

Chapter XVI

Developing and Managing an Effective Virtual Campus: The eLab Experience in the Swiss Higher Education Context

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ABSTRACT

This chapter presents a successful Swiss experience in developing and effectively managing virtual campus projects: eLab, the eLearning Laboratory of the University of Lugano and the University of Applied Sciences of Italian Switzerland. eLab activities are presented at two distinct moments in time. We first describe the context of e-learning in Swiss higher education institutions, focusing in particular on the Swiss Virtual Campus programme. During that programme, eLab emerged as one of the best performing e-learning support centres in Switzerland, thanks to three main elements: the establishment of a clear prototype-based design and development model, the definition of quality control procedures, and the implementation of a consistent and institution-wide online learning environment. After the end of the programme, eLab had to switch from a project-oriented laboratory towards a service unit. The general strategy that drove this change and the concrete tools and practices that made it possible are presented in this chapter.

INTRODUCTION

eLab is the e-learning Laboratory of the University of Lugano (USI: Università della Svizzera italiana) and the University of Applied Sciences of Southern Switzerland (SUPSI: Scuola Universitaria Professionale della Svizzera Italiana), two higher education institutions of Ticino, the Italian speaking part of Switzerland.

eLab is one of the Support and Production Centres (CCSP) that were founded in Swiss Higher Education Institutions (HEI) thanks to an initiative of the Swiss Virtual Campus (SVC), a national programme launched by the Swiss University Conference in 1999. The programme aimed at “promoting innovative Information and Communication Technology (ICT) based e-learning at Swiss Universities at a high level of quality that is commensurate with that provided at the top international institutions in the field” (SVC, n. d.). The three main goals of the SVC were:

- To improve the quality of student learning processes and strengthen interactive teaching by broadening university teaching into a range of available courses for both on-campus and corresponding students;
- To strengthen the collaboration between the universities;
- To develop high-quality teaching materials and methods.

The SVC funded 108 projects and 10 *ad hoc* mandates. It was discontinued in 2008, leaving an important inheritance in most Swiss universities. As operative units, the SVC promoted the institution of CCSP. The overall context of this chapter are the activities of the SVC, which was indeed the most influential initiative to promote and establish e-learning experiences throughout the Swiss higher education landscape at large. The first two sections will provide background information on this and introduce the eLab. In this chapter we present the successful case of one of

the e-learning support centres, namely the eLab. Although eLab is the CCSP of two of the youngest and smallest Swiss higher education institutions (HEI), during the SVC programme it proved to be one of the best performing centres in the country, thanks to three main strategic elements: (a) the establishment of a clear prototype-based design and development model; (b) the definition of quality control procedures; and (c) the implementation of a consistent and institution-wide online learning environment.

After the end of the SVC programme, eLab had to tackle a new challenge: switching from a project-oriented laboratory towards a service unit, providing ongoing support to the established educational technologies initiatives in its home institutions. This implied getting to be sustainable after the end of the SVC financial support. The general strategy that drove this change is presented later in this chapter. It was – and still is – an attempt to create an effective virtual campus among USI and SUPSI, throughout their five seats, based on the experience eLab had previously gained in managing and supporting SVC projects.

E-LEARNING IN SWISS HIGHER EDUCATION INSTITUTIONS

Although a small country, Switzerland hosts a rich and diverse higher education landscape, including ten cantonal universities, two Federal Institutes of Technology and seven Universities of Applied Sciences focused on professional education and applied research (Lepori, 2008). The development of e-learning in Swiss HEI went through a rather slow start, before rocketing up from the end of the 1990s thanks to the launch of the SVC (Swiss University Conference, 1996, 1997 & 2003). In its first phase, or *impulse* phase, run from 1999 to 2003, the SVC financed a rather small number of large consortia among Swiss HEI to develop high-quality teaching materials for online education. The underlying rationale was that these courses

could be shared by most Swiss HEI, especially in domains with large numbers of students, improving the educational performance of subjects taught in overcrowded classes and achieving significant scale effects. Some of these projects played a relevant exploratory role, achieving high quality and international awards. However, the expectation of having distance courses in Swiss HEI proved not to be realistic. Most projects actually developed materials and applications to support classroom teaching, for self-study or for complex tasks as simulations. At the organisational level, these largely stand-alone projects integrating content specialists, pedagogical experts and their own technical personnel proved to be too expensive and too difficult to maintain (Gertsch et al., 2004; Lepori & Succi, 2003 & 2004).

Thus, the focus of the SVC switched from distance learning towards the enhancement of face-to-face education and the introduction of new pedagogical approaches, such as learning by doing. The main paradigm chosen for the SVC second phase, or *consolidation* phase, was blended learning. This phase which ran from 2004-2007, still largely determines the current landscape of e-learning in Swiss HEI. This was combined with the goal of having a high number of small projects (Swiss Rector's Conference, 2002). The centrepiece of this second phase was the establishment of a Centre of Support and Production (CCSP) for e-learning in each HEI, which would provide technical and pedagogical competences, sustaining the academic personnel in the design and development of contents.

This policy has been quite successful. The final evaluation of the programme showed that most of the Swiss HEIs had a CCSP at the end of 2007, even if large differences emerged between institutions (Lepori & Probst, 2008). Thus, in a number of institutions, including most of the largest ones, the established units have found a stable organisational position and actually serve as a reference point for a large share of teachers. For example, a large share of courses are hosted

by the Learning Management System (LMS) offered by the CCSPs. However, CCSP in other institutions, including many Universities of Applied Sciences, are still in a development phase and face a rather uncertain future with the end of federal support.

What are the elements for this success? Usually, these centres benefit from a clear strategy at the university level, including explicit sponsoring by the presidents. At the organisational level we can distinguish between two different models for the establishment of CCSPs:

- Individual centres that gather in a single unit the interdisciplinary competences needed for e-learning projects and activities. In some cases, these centres also have delegates or ambassadors in departments and faculties to allow for better integration;
- Network centres, where the CCSP is composed by multiple coordinated units, for example an educational centre and the informatics services. This model better answers to the needs of decentralised institutions like most Universities of Applied Sciences, or where different centres existed already before the establishment of the CCSP.

A look at the services offered by CCSPs shows a clear picture: with very few exceptions, CCSPs focus on offering basic services and consultancy to a wide audience of teachers, instead of developing products for a few selected curricula. Through the two SVC phases, CCSPs made the transition from a technology and product-based approach to an approach oriented to the enhancement of classroom education even with simple services. For example, a number of CCSPs offer basic consultancy about an instructionally sound use of Microsoft PowerPoint. In more detail, the main services of CCSPs include:

- Dissemination of e-learning, including workshops, courses and consultancy, on both

- instructional and technological domains;
- Maintenance of institution-wide Learning Management System (LMS), with Moodle being the most common choice;
- Management and advice on technical devices and media production;
- Management of internal calls for proposals for small-scale projects, and support to accepted ones;
- Maintenance of the SVC-funded projects, which were all concluded in the first half of 2008.

In 2006, the Swiss Conference of Rectors announced the end of the SVC programme in 2008, and that no further funding would be available in the future. This was explained by the focusing on other priorities, but also with the wish that HEI would start considering e-learning as a regular part of their own current activities and educational strategy. In July 2008 the Swiss National CCSP Assembly was founded, which gathers the e-learning competence centres of all Swiss HEI institutions, with the aim of establishing cooperation and exchange opportunities at a national and international level.

eLAB: ORIGIN, MISSION AND VISION

The regulations for the second phase of the SVC programme required HEIs to establish a CCSP. eLab was born as an answer to this request in January 2004 by an agreement between two units of USI and SUPSI. The mission of eLab is to promote the development of e-learning applications at USI and SUPSI in the first instance, and then in the Italian speaking part of Switzerland at large.

eLab's approach to e-learning relies strongly on the history of so-called *technologies of the word* (Ong, 2002). As a matter of fact, education has always integrated every new available technology of the word in a rich and creative way, in order

to maintain, increase and transmit knowledge. Take handwriting in Medieval universities: the word *lectio*, meaning *lesson* or *lecture* refers to teacher dictating important texts so that students could write them. In such a historical perspective, the use of new information and communication technologies (ICTs) in education – e-learning – is extremely *new* if we consider the available technologies and the opportunities they offer to enrich the learning experience. At the same time, however, it is completely *traditional* if we consider the opportunity and willingness universities have to integrate technologies into their practices in order to “do their job better”.

eLab staff see e-learning as “the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration” (CEC, 2001, p. 2). This is indeed a very broad definition, which encompasses three layers: (a) e-learning as the use of ICTs in education and training; (b) e-learning as online education and training; and (c) e-learning as the capacity for transforming education and training through the use of ICTs (Cantoni & Tardini, 2006). Such a comprehensive approach turned out to be successful: eLab has soon become one of the best performing CCSP, at least if measured by its ability of getting SVC-funded projects¹, by the marks received in the annual monitoring by the SVC committee and by the extent of use of its LMS.

In its activity of supporting all USI and SUSPI SVC projects, eLab was in charge of providing instructional design services and support for the technical development of digital content. eLab set up an interdisciplinary staff resource composed of instructional designers, developers, one graphic designer and one expert in legal issues. In this way, the necessary skills and competences have been guaranteed to all projects. The activities of the eLab team were aligned with three major strategic elements, which proved to successfully implement its vision and approach: a prototype

based design and development model, lightweight but ongoing quality control, and the set-up of a consistent institution-wide online learning environment.

eLAB FAST-PROTOTYPING APPROACH TO E-LEARNING DESIGN

The first strategic element for eLab is its design and development model. eLab staff were aware that the key to success of most projects is a positive collaboration among an interdisciplinary team composed by people from different institutions. Therefore, eLab needed a model that put communication first, and developed a well-shaped and sound prototype-based design and development model. This model sees fast prototyping as a communication catalyst, i.e., a tool “to enhance discussion in the team in a focused way by concentrating on facts and results and not on theories or prejudices about learning technologies. Enhanced and focused communication fosters the development of a mutual understanding among the different professionals involved in the project

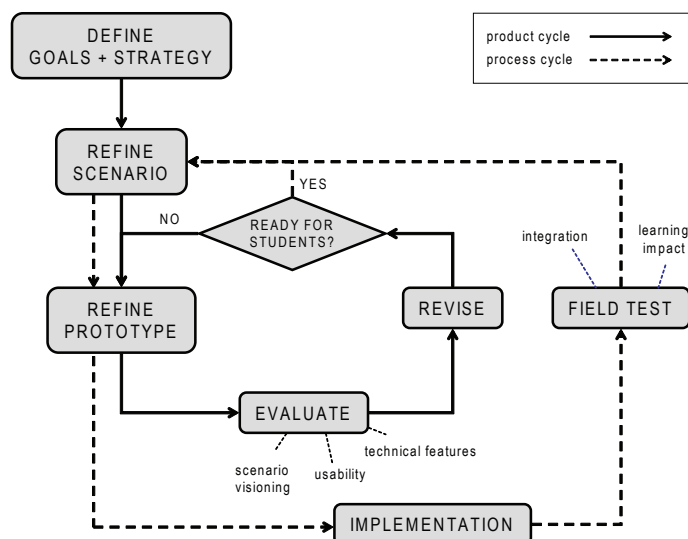
and the creation of trust – two important conditions for a successful development” (Botturi et al., 2007b, p. 274).

eLab’s fast prototyping model is composed of two cycles: (a) the inner or *product cycle* and (b) the outer or *process cycle* (see Figure 1).

It is important to emphasise that the key elements are embedded in a scenario, a narrative and semi-formal description of the instruction, which sets some parameters, such as target students, the blend of face-to-face and distance learning activities, and so on. The scenario is an informal definition of the instructional and technical requirements for the project. Its development is indeed a chance to bring together all the ideas of team members and to generate a shared vision.

The scenario is the starting point for the *product cycle*, which starts with the development of a prototype of the product that fits the scenario. By *prototype* we mean structured courseware, with real content, already implemented as if it were to be used in a real setting. A prototype usually includes only a part of the content, or leaves out some features, but the main point is that it is actually usable in the scenario. The prototype is indeed the second focal point that brings together

Figure 1. eLab fast prototyping model for e-learning design (Botturi et al., 2007b, p. 275)



the team: beyond their personal views and ideas, they need to decide on the quality of a concrete product.

The project team then internally evaluates the prototype following the quality control process, and leads to potential revisions both in the prototype and in the scenario. The evaluation makes project members move one step further in the development of a shared understanding. Developing the scenario, they merely described a wish-situation; now, the prototype has helped them evaluate single features (e.g., navigation structures, exercise feedback, etc.) and make decisions. The prototype is then revised according to the evaluation's results, and a decision is made as to whether it is ready for real testing; if it is, the process moves onto the process cycle.

The *process cycle* is basically a field test, constantly monitored. When it is over, the final evaluation of the process cycle follows three steps: (a) the delivery of a standard questionnaire to the students, which measures satisfaction, learning and transfer (the first three levels in Kirkpatrick model; see Kirkpatrick, 1998); (b) the analysis of the students' performance in the course exam or assessment; and (c) a focus group that collects feedback from the instructors. According to the new inputs provided by the evaluation process, the project team can decide to make revisions and perform another test, to conclude the implementation and produce the final courseware, or – if the real situation proved to be very different from the scenario – to even switch back for another product cycle (Botturi et al., 2007b, p. 274-276).

Thanks to this approach, eLab has been able to manage the quick start of many projects at the same time, and also – through the cross-review of prototypes – to share ideas and solutions. The effect of this approach as communication catalyst is also visible, as it allowed the creation of effective teams with a clear focus on development, rather than on theoretical or ideological views of e-learning.

eLAB'S METHODOLOGY FOR QUALITY EVALUATION

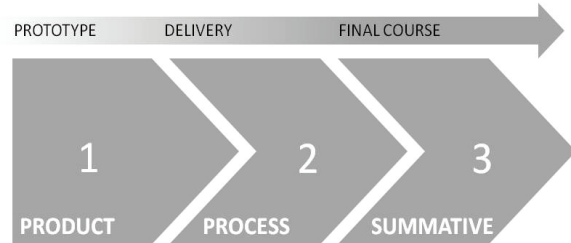
Quality control is a key issue for all virtual campus implementations. Are projects delivering what they planned? Are they achieving the desired effects? For eLab, this issue was strictly connected to the fast-prototyping design and development model. The real issue are actually resources: quality management and control has costs – often huge ones – and project budgets often do not allow extended quality measurement processes. For this reason, eLab has developed a lightweight method for making e-learning quality evaluation a feasible and sustainable daily practice (Botturi et al., 2007a), and to share the idea of quality control among all team members, including content experts from other departments and units.

The method focuses on three elements:

- Quality of e-learning tools and learning materials as a “perfect product”, resulting in the evaluation of the technical quality, i.e., of the usability of digital learning materials and of the online environment;
- Quality of the e-learning service as “exceptional service”, resulting in the evaluation of the integration, i.e., to what extent and how e-learning activities are deployed within the framework of a single course, completely online or blended learning;
- Summative evaluation, i.e., the *ex-post* evaluation of a course at the end of its life-cycle.

The methodology follows three steps: (a) prototype evaluation, (b) process evaluation, and (c) summative evaluation, as shown in Figure 2. The three steps are closely related to each other but have different goals and exploit different instruments. Details can be found in (Botturi et al., 2007a). These steps also refer to different stages in the design and development process:

Figure 2. Overview of the evaluation method (adapted from Botturi et al., 2007a, p. 166)



the prototype evaluation refers to the product cycle; the process evaluation refers to the actual integration of e-learning materials and activity in a real course, and pertains to the process cycle; the last step, summative evaluation, takes place at the end of the project.

Prototype evaluation aims at improving the technical and usability features of all digital resources developed in the project. The prototype evaluation starts when the prototype is finalised. It consists of two activities performed by an evaluator: a *technical inspection* that controls a list of features, and an expert review performed following a list of specific scenarios and tasks.

Process Evaluation was designed to provide feedback on the actual practices of students during their learning experience and to assess satisfaction and learning. Unlike the prototype evaluation, this step does not evaluate a specific online resource or learning product, but a whole course as a learning experience. The evaluation starts before the course starts with the description of the course scenario. Right before the end of the course students are surveyed with a standard online questionnaire built around Kirkpatrick's (1998) first three dimensions: reactions, learning and (some hints as to) perceived transfer potential. Once the course is ended, the instructional designer interviews the instructor(s), in order to understand what has happened during the course, what did the instructor do, whether the course has met their and students' expectations or not, and so on. All this information is put together with

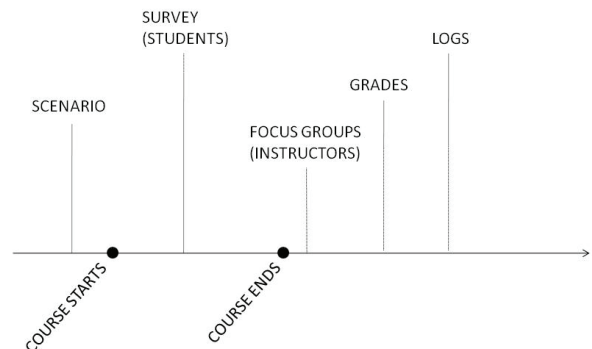
the course grades and a standard analysis of log files in the final evaluation report, which is then discussed with the project team. Figure 3 sketches the activity plan for the process evaluation.

Process evaluation can be repeated more than once, in different test phases, thus providing incremental results.

Summative Evaluation summarises all the evaluation activities carried out so far with a final picture of the overall quality of the project. The results of this step are useful mainly in order to present the outcomes to important stakeholders – such as the financing body, which can sometimes be responsible for a continuation of the project itself. In the summative evaluation, the final test phase of the project is monitored through the same activities as in the process evaluation. Its results are then compared with those from previous process evaluations into a final report targeted to external reviewers (Botturi et al., 2007a, pp. 165-70)

eLab is a small unit with several projects that were concurrently under development. Time and cost effectiveness was therefore a crucial criterion, much more than exhaustiveness: the choice was made for a continued monitoring of the projects resulting in a set of limited but comparable data, rather than for sporadic, more complete, but non-comparable observations. In this way, quality could become a habit, with techniques that can be improved, refined or expanded when necessary.

Figure 3. Activity plan during process evaluation (adapted from Botturi et al., 2007a, p. 168)



eCOURSES

The third key strategic element, after the design model and the quality control process, was the development of a consistent and institution-wide LMS. Having a unique – or at least controlled – technological environment is indeed a precondition for long-term sustainability and for efficient management of resources.

Before the creation of eLab, USI and SUPSI already had a year-long experience in blended-learning courses and in funded e-learning projects with some commercial LMS, namely WebCT and BlackBoard. These two LMS yet served only a very limited number of courses of early-adopter instructors: the largest part of courses simply distributed electronic documents through shared folders on the universities' intranets. Also, from experiences in other academic institutions and from the literature, eLab staff were aware of the danger of having “lone ranger” professors setting up their own technological infrastructure for online activities.

In the process of creating common services for USI and SUPSI, a central LMS had therefore to be chosen. The choice was made for an Open Source (OS) solution: Moodle.

Choosing an LMS

The perceived benefits that pushed eLab toward an OS solution are threefold, and concern (a) costs; (b) infrastructure; and (c) tailoring and integration. One of the main issues with commercial LMS is indeed funding. USI and SUPSI were skeptical about the real return of a potential huge investment for a commercial LMS for three main reasons:

- Before the transition to e-learning, the actual use of the LMS was unpredictable, since instructors and students did not have established practices in using online tools;
- The uncertainties of the market and the rapid

and often earthshaking developments of the e-learning world made the commitment to a single vendor risky;

- It was a one-shot situation: in the case of failure, the cost would have made almost impossible to try out another solution.

Moving to an OS solution mitigated these issues: even a failure would have had reduced impact on the overall budget, and would not have prevented moving to another OS or even commercial solution later. But how much does an OS software cost? Actually, one of the major hidden costs of OS software is the need of infrastructure (hardware and network connection) and of in-house workforce for set up and maintenance. However, USI and SUPSI, like most universities, already had a dedicated IT staff and infrastructure, virtually making these issues irrelevant. Moreover, the hardware demands of OS software are usually significantly lower than those of commercial software.

Finally, a LMS potentially affects the core of the academic activity, teaching and learning. It has to be integrated into an organic system of class scheduling, enrollments, assessments, quality evaluations, network accounting, etc. The main advantage of an OS solution is the possibility to tailor the application to institutional needs, so to integrate it seamlessly into the existing procedures and systems. Once it was decided to look for an OS solution, a review and selection process started: the selection ended with the identification of Moodle as the main eLab platform (Botturi, 2004).

Tailoring Moodle to the Universities Needs

Selecting a technology is not enough to make a consistent e-learning environment, in which the academic staff would “feel at home”. Indeed, Moodle had to be adapted and integrated in order to fit the needs of USI and SUPSI, and to be communicated to the users. This happened

through three steps: integration, customisation, and enhancements.

Integration

Integrations are modifications to the application that are aimed at making it a functional part of the bigger system. In the case of Moodle, the main challenge was to try not to make it an additional problem for the users who received yet another username and password. In the first instance, the issue was solved by creating a small module that allowed the authentication in Moodle through the email account, which was the only common information present at all USI and SUPSI seats. Afterwards, the authentication system was changed and integrated into AAI (Authentication and Authorisation Infrastructure), a common system developed at the Swiss national level in order to allow single sign-on Web access across Swiss universities, thus simplifying inter-organisational access to Web resources (SWITCH, n. d.).

Customisation

Customisations are modifications to the application that adapt it to the preferences and practices of the users. Moodle was introduced at USI and SUPSI as a platform called eCourses, with its

own URL (<http://corsi.elearninglab.org>), logo and look-and feel (see Figure 4).

Enhancement

Enhancements are new features. In the context of an European project, some new modules for Moodle were developed: we mention here GISMO (Graphical Interactive Student Monitoring tool), a module that generates relevant visualisations of student tracking data logged by Moodle. These visualisations are useful to get a synthetic overview of online activities, and proved to be effective especially for tracking completely online modules (see Figure 5) (Botturi et al., 2006, pp. 124-128). Furthermore, other tools have been added to Moodle, such as Turnitin, a suite of learning tools that includes a tool for plagiarism prevention, and Mindmeister, a tool for collaborative online mind mapping.

Promotion and Communication

After selecting the technology and preparing it for the specific institutional environment, eCourses had to be communicated and promoted within its target community, namely professors, instructors and students. As a matter of fact, innovations do not automatically spread in the contexts where

Figure 4. The current homepage of eCourses

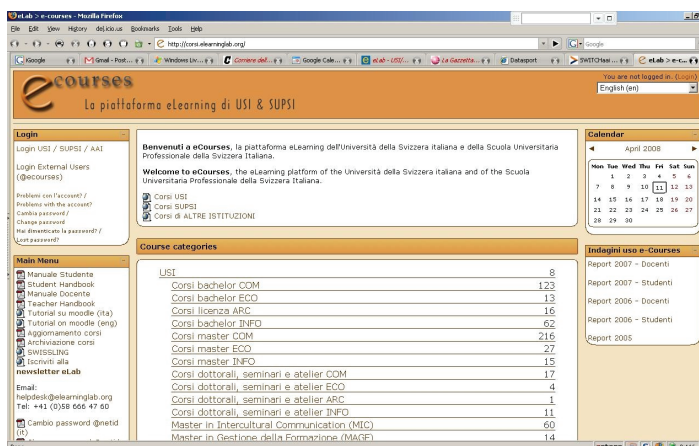
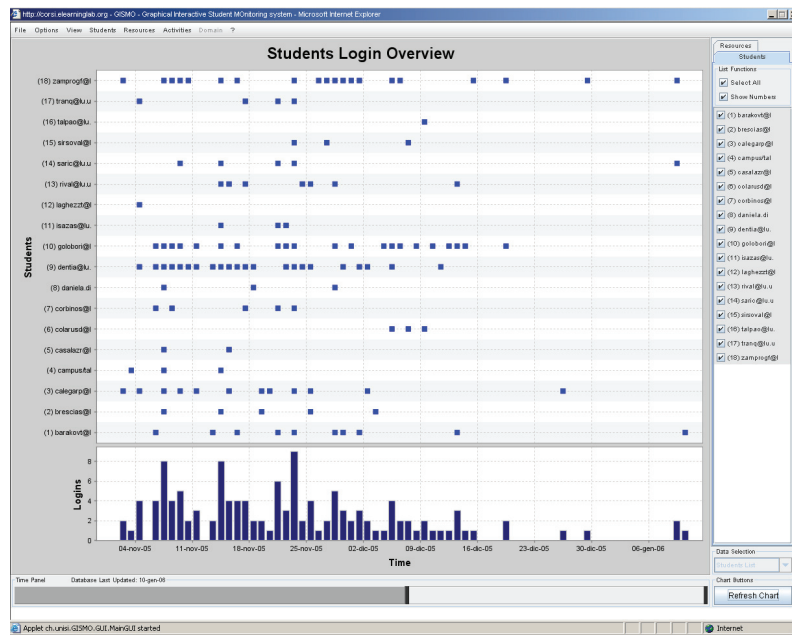


Figure 5. A GISMO pop-up window with an overview of students' login



they are supposed to be adopted, but need to be adequately promoted and communicated (Rogers, 1995): E-learning makes no exception. In order to ease the adoption process of the platform in the involved universities, two main activities were undertaken:

- Workshops on the use of Moodle for all instructors and teaching assistants of USI and SUPSI. The workshops dealt with both technical and pedagogical issues concerning the use of Moodle. In addition, an online module about the basic features of the LMS was developed and put online, available to all the eCourses users;
- One-to-one assistance with *ad hoc* modules was offered for teachers who could not take part in the workshops and requested it. This happened as a clinic-by-phone call service, and through the presence of eLab staff at the different departments of USI and SUPSI on a weekly basis.

Monitoring and Evaluation of eCourses

A different and service-oriented aspect of quality control included monitoring the actual use and effectiveness of eCourses. Also, observing the use of a tool is a way to learn more about the population eLab is intended to serve. Monitoring happens in two ways: by means of a survey aimed at measuring users' satisfaction with the LMS, and by means of an analysis of the logfiles of the LMS.

Starting in 2005, surveys were carried out once a year, usually at the end of either the Winter or Summer Semester. Surveys are conducted by means of online questionnaires, designed in Italian and English to accommodate the international population. The results have always been encouraging. In the last survey (conducted in February 2007), the general satisfaction was very high: 93% of 120 teachers and 82.4% of 239 students who responded to the questionnaire declared to

be enough, much or very much satisfied with eCourses. Concerning the use, the answers show that eCourses was mainly used as a distribution tool for didactical materials (slides, handouts, etc.). Among the other tools offered by the platform, it is worth noticing that the use of lessons, assignments, forums and diaries has increased over the years. It is also worth noticing that several students expressed their strong wish that all USI and SUPSI teachers use the platform. As for the impact eCourses had on teaching activities, 50% of respondents declared they had noticed positive didactical changes; nobody experienced negative changes. The improvement of interactions with students, the variety and completeness of courses, the possibility of working from different places and students' autonomy have been indicated as the most relevant positive aspects of this change.

After Summer Semester 2007 eLab started the analysis of logfiles, which will be replicated yearly. The goal of the analysis is monitoring how the LMS has been actually used by students and teachers. At the end of Summer Semester 2007, 1,368 courses were hosted on eCourses. However, about 27% of them had no users enrolled as students and/or no access by the course's instructor(s), reducing the number of active courses to about a 1000. Generally speaking, the analysis showed that the use of eCourses and of its functionalities strongly varies in the different faculties of USI and departments of SUPSI: for instance, in some faculties and departments eCourses is used by almost all the instructors and students, while in others it has still reached only a few adopters; furthermore, some faculties and departments have started using different functionalities offered by Moodle, while in others the use of eCourses is still limited to the delivery and sharing of online learning resources, as it has also been showed by the results of the survey. Such information is useful in order to plan and refine eLab services and training programmes.

eLAB AS A SUSTAINABLE SERVICE

While e-learning can start as a "lone ranger" effort (Bates, 1999), and continue as projects, it eventually develops into an institutional strategy (Bullen & Janes, 2007), changing the practices at the very core of educational institutions: teaching and learning. This of course means a change in the roles and positions of dedicated units within an organisation.

The strategy outlined, based on its design model, quality control and consistent e-learning environment, achieved good results during the SVC programme, and granted national and international visibility. Moreover, its experience, the tools developed and the services offered, have made eLab necessary to USI and SUPSI. For this reason, in January 2008 the two universities decided to integrate eLab into their core structure, making it a joint service unit. After the discontinuation of the SVC and of its funding, eLab had to find its own future, and that decision guaranteed its stability, along with interesting prospects to the development of e-learning at USI and SUPSI. The level of eLab staffing has been slightly scaled down, but it has been made stable, safeguarding its peculiar and effective blend of skills and competencies.

The main risk connected to the transition from a project-based unit to a service-oriented one is the possible slowdown in the innovative drive. eLab tries to overcome this risk by maintaining a very strong link with the two units from which it was formed: the NewMinE Lab, a university lab deeply involved in basic research in the e-learning field, and the SUPSI Department of Innovative Technologies (DTI), oriented towards applied research in the technological domain. As a matter of fact, most eLab people are collaborating in research projects or in teaching activities at either NewMinE Lab or DTI. This integration is also interesting from the perspective of eLab collaborators, since they can to some extent get

attractive jobs with both a service and research component.

Furthermore, eLab is continuously searching for new projects, either participating in public national or international calls or through specific agreements with single partners, such as private companies, associations, other educational institutions, etc. For example, in January 2008 eLab has started a collaboration with a Swiss bank, in order to introduce e-learning activities in its learning practices. In addition to the “traditional” solution of an LMS, where different courses are made available, eLab is developing resources available through other devices, in particular using PSP (PlayStation Portable): the basic concepts and some self-evaluation quizzes of a course about basic banking are condensed in short animations or interactive presentations accessible through a PSP.

Also, eLab is collaborating with the Technology Enhanced Communication Lab of USI, in the development of a completely online Diploma of Advanced Studies (DAS) in Technology Enhanced Communication for Cultural Heritage. The DAS, offered within the Faculty of Communication Sciences, is targeted at “practitioners and/or graduates in the heritage field who wish to advance their career, to develop a specialisation, or to redirect their professional orientation” (TECH, n. d.). The DAS started with a pre-opening offer in Spring 2008. Offering a complete online DAS could seem to be against the trend of the Swiss context of e-learning in HEI, as the SVC experience has showed; however, in eLab’s vision, this kind of offer – high-quality curricula in niche fields where Switzerland has an important international reputation, targeted at international top-level professionals – could be a solution for expanding the Swiss market of e-learning.

To sum up, four main points – strictly related to one another – have been relevant in eLab’s experience to guarantee its sustainability:

- A deep link with research, through the collaboration of eLab staff in research projects led by other USI and SUPSI research units;
- A continuous effort towards innovation: every semester, eLab proposes to USI and SUPSI one new service, such as a new tool (e.g., the aforementioned Turnitin) or a new workshop (e.g., workshops on psychological issues in e-learning);
- A strong commitment to self-financing: in 2008 30% of the whole eLab’s budget has been obtained through external funds coming from specific mandates of single partners;
- Finally, the cooperation strategy between the two regional HEI – USI and SUPSI - which allows eLab to achieve a sufficient critical mass despite the small size of the two institutions (having about 2,000 students each).

FUTURE TRENDS

The establishment of such a virtual campus has modified the learning cultures of teachers and students at USI and SUPSI, including e-learning as a part of it. This still needs to be strengthened and improved, working in both breadth and width. On the one hand, the use of eCourses has reached almost the total population – but not yet all. On the other, its use can be improved and adapted to the different organisational and instructional situations within the institutions.

The first step in this direction is the promotion of a more aware and advanced use of the tools that are available to the community, providing support for better integration into the teaching and learning practices. Concretely, some actions have been planned to promote this awareness in instructors and teaching assistants:

- New workshops will be offered in addition to those on the use of Moodle, concerning in particular psychological and pedagogical issues in e-learning: Instructional Design, Online tutoring, Multimedia learning, Computer-Supported Collaborative Learning will be some of the topics that will be presented in these new workshops;
- Personalised continuous assistance during one whole semester will be offered to selected teachers of different faculties (USI) and departments (SUPSI), in order to help them design better the online activities and resources of their courses, in a kind of “personal eLearning clinic”.

Related to this first step, a revision and refinement of the quality methodology will be performed, in order to have a more comprehensive framework where also the activities of monitoring and evaluation of eCourses are integrated.

Furthermore, new tools are continuously being monitored and tested as possible integrations to teaching and learning practices: for instance, Web 2.0 tools and resources, such as blogs, wikis, 3D virtual worlds, folksonomies, and others, are being experimented as teaching tools (Kemp & Livingstone, 2006); in this field, special attention is paid to Open Educational Resources (OER), which were defined by UNESCO in 2002 as “the open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for noncommercial purposes” (UNESCO, n. d.; Johnstone, 2005). The possible use of videogames in learning and teaching is also under continuous investigation, as the aforementioned pilot project with PSP in collaboration with a Swiss bank shows (Gee, 2003; Gibson et al., 2006; Van Eck, 2006).

A further step will be to promote e-learning application specifically targeted to some educational strategies and needs of USI and SUPSI. This might include, for instance, specific services for

curricula devoted to part-time workers (one of the core businesses of SUPSI), modules for students who did not pass exams, as well as integrating courses to fill in gaps in previous education (e.g., to access Master courses). To this purpose, eLab will be required to cooperate much more closely with educational departments at the level of design of educational offerings, beyond addressing the needs at the level of individual courses.

CONCLUSIONS

In this chapter the eLab’s experience has been presented as a successful case of the development and management of a – relatively small – virtual campus. The success achieved by eLab is based on four main strategic elements developed thanks also to the support of the SVC programme:

- The fast prototyping approach, which put communication in the foreground. This allowed eLab to support many e-learning projects simultaneously, thus gaining an important experience in the development of e-learning experiences and in the management of the corresponding e-learning teams;
- A lightweight methodology for evaluating the quality of the e-learning projects, which guaranteed a sustainable control of quality for all the projects with a sensible management of resources;
- The set up of a consistent and institution-wide online teaching and learning environment, achieved through the adoption of Moodle and the consequent adaptation, management and promotion of eCourses. This provided a common platform for the creation of a joint virtual campus between USI and SUPSI, hosting the different courses offered by the two institutions;
- The strong integration of eLab in institutional strategies of USI and SUPSI and close

communication with the directions of both institutions, ensuring that eLab services are in line with institutions strategies overall.

Some steps are still required for eLab in order to improve the quality of teaching and learning at USI and SUPSI. However, the establishment and correct balance of the four aforementioned elements was key to the actual creation of a stable virtual campus was so far entrenched in the educational activities of USI and SUPSI that they were considered to be essential. But the core element that allowed this is the presence of a collaborative interdisciplinary staff, dedicated to the mission of the eLab and focused on innovation.

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ENDNOTE

- ¹ In the 3rd SVC call, USI and SUPSI received funds for 8 projects out of the 32 funded. In the 4th call the success of the two universities was even greater: 10 projects funded out of a total of 27.