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Doing Things Better – Doing Better Things
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UNIVERSITY AS AN EXTENDED ENVIRONMENT: A QUESTION OF "E-QUALITY"

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Introduction: University in the 21st Century

The activity context of universities in the 21st Century is involved in rethinking processes about both learning space and time and the prospect of student-centred environments in which the student, through dialogue and collaborative relationships, actions, reflection and discussion with peers, learns skills that may be useful when facing cognitive, ethical and social challenges of lifelong learning and "learning to learn" (Delors, 1996; Loiodice, 2011).

Therefore, there are several challenges arising and the University must be regarded as the drawing power of the lifelong learning process (Unesco, 1998) to be able to face them; in particular, university must become a place of collaboration, experimentation, reflection and innovation generation (Morin, 2000).

University will mainly drift towards planning and building extended and collaborative learning environments (Ellerani, 2007), integrating the technological dimension into its own structure and being able, especially through internet and web technologies, to overcome the problems connected to space and time as well as the dichotomies between inside and outside and face-to-face and distance; this is what Lèvy defines, by means of an effective metaphor, as «*Moebius effect*» (Lévy, 1997, p.127). In particular in the technological dimension, university must be able to plan learning environments in which the students can build "lifelong skills" through interaction in real and virtual discussions and activities within a community connected to the web (Baldassarre in Loiodice, 2011, p.62). The extension of the environment through the technology and in the technology provides the university offer with a civic value, contributing to "*nurture the talents and skills of all its members as much as possible and fully committing itself to lifelong learning and to a wider participation to higher education"* (Comunicazione Lueven, 2009).

This vision also includes the idea of a "*capability approach*", which has been borrowed by the economic field and has become an educational framework (Sen, 2000; Nussbaum, 2012). It is an approach based on the idea of conveying and providing *conditions and opportunities to "be able to be and to do",* in other words allowing everybody to develop his/her talents and to act (*to be and to do*) within a particular context; in this way, talents can be capitalized and used to transform one's own lease of life (*to realize what one could be and do if one had the will to do*

it). In this sense it is interesting to see the relationship between the open education on offer for everyone (open, distance, e-learning education) and the opportunities described by this approach (Tait, 2013).

Hence various and diversified challenges are involving higher education and they are arising through several initiatives and prospects characterized by the idea of *openness* (openness of contents, resources, data and environments), by the phenomenon of *Moocs* (Massive Open Online Courses), and by the increase and pervasivity of technology and digital and mobile devices which permit an increasingly effective connection and interaction. For all these reasons, "*Education paradigms are shifting to include online learning, hybrid learning, and collaborative models",* as described by the New Media Consortium, NMC Horizon Report 2013.

On the basis of these premises, the study described below is intended to respond to two issues connected to the expression "e-quality":

11. How can an institution reconfigure itself in order to meet the requirements of lifelong learning with the aim of reaching social justice according to the capability approach? (social innovation-organizational innovation)
12. How can the new digital formats and digital environments support the quality of a teaching/learning process that is intended to be more suitable to the needs of "learning to learn"? (educational innovation)

The case: the blended learning post-graduate master programme

The study is intended to observe the development following the decision to open a post-graduate master programme in blended mode for adult and working students in a territory characterized by transfer difficulties resulting in enormous transfer times. The purpose of this kind of study is to bring into focus all the needs, impressions, beliefs, problems, resistance, openness, risks, and opportunities, in order to understand and plan an environment that may be really "capacitating", open to the needs of the new students for flexibility and openness, but also for effectiveness and quality of the student-centred pedagogical and educational offer supported by digital tools and environments.

Theoretical and methodological framework

The reference theoretical framework is related to the dimensions of the collective and connective intelligence (Lèvy, 1996; 1997; Siemens, 2005) of situated, interactionist and collaborative lifelong learning (Delors, 1996; Alberici, 2008; Wenger, 1998; Slavin, 1996), to the participating and active dimension (Jenkins, 2007, 2010; McLoughlin & Lee, 2008) of adult, reflexive and transformative learning (Knowles, 2001; Mezirow & Taylor, 2009; Schön, 1996; Merriam, 2010) and to the ethical and social dimension of inclusion, access equity and capability approach (Elias, 2010; Ciraci, 2008; Nussbaum, 2012).

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Other references are e-learning, online learning, in particular blended learning in higher education (Ardizzone & Rivoltella, 2003; Scurati, 2004; Galliani, 2005; Calvani, 2005; Trentin, 2008; Conole, 2013, Salmon, 2012) and the design of learning environments (Conole, 2013, Laurillard, 2012).

The study also considers a further important phenomenon that is interesting and upsetting the academic world: the appearance and growth of Moocs (Massive Open Online Courses), which represent a solid experimentation training ground for new forms of openness and knowledge-sharing based on different dimensions and on digital and social environments (Johnson et al., 2013).

From a methodological point of view, this study finds its place in the field of qualitative researches, which try to understand phenomena in their complexity (holistic approach) through the procedure of the case study and according to an inductive process that uses specific observations to build more general and interpretive patterns.

The sources are represented by all the members of all levels in the university who are involved in the process: leadership, course teachers, students, technicians, office workers, and consultants, as well as external members represented by the local services that interface with the university.

The instruments consist in focus groups, semi-structured interviews, participating and non-participating observation, and questionnaires.

The research phases

The research design develops over three phases, which are referred to three process levels:

- macro-level: exploration of the concepts of accessibility and flexibility through a survey among the different stakeholders;
- meso-level: observation of the different phases of the design of the extended learning environment and the collaboration relationships between the different individuals who play a role within the university;
- micro-level: observation of the educational and pedagogical actions and transformations occurring within the extended learning environment.

Each phase produces elements to understand certain aspects of the phenomenon and permits to reorganize the research according to the new elements acquired, which extend the starting cognitive frame in an open and interactive scheme whose development procedures arise during the research.

First phase: exploration of blended learning (environment openness)

The exploration phase was conducted through interviews and focus groups and was intended to investigate how the different individuals who play a role within the university perceive the concepts of blended learning and environment openness. The purpose of this phase was to

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determine the human and technological resources, expectations, resistances, motivations and fears of the different interviewed people.

Table 1: Explorative research about "blended learning, perceptions, conditions"

reasons for exclusion	geographical distance, times, transfers, job, other engagements, age
social dimension	appreciation of flexibility and accessibility
pedagogical and educational dimension	open questions "participation, educational relationship, education quality, digital skills"
organizational and institutional dimension	support by the leadership, suitable human and technological resources

Second phase: design of the learning environment

This phase was conducted through participating observation and provided documentary evidence of the interaction of the different subjects involved in the transformation of the offer, in particular teachers, technicians and office workers, who have let their specific skills (educational and pedagogical, technical and instrumental, organizational) flow together in a synergy by means of a plurality of tools and environments, in order to create a multi-mode learning environment characterized by synchronous and asynchronous phases; this is a learning environment that is articulated in the different educational classrooms (Ardizzone & Rivoltella, 2003; Laurillard, 2012).

Figure 1. Multi-mode extended environment

In particular, an open environment has been created: it is open to different forms of participation (face-to-face, online via videoconference through Lync, asynchronous through Moodle), which the students can choose according to their availability in terms of time and own engagements. The university is responsible for involving and supporting teachers and students by supplying them with videoconference software to overcome the technological divide and by training them to use it through diversified familiarization processes (onsite, online, asynchronous).

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Third phase: monitoring (October 2013 – June 2014)

In the third phase, which is still in progress, a monitoring process has been started. It is structured in moments of non-participating observation of the development of the educational activities in a multiple environment: in particular the aspects summarised in Table 2 have been monitored.

Table 2: Summary of the observations

	Student	**Teacher**
Attendance	blended, asynchronous, assessed for "participation"	In a physical classroom for most of the courses
Privacy	Problem with the recording (sensitive data) and tracking of the activities	Classes copyright problem solved with Moodle
Participation	– "Diffused" throughout the different environments – On-site "im-mediate", spontaneous – Online "mediate", filtered by different tools, more reflective – Asynchronous in forums for discussion, sharing, peer assessment	– On-site and online via videoconference – Asynchronous and non-homogeneous (forums have not been activated homogeneously)
Role	– Active, interactive – Involved in the design process – Bearer of different experiences and background	– Less directive, more open and flexible, horizontal, coordinating, activating – More constant in time (before-during-after) – "Lighter but more extended" presence – New ways of communication required by the digital tools and environments (tele-teacher-presence)
Method	– Collaborative work, open to the others' contributions – Peer learning – Peer assessment	– Collaborative learning design with technicians, teacher and students (conversational framework) – Flipped classroom – Case study – Discussion time – Collaborative learning – More direct and continuous relationship with students – Personalization of paths
Assessment	– Of active participation – Of the product by means of peer-assessment, tests, essays, e-presentations	Of the process by means of – learning analytics – focus groups and questionnaires

The assessment performed by the students (focus groups and questionnaire) highlights.

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Table 3: Summary of data and assessment by the students

Context	– Gender of users: 90% female – Heterogeneous composition of the group (28% education, 44% social worker, 17% student, 11% other) – Predominance of working time (full/part time (84%) – "Online, on-site, asynchronous" participation distributed in about 30-33% for each modality
Satisfaction	– Good level of satisfaction regarding the extended modality and the instruments used (videoconference and asynchronous classroom) to access the classes – Importance of the integral video recording of participating classes to convey the classroom mood – Perception of the "transformative" value of collaborative and participating learning – Perception of the sense of community of learning and practices
Needs	– Improve the scheduling of workloads (too many requests in concomitant courses lead to cognitive overload) – Information overload (need for a better management of contents – consider a content manager) – Shared policy about the management of time, requests and didactics (consider a similar structure for all teachers) – Create a community of practices among the teachers to spread good practices

Conclusions

The study, which is under completion, is bringing into focus the two features advanced in the planning phase: the equality/equity dimension as the necessity to respond to users with diversified needs and engagements and the e-quality dimension, which is centred on the quality of the offer. From this point of view, the idea of participation (Jenkins, 2010) emerges as an added value for blended learning environments. Participation requires organizers and teachers to carefully design the course modalities, the requests to the students and the scaffolding that has to be offered, in order to encourage the students' contribution and the acknowledgement of a different dimension of "attendance". In turn, participation triggers comparison and discussion processes among the teachers of the different modules, the technicians and the available resources, and the students themselves. Participation encourages collaborative work, listening and interdependence with peers, discussion and mutual support, and therefore it enlarges the complexity of roles both of students and teachers. Participation is interconnected to path creation and personalization in a pedagogical dimension, which was effectively described by McLouglhin's model 3P's of Pedagogy – Participation, Personalisation, Productivity (2008).

The case is still on-going: the critical issues connected to complexity, training of teachers and adaptation of students, the matter of privacy and copyright in the open society, the management of digital tools and environments, the contraction of resources during this time of economic crisis are all factors that must be monitored constantly and that need a shared solution. However, the results increasingly encourage a focus on student-centred models, in

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which the students are responsible for their own education in a "ubiquitous learning" (Cope & Kalantzi, 2009) and "diffused participation" dimension, and on the transformation of the teacher's role – coach, visible, mentor, aggregator. On the one hand the role of teachers is relieved in terms of conveyance and management of contents, while on the other hand it expands in time and space within a "lighter but more extended" dimension.

Therefore, it seems to be possible to state that the idea of "e-quality" may be realized only by sharing a rigorously pedagogical prospect regarding the use of technology, which does not have to be lead by the question "where are we going?" but rather by the question "where do we want to go?" (Dublin, Teaching & Learning, 2014).

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