



Open Distance Learning at Southern Switzerland Universities

A comprehensive and multilingual approach involving universities, teachers, students, and administration

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1 Life Long Learning

Globalisation of economy, communication, and culture, as well as rapidly changing technologies with increasing mobility on workplace demand constantly new qualifications from any member of society. Continuous further education will be the only possibility for citizens to adapt their abilities and their knowledge to the current orders. In this way, lifelong learning becomes a keyword of postmodernism - a success factor in the labour market of the starting millennium. Nevertheless - is lifelong learning really a new concept resulted at our time - or is learning in its most general form not simply a process that allows active existence of living organisms?

Since oldest times life is regarded in that, what differs the world of organisms i.e. plant, animal, human being from every remaining reality. In scientific-biological sense, life is tantamount to organic event and its directed activities. This becomes manifest by termination of actions if attaining the goal, assiduity of actions if not attaining the goal, as well as variation possibility of means and theirs combining ability if not achieving the goal respectively. In this case, stereotype behaviour is set to the normal, adaptive to the new.

This definition of the term life shows interesting similarities with the constructivistic concept of learning, according to which finding is the result of a construction of subjective realities on account of own experiences. Therefore, one get the impression that life and learning form something like a canonically conjugate pair of terms. Life and learning cause themselves mutually. In this way, the expression "lifelong learning" designates a phenomenon which no organism can free itself.

In fact, forms of lifelong learning are always documented. As known examples of our culture history I mention the big Ancient Greece philosophical schools of Socrates, Aristotle, Plato, and much other more. The form of instruction was not teacher directed but organized within the framework of discussion circles, in which the headmaster acted as *Primus inter Pares*. New ideas could be contributed at any time to the circle. As a result of a lasting discussion these ideas either were rejected or raised to new findings. There was no age limit at this kind of schools. Who could keep up scientifically and rhetorically was allowed to share at the progress of the circle as long as he wanted. Between schools, discussions often arose concerning controversially understood facts.



In Middle Ages, the circumstances in the most famous schools of e.g. Peter Abelard, Thomas of Aquin, William of Ockham, and many other more were similar. Analogous to the Ancient Greece especially the speech and rhetoric enabled personalities took part at the knowledge headway. It was only with the invention of the letterpress at the 15th Century by Johannes Gutenberg, that arose new forms of lifelong learning. Thanks to the new technique, available knowledge had no more to be transmitted primarily by dialogue or discussion - it was immediately accessible to self-study. In the same era, the discussion circles more and more were replaced by the frontal instruction. As a result, the available knowledge reached more concentrated the addressee and in the case of lacking understanding it could be deepened via reading of books. Therefore, new abilities as reading and writing, became decisive for the understanding progress.

Today we are confronted with a new situation. Knowledge will be duplicated within 10 years by our information society. Indeed the printing of books still is a popular kind of knowledge dissemination, however (faced with the fast knowledge increase) the contents of a book often becomes obsolete while its appearance. If we would like to find out the newest finding on a subject, we must tread other ways: We start surfing in the Internet, sending e-mails in order to link contacts, involving to Internet discussion fora, chatting, and so forth. We develop new learning technologies and learning strategies to reach faster and more appropriately to new knowledge. The ability to handle the new means and methods of electronic communication becomes the way pointing factor on the path to the tree of finding. The role of the lecturer get a redefinition too: He no more pursues a pure teacher-directed education, but he more and more undertakes the role of a tutor that accompanies the student within his finding process - he becomes the *Primus inter Pares* in a virtual class.

In other words, in some points, we approach to the teaching and learning concepts of the Ancient World and of the Middle Ages again. Therefore, it must be our main aim, to result a similarly fertile atmosphere in the virtual environments made by us, as our ancestors did. Only this way we will achieve, that learning with new educational technologies will not become a troublesome duty but a joy and furthermore an individual success.

2 Open Distance Learning at Southern Switzerland Universities

For years the new media in general and the computer with its features in particular are suitable for using in teaching. However the step from the singular efforts towards open distance learning (ODL) was performed very rarely. Particularly such countries, that have a low population density (like USA, Canada, Australia, and the Scandinavian countries) established sustainable ODL-environments within the education system. In this way travel costs and time got reduced for the students (and partially for teachers as well). Globalisation of the marked and the involved merging of the national societies to an international community provokes a growing acceptance of ODL concepts in high population density countries of central and southern Europe as well.

2.1 Southern Switzerland universities

The two universities of Italian speaking part of Switzerland will participate with high priority at this development. One of them, the 'Scuola universitaria professionale della

Svizzera italiana (SUPSI) is the University of Applied Sciences of Southern Switzerland. SUPSI was established in 1995 as the successor institution of the former technical college of Southern Switzerland and is situated within the region of Lugano. The overriding goal of SUPSI is the promotion of technological development and technological transfer. Today SUPSI consists of five departments and three institutes. The basic educational programs lead to a three year bachelor degree. Starting from 1999, the very large postgraduate courses offer of SUPSI has been enriched with two master programs partially offered in open distance learning mode.

The other university of Italian speaking part of Switzerland is the 'Università della Svizzera italiana (USI)'. USI was established in 1996 and it is part of the Swiss university system, along with nine other cantonal universities and two federal polytechnic schools. The university of Southern Switzerland is the only university outside of Italy whose language of instruction is Italian. USI is organized into the Faculty of Economics and the Faculty of Communication Sciences in the city of Lugano and the Academy of Architecture in the city of Mendrisio, 15 miles south of Lugano.

Both institutions are collaborating very closely in several areas. For instance the research services department, the computer services department, and (partially) the postgraduate education are organized as common structures of both universities. The research services department commits the common research and development strategy and supports the researchers and assistants of both institutions within all research activities. It fosters the collaboration between university representatives on the one hand and representatives of the public administration and private companies on the other hand. Furthermore the research services department is responsible for the information retrieval and the logistic support while setting up proposals to national and international research programmes.

2.2 Virtual Campus projects

One of these national research programmes is the Swiss Virtual Campus programme that aims at setting up a nation wide open distance learning environments for university students. Within the framework of this programme SUPSI and USI started three projects in order to set up a virtual campus with strong local roots and with closed relationships to other universities of Switzerland and of the near foreign countries: the two distance education projects 'MACS - Continuous Education Modules' and 'SWISSLING - A Swiss Network of Linguistics Courseware' as well as the infrastructure project 'Forum New Learning'. The main objective of the two education projects is to expand the offer of modular courses and to make it available anytime and anywhere for more interested people.

The project MACS aims at transforming the postgraduate education programme 'Master of Advanced Computer Sciences' offered by the SUPSI into distance education mode. Within two pilot courses we are testing different concepts for establishing a logistic, pedagogic, and methodological structure that supports open distance learning in an appropriate way. The first course is prepared for an Italian speaking target audience in Ticino and northern Italy and started on March 2001. Using the learning environment WebCT we want to test and apply all state-of-the-art-concepts of modern open distance learning. The second course on the other hand will be prepared for a multilingual (Italian, German, and French)

target audience and will be offered in every region of Switzerland and probably in the closed foreign countries. The great challenge here is to take care of the different cultural backgrounds of the future students as well as to find out:

- what platform is suitable for a multilingual contents preparation,
- what moment are suitable for switching between common instruction and language specific tutorial,
- what social contacts are necessary for promoting the cross-language communication.

The project SWISSLING aims at developing an environment suitable for offering basic university courses in an open distance education mode. The main objective of SWISSLING is to set-up an introductory course in linguistics targeted to university beginners in human sciences (linguistics; communication sciences; literature and languages). The concerned departments of five Universities in Switzerland (Lugano, Basle, Geneva, Lausanne, and Zurich) have ensured their support to the project and declared their willingness to recognise SWISSLING into their curricula. Thus, already in the current test phase, more than 700 students are involved in the project and profit from a reduced classroom presence ranging about 75%. In particular, the project's goals comprise the following issues: (1) Common use of distributed resources, improving the educational program of individual universities. (2) Better presentation of complex material by using multimedia strategies. Dynamic educational display of know-how and know-that training materials using multimedia tools. (3) Promoting co-operative learning. (4) Providing facilities for studying independently from both time and location; enabling self-paced individual and interactive learning and evaluation. (4) Co-ordination of the teaching of Linguistics in the three main language areas of Switzerland.

The infrastructure project 'Forum New Learning (FNL)' originally was proposed by the university partnership *eduswiss*, at which SUPSI participate. FNL is designed as a future teacher and student support system that make available tools and information, provide training and education for teachers, and that set up a support network focussed on technical and in particular didactical issues. The main activities of FNL are:

- Knowledge Sharing: Build and maintain an 'Interactive Knowledge Sharing System' to allow partners to file and exchange didactical knowledge components concerning NLT.
- Education: Set up a pool of modules for training and education of teachers in the field of NLT.
- Support: Set up a network of competencies concerning technical and didactical aspects of NLT which aims at a highly qualified counselling for NLT projects.
- Assessment: Discuss and evaluate possible future developments.
- Translation: Guarantee an Italian, German, and French translation at least for the most important information, resources, and services.

The project 'Forum new Learning' will help us to keep a common guideline within our different activities and to adjust the outcomes of our distance education projects with our partner institutions in Switzerland and foreign countries. The recent results of FNL are already available in Italian, German, and French at <http://www.fnl.ch>.

2.3 Pedagogic features

We attach great importance to the media didactic aspects of open distance education. Right from the start of our activities, we use the corresponding findings of former projects such as 'CLASSROOM 2000', 'FACILE', and others. The distance courses carried out within these projects brought some difficulties to light, which have different effects depending on the student:

- It may be difficult for many students to establish contact with tutors and other students.
- It makes great difficulties to understand the course documents without additional aid.
- The individual time management is a proper challenge for students. The danger is very high that the course documents will be treated only in the last moment.
- The student often feels alone and particularly has difficulties to estimate learning success.

In order to solve these problems we use the following concepts within our distance courses elaborated together with the pedagogic institute of Fribourg University:

- The courses are only in part carried out virtually. Face to-face meetings are organised in each case at the beginning, in the middle, and at the end of a course.
- A so-called red thread ('fil rouge') leads the students through all course documents; it provides information on learning aims and required learning time to the students.
- A contract between student and tutor regulates the individual time management within a virtual course:
 - at what time the student works what and how long?
 - at what time the tutor will do a control call?
 - and so on.
- A quiz helps the student to better estimate the learning success.

Furthermore we want to

- elaborate and use strategies of co-operative learning - instead of competing against their colleagues, students have to build and strengthen on-line learning communities;
- rethink their role, in particular finding a good balance between being an instructor and a facilitator - which entails leaving more room to learners' initiative and responsibility;
- consider the social impacts of distance courses for the participants - e.g. the influence of ODL on family life.

Within an assessment phase the future experience in distance education will be evaluated against the objectives decided in phase one and compared to face-to-face modules: a first set of guidelines for the realization of future IT-based course shall be delivered after that. In this way, the acceptance of our open distance learning concept among the students will be increased and the amount of work of tutors will be decreased.

2.4 Administration

The future distance education system designed by us and our partners will be realised using the software platform WebCT that is a tool, which enables teachers to put course contents (documents, articles, curricula, etc.) on internet in a simple way. We decided on WebCT because it is the today most used tool worldwide and at Swiss universities and because it was evaluated best by the Swiss university council. WebCT is a collection of tools, which enables teachers going online with their courses, or with parts of it. It can be used as:

- an authoring system, which supports editing and managing online documents by means of glossaries, links, indexes, and search tools;
- a communication tool, which supports different types of synchronous and asynchronous communication like email, forum, chat or whiteboard, and in future video conferencing;
- a group ware, which enables the communication within groups, the exchange of data's, and the presentation of group results;
- a course management tool, which enables the publication of course dates within a calendar, the management of student information, and control of learning progress by means of tests and quizzes.

We started a broadly designed campaign offering daily seminars introducing WebCT for our and our partners teaching staff. On the other hand we are on analysing the communication structure of university administration so that we optimally can represent it within WebCT. This way not only the course content and the course realization but also administration becomes virtual. All single components elaborated within the projects presented above will grow to a comprehensive virtual campus.

3 Conclusion

It is certainly too early to draw a definitive conclusion about the success of our project activities. But nevertheless we made some positive and encouraging observations.

- The use of the new educational technologies leads us to a reassessment of the didactical behaviour of every involved person in a comprehensive way. For this reason we involve the entire teaching staff while transforming single module into virtual or semi-virtual mode.
- Due to the fact that the participants save a lot of travel time visiting a (semi)-virtual course instead of an on-site course, many candidates have been registered even for our first pilot courses.

Profiting from this initial success we will organize a broad assessment campaign analyzing above all communicative, the didactic, and the pedagogic aspects of distance education and thus get some data's on the probable added value of our future distance courses. Together with our project partners we elaborated an ample questionnaire system which we will apply at the beginning, in the middle and at the end of each distance course offered by us. We expect the first consolidated results of our projects in September 2001.

References

- [1] Collaud G., Gurtner J. -L., Coen P.-F., "Design and use of a hypermedia system at the University level", *Journal of Computer Assisted Learning*, 16, 137-147, 2000.
- [2] Collis. B.(1997) "Pedagogical reengineering: A pedagogical approach to course enrichment and redesign with the www", *Educational Technology review*, Autumn/Winter.
- [3] Flückiger F., Ninck A., (1998), "Conference on New Learning Technologies, Poceedings" June 12th 1998 at University of Technique and Architecture of Fribourg, Switzerland.
- [4] Flückiger F., Müller L., (1998), "CLASSROOM 2000 - Towards Management of Life Long Learning using New Learning Technologies", proceedings to SEFI annual conference, 1-3. September 1998, Espoo, Finland.
- [5] Flueckiger F., Waefler K., (2000), "Eduswiss - a Multilingual Online University Partnership for Postgraduate Education in Switzerland", *Proceedings of Online Educa Berlin - 6th International Conference on Technology Supported Learning*, November 29th - December 1st 2000, Berlin, Germany.
- [6] Rueger D., Zahnd J., Gurtner J.-Luc, Perrault P., Abou Khaled O., Pettenati M.-C., Vanoirbeek C., (1999), "Web based authoring tools for work plan and self-evaluation in distance education", in: F. Flückiger, A. Ninck, T. Braun (Eds.), *Proceedings of the 2nd International Conference on New Learning Technologies*, 30./31. August 1999, Berne, Switzerland.
- [7] Tvedt A., Rueger D., Zahnd J. (1998), "Aiming for the best of both Worlds-Combining traditional Teaching and New Learning Technologies to avoid undesirable Trad-offs", Poster presented at the Conference on New Learning Technologies, June 12th 1998 at University of Technique and Architecture of Fribourg, Switzerland.
- [8] Zahnd J., Rueger D., Gurtner G. (1998), "Pedagogical Aspects of Education in a Virtual Classroom", communication presented at the Conference on New Learning Technologies, June 12th 1998 at University of Technique and Architecture of Fribourg, Switzerland.