in 2010 more than 2,000 members. Analysing the composition of the population enrolled in these universities, we find that, generally, these students are over 25 years of age; very often they are people with a past spent in conventional universities, or people who are already working.

In total, in the academic year 2007-2008, 249 undergraduate courses online were granted.

On the basis of the statements on websites, about 89% of Italian universities include in their educational offer proposals for distance learning.

The spread of e-learning courses has increased compared to previous years; in fact, we move from 32% of Italian universities who used this training method in 2004 to 57% in 2005, to reach 68,8% in 2006.

There are 31 universities that offer activities in distance learning, 24 of which, corresponding to 77,5%, promote alongside this mode "pure e-learning". As in previous studies we have observed a significant rate of increase among universities that use distance learning (10 in 2004 and 28 in 2005), in 2006 the number of universities that use distance learning has risen by only three units to a total of 31 universities.

Finally, the educational web enhanced, or ICT support traditional teaching, is affirming itself in the Italian universities, reaching 52% of universities offering on their home page site this type of service.

We observe an increased of Italian universities that offer training in e-learning courses, going from 73% of the sample in 2003 to 92% of the sample of 2006. A growing number of universities that have structured whole online degree programs courses, turning to a particular target (working students, disabled, etc.). This is especially true in the field related to education sciences, engineering and social sciences. This data is also confirmed by the ELUE (2006) research according to which e-learning initiatives conducted by Italian universities are concentrated in the areas of humanities (25%), engineering (23%) and social sciences (18%).

Despite an appearance of immobility and a lot of criticism, not always well-founded, this short examination shows the significant turmoil that exists in the Italian university system.

### **3.1. MODELS IN USE**

In reference to the diversity of perspectives and models in use, we can observe different realities and it is currently difficult to delineate what might be the winning scenario. Of course, we can recognize that there is a spreading of hybrid models which use distance learning systems of first, second and third generation in various ways. Then, they often tend to use technology as a vehicle for transmission of learning content, characterized by lack of multimedia connotation. This should not be considered completely negative, because it also responds to the need to promote access and inclusion of subjects with technological, cognitive emotional and use digital divide (J. Dijk, 2006, 2011). In addition, on the basis of a comparison among different models in e-learning use, we may notice that some are inspired to spatial metaphors, so, they tend to reproduce in the virtual space a kind of representation of real environment; while others, on the contrary, stimulated by the idea that it is necessary to reinvent a method, completely, considering characteristics of virtual environments. For this reason, they prefer to focus on the social and relational dimensions of the network. Obviously, these are two ways that they are not in opposition to each other, but they can be integrated both on the theoretical and the implementative plane. The first model aims to organize the on-line learning environment geared to replicate symbolic spaces that represent the places of knowledge, to accompany the insertion of the new entry activating resources gained in experiential education. The second one winds around the role of actors involved in the training program. In this case, the emphasis is on the relationship between parties involved and different areas of interaction. In this case, therefore, the accompaniment is oriented to activate in the new entry inner and intuitive resources. The first model enables the routines of knowledge, while the second stimulates most creative and subjective dimensions.

Whatever technical and methodological choice is adopted, a clear policy of copyright is necessary to protect the quality and dissemination of materials.

It is important to remember, moreover, that proliferation of courses, tests and telematic universities, up to open courses experiences which are spreading across the border, to consider the transition from the traditional model of universities, that incorporate the process of building and transmission of

knowledge, within rigidly determined borders and paths, in what is called multiversit@s, which gives rise to a multiplication and differentiation of opportunities for students and mode to do teaching. It is evident, however, that the multiplication of universities, courses and opportunities may not result in the risk of de-skilling of knowledge, nor of its certifications, especially in a country where (and as long as) the regulatory framework recognizes the legal validity of titles of study. We can not ignore the fact that even taking into account the foreign experience, that in terms of distance learning is ahead compared to the Italian situation, there are important failures and worst practices from which it would be necessary to learn.

### **3.2. STRENGTHS, WEAKNESSES, RISKS AND OPPORTUNITIES**

Finally, in order to desire to operate a reflection based on the logic of a Swot Analysis (SWOT), below we offer a summary of risks and opportunities, strengths and weaknesses, associated with the use of such instruments and techno-social environments, so far observed, in educational processes.

Among the strengths we can include:

- the liveliness of experimentations we register at bottom-up level, so much in the university although, in a much more timid manner, in the school system that boasts a higher sensitivity in this field, in the high school segment and, in particular, in technical institutes;
- diversity of models and theoretical approaches which correspond to a variety of implementative solutions, strongly user oriented;
- the advanced state of experimentation that allows us to operate critical reflections and evaluation actions, in order to drive towards the continuous improvement of the quality both of e-learning and production of learning materials;
- the speed of information and communication that enables us to speed up, as never before, each type of exchange and relation;
- the opportunity to capitalize the knowledge and to build and multiply, in this way, the possibilities of connection and spread both inside and outside;
- the greater attention to the quality standards of process and products;
- the skepticism that exists between a certain part of the teaching staff at different levels, which can act as a "critical eye", related to the risk of falling in love with technologies, methodologies and approaches. In fact, all this social-environment even if presenting a certain charm, it must be remembered that they incorporate a certain gradation of risk, dispersion and fragmentation;
- the attraction to younger students, now recognized as the net generation, who live with difficulty the anachronism of education systems towards new and old media;
- the ease with which the younger generation, now included in the paths of traditional training, move in these techno-social environments;
- the potentiality offered by these techno-social environments to be used in different ways.

With regard to weaknesses we can mention:

- the chronic shortage of economic, human, professional, structural and technological resources, that for some years affect the educational system at all levels;
- the shortage, except when there is a total absence, of clear e-learning policies at the structure level (university and school);
- the shortage, except when there is total absence, of development centers inside education agencies and of the administrative apparatus connected to them;

- the absence of a copy right policy to protect specific know-how productions;
- the lack of skills and technical figures in educational institutions, at various levels;
- the lack of educational and methodological skills for the development of ICT in teaching by the vast majority of teachers;
- the lack of technical competence, vision and e-learning design among middle management and directive figures that deal of the education system at various levels;
- the significant resistance, still implemented by most of the teaching staff at different levels, which, as in the whole system of the Italian Public Administration, especially in schools, is plagued by gerontocracy;
- spontaneity of initiatives which, often, remain isolated and unable to run critical mass and promote learning organization.

Regarding the opportunities we can indicate:

- the progressive lowering of costs in relation to the diffusion of ICT and technological infrastructures;
- the presence of diversified technology partners in this area which would be hypothetical partners in competition with each other;
- the increasing ease in the use of technology;
- the variety of ways of teaching made possible by the old and new media panel;
- a market that, as all research in this sector show (Haggard, 2013), is still expanding and able to offer new employment opportunities or, otherwise, to renew traditional crafts;
- the openness to the global market;
- the establishment of a clear idea of lifelong learning policy that could open training for a new 'student-target' and could become an opportunity for innovation and development of entire socio-economic sectors of our country as, for example, touristic and artistic, historical and museums;
- the variety of opportunities that are open to students who can, in this way, build customized learning paths, grafted on training needs defined and free from any space-time limit;
- the multiplicity of opportunities for teachers so they can take diverse career paths, experimentation, research and positioning.

Finally, for a reflection on risks we have to mention:

- the absence of vision and policies of development at the decision making level, with serious consequences on the possibilities of improving the technological gap of our country in this area, in comparison with new and old countries of advanced technology;
- the lack of public investment in this segment (but not only) in educational systems, thus schools and universities;
- the inadequate technological infrastructure support of our country, as is well highlighted by the Caio report (2009);
- the absence of a system vision, determined by a general lack of knowledge and lack of adequate information on the state of education systems at summit level. In summary, the absence of a policy of knowledge management on these issues, able to design and manage an effective flow of

communication and information between center and periphery, compared to the colorful framework of experience and ongoing trials;

- a certain lack of research on these issues, which has now been reduced by some institutions that operate continuously in this field, in order to produce a comprehensive understanding of the phenomenon. In fact, for any founded decisions, it is important to understand local implementation strategies adopted, to know effects and distinguish best and worst practices on which to assess and intervene with appropriate measures of support, transferability or correction;
- a significant delay in terms of international comparisons in the field of e-learning, accompanied by an attempt to recover the gap that risks being "short-sighted" if we do not take into due consideration errors that marked worst practices by those who already began intervention in this field of action some years ago;
- a considerable national delay in the ICT sector in the development of products, management software and contents marked by culture, creativity and Italian design, and applied to the traditional areas of trade and development which should be the core development of our country: tourism, artistic heritage, archaeology and museums; historical and cultural productions to spread the Italian language in the world and so on.

#### **4. CONCLUSION**

It is now time to ask about the role that education systems can and should play in view of the fact that they can no longer be separated from a critical confrontation with the new social reality. However, it remains a strong conviction that no effort may be sufficient if we do not mature, at the level of policy, a vision system on what could be the contribution of this sector in the overall framework of national development. But, at the same time we need to advance a management awareness of the importance of developing the level of organizational contexts and micropolitics of organizational development. This is the first step to capitalize the wealth of isolated experiences and produce a real organizational change in a logic of learning organization and quality assurance of training at all levels, and in all modes of delivery.

We can consider that two closely related myths have inspired the widespread approach to ICT and their incorporation into the education system. The first refers to the irresistible power of globalization, the other regard the determinant effect of technology. The result is expressed in the widespread idea that the acceptance of e-learning in all sectors of education system is inevitable. This leads some through enthusiastic attitudes towards the use of new media, and others through the resignation of those remaining to look this inevitable development. However, as we have also tried to show in the research work, any uncritical acceptance must be repudiated. The form in which it is spreading the use of old and new media in education can not be passively accepted. Agreeing with Sue Clegg, Alison Hudson and John Steel (2003), here it is argued the need to counter both the technological determinism as the uncritical acceptance of a neo-liberal vision of technological globalization. The technologies are never neutral but are always a concrete product and outcome of the historical and social relations and, as such, the embodiment of power relations and technique capabilities emerging that derived from it. ICT, being manufactured, is the result of complex social processes, which are never free from the risk of gender differences (not just regarding differences among male or female) and accumulation strategies of their manufacturers and suppliers. Even looking at the way in which e-learning has developed in the university we can not avoid the fact that this has occurred, for the most part, under a managerialist fashion, sometimes more oriented to a 'save' or 'invest' objective rather than teaching. Now we need to develop a new philosophy and practice in distance education, with special regard to the quality assurance of processes and results.

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