# Reflections on the experience of distance learning in the health professions

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Abstract

*This contribution aims to reflect on the many years of experience in online teaching within the Degree Courses of Health Professions at the University of Genoa. The students (around 250) are spread over the whole Region located in the structures in which they carry out training activities; Obviously, the structure of distance learning has been applied only to theoretical modules with the provision of materials to support the study of the subject (video lectures, slides, in-depth material), exercises / self-assessment tests, in in-depth interventions. The study focuses on two courses: Sociology and Anthropology.*

Keywords: E-learning, Multimedia, University Courses, Health Professions

## Introduction

The training of health professionals has long been established at the University of Genoa and implemented in close collaboration with the National Health Service and the Health Regional Authorities, as well as with other public and private institutions. In particular, over the past decade, a cultural and planning turmoil, which has found in the National Conference of Health Degree Courses, the natural environment to steer and debate, has opened to numerous online educational pilot courses also facilitated by the university autonomy. Today, these pilots need to be renewed and redesign for the challenges that the degree courses are about to face. The law has recently drawn the path for the reform of health professions teaching organizations. Such a challenge also requires a deep and thorough reflection on the pedagogical models which have driven the previous decades of university education, particularly in terms of their correctness, and conceptual consistency, with respect to the most modern trends, as well as in relation to their effectiveness towards the performance expected by the professionals. In this unavoidable process of renewal of university health care courses, not only academics are involved, but also and above, all teachers from the National Health Service aside from a number of external experts. In total, more than 3,000 trainers at the University of Genoa carry out their teaching activities in the area of courses organized by the Faculty of Medicine in Genoa.

Web-based learning is used with increasing frequency also in university courses and its application allows educators to improve the efficiency and effectiveness of training interventions, as proved by some studies examining the effectiveness of online teaching in relation to the current traditional approach of teaching [1, 2, 3, 5, 6]. The satisfaction of participants to web-based activities is higher when compared to traditional methodological approaches [7]. More specifically, the perceived benefits include flexibility regarding hours of use (when and how to use), of access independent of the student's geographical location, the adaptability to the needs of the learner and the opportunity to communicate and collaborate in a virtual way [4, 6, 8].

Although this approach offers great advantages, it's use in university courses in the field of health care is still limited. In this context, the collaboration launched by the Medical Faculty fits in with the University informatics facility aimed at giving a concrete response to the didactic and pedagogical problems of degree courses in the area of health care and a new impetus to the testing of pathways more suitable to the characteristics both of the courses and of the students.

## The local university context

In order to better understand the reason of this project, some words must be said about the overall plan accomplished in 2010 and in which the teachers' training course is plunged. The online courses activated in the medical area are part of a wider project aimed to promote the ICT supported education (both blended and distance learning) inside the University of Genoa through some classrooms, equipped for recording and transmitting lessons, located in different part of the region. Despite the very small territory, the orography of Liguria makes transportations quite difficult from the inland to the towns on the coast, moreover the lack of receptivity in terms of student residences in the metropolitan area of Genoa led to the realization of this project called "Academy Point" (AP).

Born for the drive of the university and the Liguria's Regional Council, it is especially devoted to enhance the potential of ICT in health care professions degrees; even if open to all students, these facilities are especially concerned for education and long life learning of physicians, nurses and allied health professions for they have some peculiarity in respect to other users (such as the need to combine theoretical lessons with the practice in hospitals and the need for periodical refresher training along all their career).

This peculiarity led to an additional objective of the training course that is to promote a core group of community of practice among professionals connected by common interests and difficulties but operating in different locations of the region.

The result is a community of experts in the health field, numerically relevant and professionally varied, who exchange teaching methods, experiences and case studies for many years and well beyond the time limits of this pilot course. This community has managed over the years to involve and include step by step a large number of teachers, covering many areas of health, not only of a social nature, such as anthropology and medical history, but also technical-professional, such as radiation protection, safety in the workplace, up to some online experiments related to simulation in surgery.

As already said, the AP includes multimedia classrooms distributed throughout the region and a central media library, which is an archive of recorded and post-produced lectures. Each room is equipped with a system that includes integrated multimedia PCs for the students and the teacher, the audio-visual equipment to capture lectures and video or web conferencing. The lesson the teacher makes to the students attending in his classroom can be immediately sent to the other ones at the same time or can be attended by students later through the available PCs or directly at home. The AP should support also training initiatives towards the territory to be activated in the near future. They are designed to be integrated with UNIGE online portal and to extend its features and performances, allowing a synergy for more flexible and modern ways of training and allows to experience also distance learning modules.

The national statistics show that Italy is still below the European average as regards the spread of broadband telecommunications networks, this project is a small contribution to improve them at regional level for promoting research and innovation in education. In conclusion, it helps students to get training available "on demand" thus customizing his own pace with also the possibility of having sessions of collaborative learning through the Moodle capabilities (namely AulaWeb, see below) and teleconferencing, then restoring the minimum of interpersonal interaction, which is a vital ingredient of the learning process.

The potential of ICT offered by the University of Genoa: the AulaWeb portal.

Since 2004, the University of Genoa has made AulaWeb available to students and teachers, a portal based on Moodle to support ICT training, now used by the majority for courses of study as well as for individual students.

From the portal statistics it emerges that the main activity is still the support of traditional teaching, but over time a gradual increase in the use of those more correctly collaborative functions, has been observed, indicating a change of approach from the part of traditional teaching.

However, both in seminars on the use of the portal, periodically organized by the University, and from the results of questionnaires proposed on its rating, interesting expectations and developments in the training supported by the ICT, emerged on the part of teachers and students.

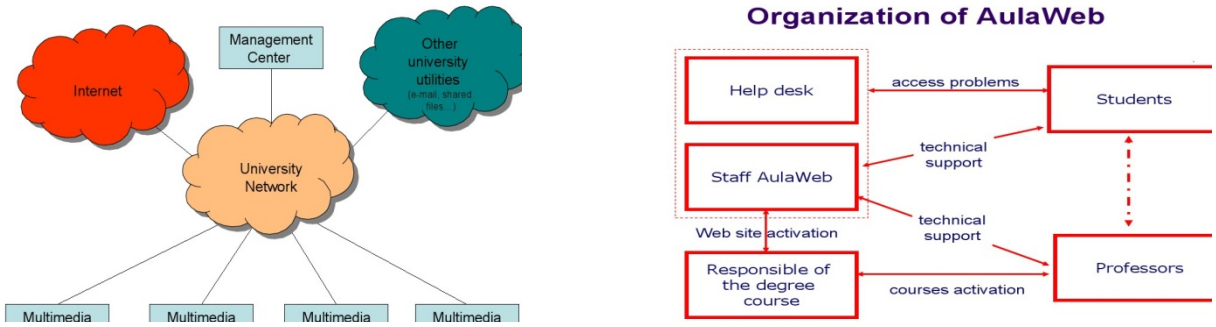


**Figure 1** –Scheme of Academy Point and of Organization of AulaWeb

The university world does not seem safe from the risk that the educational use of ICT in training is rejected a priori or embraced in an enthusiastically uncritical way, or simply in a way that generates the misconception that it is the instrument itself which determines the educational innovation; the university teacher is an expert of the subject he is used to teaching in presence, not necessarily thinking about how to organize a course for others to follow, at least in part, with their own ways and times. To encourage teachers to investigate new teaching methodologies, the University of Genoa, in collaboration with the local branch of the ITD-CNR, organize periodically training courses for teachers interested in exploring the topic of Instructional Design. For Health Professions degree courses, in which classroom traditional teaching has always been privileged in respect to active methods, even in the blended form, the portal is not yet a reference point for teachers and students, nor in it is function as a repository, least of all in the more collaborative features it offers.

This has stimulated the realization of this project, that inserts itself in the already launched testing ground, but focused on the specific educational needs required by training paths in the healthcare area, in order to create stimuli for reflection and also especially among non-university trainers heavily involved in academic courses that prepare healthcare professionals.

## The didactic context

In this historical moment, medicine and the concepts of health and disease are a privileged key to interpreting our society and its changes.

Despite the extensive reflections on the theme of the humanization of treatments, however, there is still a considerable distance between the theory and its implementation. The training of health personnel is complex and requires a holistic approach. In addition, Italy is now a landing place for immigrants and this is changing the demand for health at the same time as the social fabric changes. The critical issues related to multiculturalism are not only due to linguistic problems, but also and above all to cultural differences that can prevent an effective relationship with the immigrant, such as, for example, the different concepts of care for the elderly, nutrition, the procreative and contraceptive dimension, hygiene, the relationship with death, etc..

The degree courses of the Health Professions of the University of Genoa have for some years activated a new approach to the humanization of care, with the ambition of contributing to stimulate a "new culture of care" that involves all aspects and all actors of the process, a culture that allows to elaborate a new look and that proceeds aware that the issue to be addressed is complex and needs a multidisciplinary meeting.

The teaching "Approach to the health profession", preparatory to the professional training activities of the first year, integrates for this purpose three looks (sociological, anthropological and psychological) with the general objective of making future health professionals acquire the basic tools of the social sciences and stimulate the observation and understanding of the social reality in which they live as citizens and in which they operate as health professionals.

## Methods

The programme of the first two courses (sociology and anthropology) has been suitably agreed between the teachers so that the same problems of interest to the health sector can be tackled in parallel from an anthropological and sociological point of view.

This is in order to allow students to live in an integrated way the teachings that over the years had always been proposed in a disjointed way and therefore also to better understand their usefulness for future health professionals.

The project for distance learning was supported by the AulaWeb portal, based on the Moodle platform, a platform that is simple to use, dynamic, flexible, modular, perfectly manageable by the individual teacher both in the construction of teaching materials and in the management of virtual classrooms.

The students (250 each academic year) were, therefore, guaranteed the use of the teachings without the imposition of tiring movements and according to a scan that allowed the individual student to choose the time of study in a flexible way and more suited to their personal needs.

The didactics was developed mainly on the web, but three meetings were also planned in attendance aimed at presenting the online course, the materials and the organization, the first, to solve specific needs in terms of clarifications, including disciplinary, the other two.

During the planning phase, particular attention was paid to the distribution of training hours between the classroom and the FAD, seeking a significant link capable of enhancing the potential of both training methods, more specifically the immediate human contact of the classroom and the flexibility of distance learning. The first meeting in the classroom was used to "break the ice" and to create a minimum of socialization essential element to continue with the interaction at a distance. The activities in presence were planned as preparatory activities for those at a distance.

The other meetings in presence served to consolidate the value of the training actions carried out at a distance, to make an analysis of what had been done up to that moment and to plan possible recovery/integration actions. The structure of distance learning was divided into modules with the provision of materials to support the study of the subject (video lectures, slides, in-depth material), exercises / self-assessment tests, in in-depth interventions.

Students, in addition to following the proposed activities through videos and other educational materials, to access the final evaluation, must take two tests. The first test consists of a multiple-choice test on the programme of lessons provided for in the course plan.

The second test consists of a report on the activity of internship in which the experience lived is reread, deepened and reinterpreted through the knowledge and skills acquired in the theoretical teachings proposed, as well as being integrated with the wealth of experience and previous knowledge and reworked from a personal and psycho-motivational point of view. A structured format has been prepared and inserted on AulaWeb for its drafting. The evaluation, formulated during the final examination of the internship, takes into account the accuracy of the analysis of their experience of internship and the wealth of cultural references and critical insights in the reworking of the activities carried out.

## Evaluation of experience

In the last five years of activity, we have been questioning the results produced, the aspects that have satisfied us the most and those that need to be improved in order to ensure a better future use. More than 1200 students enrolled in a course in the healthcare professions (nursing, physiotherapy, speech therapy, etc.) answered the questionnaire.

An analysis of the questionnaires submitted to the students and the exchanges they had asynchronously on the web-based platform shows that there is a high level of general satisfaction with the experience.

From the answers to the questions about stimulation capacity, it can be seen that the course has been able to create an immersive and engaging learning context, to increase the degree of motivation and interest of the students in the subject both because of the relationship between what they study and real life experiences, and because the student himself is stimulated to reflect on his own knowledge and experiences.

From the answers to the question on the level of satisfaction with the group sharing of the topics studied and from the answers to the open questions on the aspects of the experience that have impressed favorably, it emerges that in addition to the individual commitment, the possibility of working in a group, of sharing knowledge with heterogeneous subjects that offer different points of view, is certainly a very stimulating element. The exchange with the others offered an excellent opportunity for personal reflection on one's own knowledge and for re-elaboration and discussion of the same in order to open up to new and different ways of understanding the world, making learning open, plural and problematic.

As far as the aspects related to the technologies used are concerned, the satisfaction with the experience is positive, since the distance learning mode offers the possibility for working students or students living in other cities, who are unable to attend classes in the presence of the student, to carry out and follow the training activities through a more stimulating and participatory teaching methodology than the other online teaching experiences conducted by the sample group.

A more in-depth reflection should be conducted in relation to the figure of the tutor in the case of courses in the health area.

In an on-line context, the tutor is the coordinator of the training based on cooperative learning and cooperative working processes supported by the telematic network. The set of figures of didactic mediation, that is of intermediate professional figures often similar or unified with tasks and competences of "frontier" between the different disciplines able to interface both with the student and with the teacher, can contribute to the shift of attention on pedagogical-didactic issues. The figures of mediation or "buffer" [9] are presented as an "interface", as intermediaries between content, teachers and resources, improving the usability of a training course and facilitating the transition from traditional teaching practices to those required by current communication technologies. The mediator, in short, as the one who promotes practices of empowerment and pedagogical mediation during the process of building learning. The tutor relates to the student in terms of communication and interpersonal interactions. He must, therefore, possess didactic-training skills, in the field of communication technologies, relational dynamics and management of management and management of collaborative groups at a distance. The tutor must be able to carry out his/her own action: in the organisational area, illustrating the methods of participation in the course, indicating its objectives, presenting materials, organising communication flows and collaborative and cooperative learning processes. In the social area he has to carry out, instead, communication management tasks avoiding monopolisation by students, intervention on socialisation processes avoiding conflicts, moderator and personal adviser for students in difficulty.

As has emerged from the students' comments, it is very important in the health area that the tutor also acts as an area expert [10], as the group produces more study topics related to the objectives of its degree course and determines a greater commitment to individual study, compared to groups led by non-expert tutors [11].

It is therefore necessary to combine educational needs with communicative and technological needs. Often, it is difficult to find a common way, a compromise that does not sacrifice the needs of teaching and learning paths. From this point of view, it is necessary to re-evaluate the relationship between technology, communication and the pedagogical-didactic dimension.

The new frontiers for digital learning delineate a new role both for the technologies forced to channel the thrusts in the didactic direction, and for the didactics, in particular in the health field, forced to review their tools and methods combining them with the technological development.

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