

MULTIMODAL INTEGRATED SYSTEM FOR LEARNING – MISL: AN HEALTH EXPERIENCE

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Abstract: The experience of the Local Health Service Department of Asolo in a remote learning approach proves that the introduction and application of new technologies in services supply is a possible aim, in spite of its difficult realization. The Local Health Service Department of Asolo is a public body of the bigger Health Structure of Regione Veneto; it covers an area of 263.000 inhabitants belonging to 30 different villages. It is made up of two socio-sanitary districts and two hospitals, which guarantee 770 bed places and are organized in 64 working units, with a total of 2500 employees and 300 professionals hired under special contract.

Since 2003 the Health Department of Asolo has decided to adopt a training integrated system for remote learning. Moreover, it has developed applicative, technological, organizational and infrastructural solutions to enable people's access to the courses - wherever and whenever they might be, even at home. These courses have been carried out by the same Local Health Unit and dealt with medical, scientific and managerial issues. The experience gathered in the remote learning approach, especially on line, has lead to an important partnership with the Regional Socio-sanitary Agency of Veneto. The result of this cooperation has produced E-learning courses on themes such as "Clinical Risk" and "Health Service Humanisation" addressed to the whole sanitary staff working in Regione Veneto.

The remote learning approach of ULSS 8 is supported by the Multimodal Integrated System for Learning - MISL, mixing several sources such as E-learning, interactive TV, web television, web campus: all these means enable people to actively participate in training sessions - either directly or indirectly.

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The MISL system assembles all these technologies and transforms Interactive TV courses into E-learning courses. It is equally possible to make them teacher-driven courses (both live and recorded) and to develop courses applying multimodal systems at the same time. The presence of an instructional schedule concerning both general subjects (such as English, Computer, Institutional and Interpersonal Communication) and more specific ones related to a precise Health Community, offers a valid alternative of choice within the same Department.

Overall, the Local Health Department of Asolo aims to reach the staff's professional growth, development and enhancement through this instructional model. In conformity with European programs, the learning and teaching backgrounds, as well as the educational and social ones, have been thoroughly re-adapted from both the locational and technological point of view. To begin with the final purpose of the MISL project is to support the full development of Human sources, who are strategically important, but also to boost innovative and reforming trends gaining round (such as the project financing, the outsourcing, the global service pattern, the E-government, E-care and E-hospital, drugs logistic)

1. The Scenario

Generally, E-learning belongs to a scenario where on one hand there is a broad diffusion of new technologies allowing a wide range of distance-made operations. On the other hand, social and cultural changes, organization features of Azienda, the distribution of services and operators in the territory together with possibilities offered by new technologies impose to consider learning, training and general education

environments (picture 1). As well as the health mission, staff valorisation through training and professional revaluation, represents for the Italian Health Organizations an objective of primary importance. E-learning uses more or less recent technologies, by integrating in aimed ways various teaching methodologies in order to reach the objective of effective and continuous training.

- Socio-cultural changes
- Territory (services and operators distribution)
- Company's organizational characteristics
- Wide diffusion of the new technologies
- New possibilities offered by the new technologies

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Picture 1 – Representation of the e-learning scenario

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The use of different technologies and teaching methodologies allows to create meeting places to exchange ideas, suggestions, and evaluations with anyone, anywhere and anytime.

2. Legal and Programming Context

In the past years, Italy has received European indications in the field of e-Learning, and Azienda ULSS of Asolo has conformed to them. In fact, in 2004 it had already achieved the national objectives legislature foreseen for 2005 consisting in training 30% of its staff one via e- Learning.

3. Partners

The practice of distance training activities supplied to the members of staff has been possible thanks to the following partners of and Azienda ULSS of Asolo:

Banca Intesa S.p.a. main Italian banking group, Treasurer of Azienda ULSS of Asolo;

Intema S.r.l. - Gruppo Getronics, specialized in the development, supply and management solutions and Information & Communication Technology services for the Health and Civil Service market;

KPMG Business Advisory Services

S.p.a., professional services for companies, with whom general theme courses have been organised. The themes included Human

Resources Management for Health Organisations, health management innovations, or more specific themes such as clinic risk.

An important partnership has been created with the Socio-Health Regional Agency of Veneto for the actuation of courses supplied by means of distance learning. Such courses are about themes like the humanization of sociohealth services.

4. MISL: Organizational System, Methodologies and Technologies, Infrastructures

ULSS 8 has absorbed the European and National directives creating a flexible training system, able to adapt to the training contents through the use of more training technologies and methodologies. MISL (Multimodal Integrated System for Learning) joins the possibilities offered by recent e-Learning and the Interactive Television methodologies, without abandoning proven effectiveness of the Classroom Training.

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The use of various technologies and more training methodologies allows to deal any topic for any professional category. Moreover, e-Learning in particular allows the learner to organize the time of development of his/her training path, in order to make lessons compatible his/her own professional engagements.

4.1 Learning Methodologies and Technologies Used

MISL uses especially two teaching methodologies for distance training: e-Learning and Interactive Television, each one uses special technologies.

4.1.1 e-Learning

e-Learning allows the operating to learn "when one wants and where one wants", thanks to the possibility to manage the times and the places of the development of courses independently: the student is offered an interactive environment based on the Internet browser, guarantying an easy way to access learning and professional updating.

The applicative/technology solution used for the e-learning system is made by LearNet, a platform for the management of multimedia centres for the distance teaching, able to integrate various multi media in order to favour teaching effectiveness of the courses supplied by means of Internet.

4.1.2 Interactive Television

It is a multi-channel system via satellite integrated with Internet allowing a high number of learners to follow courses directly in dedicated class-rooms. A special telephone placed in every work-station allows every single learner to

intervene during the lesson, allowing a participation activity to the lessons and creating in this way a communication system emulating normal communication in the class-room. Moreover, the telephone allows multiple-choices tests in real time.

4.2 Facilities

The creation of courses and a system able to supply them is a necessary though not sufficient condition to achieve continuous and effective training. In fact, the environments where the operators can follow such courses, accessible according to everyone's work engagements. Also, it is fundamental that the operator feels that distance learning is really present in his/her professional life and has basic knowledge and in the use of I.T. tools.

4.2.1 Technological facilities

As for as problems related one to distance learning environment, Azienda has adopted three solutions:

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- arrangement of appropriate computer classrooms by hospital buildings, these classrooms can be accessed by operators in order to follow on-line courses (picture 2). The classrooms are equipped with both a blackboard, and a projector in order residential teacher-driven mode.
- arrangement of appropriate classrooms by hospital buildings, where to follow courses by means of interactive television. There is also a projector and a computer linked to Internet in order to allow the development of on-line lessons also in teacher-driven mode, both distance and residential.
- free supply of prepaid cards allowing the operators to follow the course from home free of charge by Azienda ULSS to the staff enrolled on on-line courses.

4.2.2 Cultural support

Problems related to distance learning can invalidate training efficiency. On one hand, selfefficiency perception in the use of an I.T. tool, the possibility that the operators may not have basic internet and computer knowledge. The high number of English terms present in the multimedia language, on the other hand, the novelty of distance learning for operators for whom communication mediated by a computer and Internet is not part of their daily routine and their learning vision. All these elements are strictly connected to the introduction of distance training and if they are not duly considered, they can nullify the efforts made to offer an efficient distance learning system.

In order to approach the operator to this training environment, basic and advanced English and IT course have been organised, to supply staff with the necessary cultural support in order to follow the courses supplied by MISL especially the on-line ones. IT courses are supplied with interactive television method which is similar to tele-conference. The possibility for the learner to interact with the teacher through a the use of interactive telephone ensures a teacher/learner dynamic which is similar to the familiar classroom training.

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Picture 2 – The computer room of one of the hospital premises; tutor helps students while are studying on e-learning courses.

5. MISL In Progress

The e-Learning platform, Interactive Television, the presence of tools in interactive classrooms which are also useful for classroom training, the possibility for the operator to

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follow courses from home for free have been integrated to supply flexible and efficient courses.

5.1 Methodologies and Tools Offered By MISL

A special system studied by the ICT management and the scientific committee of each course, allows to bring the courses supplied with interactive television methodology into e-Learning. This system offers undoubted flexibility for each learner. By integrating the e-Learning platform with the satellite system used for the Interactive Television, The operators can follow on the monitor of any computer the courses supplied with interactive television methodology. In fact, web television allows the learner to follow all courses in interactive television mode from a remote workstation.

The lessons proposed with the Interactive Television are recorded and are made available on the Internet platform in Web Campus mode. The learner selects the relevant lesson and he/she watches its recording. The e-mail is used for possible questions of the learner and the answers of the teacher or the tutor.

Entire e-Learning courses, or part of them can be proposed in teacher-driven mode using the e-Learning platform and the Interactive and Web Television technologies. Learners from the classroom and from the remote workstation are guided during the e-learning course by a teacher in the classroom or in a remote workstation (picture 3). Courses are also available in web campus mode.

MISL offers all the services already present for e-Learning (Teaching and Scientific Tutoring, Help Desk, etc.) extending them to other distance training modes. This is done with the purpose to make training interventions the most efficient and flexible possible.

5.2 MISL Contents

Professions within the health corporation are several, operators work within different social and territorial contexts. This affects the need of skilled professionals, the possibility for the operators to attend continuous and frequent training events, teaching contents of single training interventions. On the other hand, social and cultural changes require for anyone having some knowledge on themes that are transversal to other competences.

MISL is an adapted but above all an adaptable tool to the contents required by all professions to reach the purpose of efficient, updated customised training (Picture 4). Therefore, courses can have general contents or can be highly specialised within the health community. Two courses supplied via MISL are presented below.

Course on SARS

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It is a specific course for hospital and health organisations staff members. The average duration is 5 hours. The training aim is to let participants

acquire basic knowledge on Acute Syndrome Severe Respiration and on its prevention and control measures, in order to be able to recognise and manage the illness and the suspect cases, nevertheless to give the population correct information.

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Picture 3 – MISL IN PROCESS: in the classroom dedicated to the interactive television, an e-Learning course on SARS in teacher driver mode; the students have the possibility to interact with the teacher by means of special telephones allowing to do in itinere tests.

Course on Privacy Protection within the health environment

It is a transverse course for all the employees of the health corporation who can be legally considered “subjects involved in dealing with personal data” (overall 900 operators). The average duration is 6 hours.

The aim of the course is to let the participants acquire basic knowledge on the reasons why a personal privacy protection discipline exists, on the contents of current laws, particular reference is made to the health field, to the people involved in terms of procedure and in terms of ethics and behaviour.

The teaching aim is to have participants able to carry out tasks inherent to personal data management correctly, as well as carrying out their job according to their profile and responsibilities.

5.3 RESULTS

The experience of Azienda Sanitaria of Asolo in distance training shows that the introduction of new technologies in the distribution systems of the services is a possible objective, even if not easy to achieve.

Production of effective, contextualised and flexible distance training is possible through discerning uses of the available human and technological resources, a use of all the potentialities offered from such resources. But above all, through the valorisation of the personnel involved in training, who is the first addressee, nevertheless has a pivotal role in the training activities.

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A student interacts with a teacher in a remote classroom by the special phone

Learners follow an e-Learning course in the teacher driven mode in the interactive television room

Italian national directives imposed to health organisations to train at least 30% of their staff within 2005 by means of distance learning. Thanks flexibility, MISL adaptation, Azienda ULSS 8 has achieved this objective within 2004. Such results have been rewarded by the insertion of courses produced by Azienda ULSS 8 into the distance training catalogue within a project of the Italian Minister of Health. Such commitment by Azienda ULSS 8 also has involved further important acknowledgments. It is the only Italian health organisation to be partner of Ferrara's Expo E-learning, which is the more important e-learning exhibition in Italy.

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Picture 4 – The context and the possibilities that brought to the creation of MISL

6. Project In Progress: Health Organisations Network

Azienda ULSS 8 is the promoter of the activation of one Italian network among health organisations that are active in on-line training. The Internet network helped the creation of a community that converses, discusses, exchanges materials and information on the topic of elearning and all methodological, technological and the organizational problems linked to it. The objective is to develop synergies and to spread best practices in order to guarantee to the on-line training to achieve a dimension adequate to the international standards within the field of the health. The distance job synthesis and evaluation of the community of the new network has the chance to have discussions at the annual convention.

7. A New Field Of Work: The Assembly of European Region

Nowadays, civil service operates in a field that goes beyond national borders and it definitely has to have comparisons with other European public systems, considering the essential elements for the E.U.'s plan of action, such as e- Government, e-Learning and e-Health. Azienda ULSS 8 intends to adapt to the above in its technological innovation of corporate training policy.

Azienda ULSS of Asolo operates in the Veneto region, within the Alpe Adria working community, as well as Tyrol operates within the Arge Alps working community, both members of the Assembly of European Region. Within these European regional work environment, Azienda ULSS of Asolo intends to increase the knowledge of practice and

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solutions adopted by the regions in the areas of health and social affairs and to transform and develop political initiatives aimed at influencing the relevant European policies; to set up a network of interregional cooperation in these various areas, to take initiatives in order of strengthen links between the European regions - in view of their participation in Committee activities.