



# ***InnoUniLearning***

**The Fostering of Innovative eLearning Strategies in Higher Education**

**eLearning Strategy Study**

**University of Claude Bernard – Lyon 1, France**



Sociedade Portuguesa de Inovação

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Education and Culture

**Socrates**  
Minerva

## Résumé

### Etude de cas : La Stratégie de l'Université Lyon 1, France

Officiellement créée en 1971, l'Université Claude Bernard Lyon 1 (UCBL) est la quatrième plus grande université publique française avec plus de 30.000 étudiants. L'UCBL est un établissement d'enseignement supérieur classique où les cours en présentiel sont le mode d'enseignement le plus répandu. L'établissement propose des licences, masters et doctorat en Sciences, Santé et en Sport. Le corps enseignant se compose d'environ 2.300 personnes permanentes à plein temps appartenant à 102 unités de recherches tandis que 5.000 personnes travaillent au total pour l'Université. L'intérêt porté au eLearning par l'établissement date du début des années 90. Le premier département dédié au *eLearning*, NTE (Nouvelles Technologies Educatives), a été ainsi créé et ses premières réalisations couronnés de succès furent des travaux pratiques virtuels et des programmes de formation permanente en médecine. En 2002, fort de la démocratisation, de l'essor des nouvelles technologies et d'une demande croissante de la part des enseignants, le Conseil des *Etudes et de la Vie Universitaire (CEVU)* a décidé de développer et mettre en place une réelle stratégie eLearning. Les objectifs étaient de: favoriser l'équité et l'égalité des étudiants admis dans des programmes de première année devant l'accès à des supports de cours et à un environnement de qualité et uniforme, de prendre en compte les profils hétérogènes des étudiants tant sur leur niveau et connaissances académiques que sur leurs méthodes d'apprentissage ; d'améliorer la qualité globale de l'enseignement et de l'apprentissage ; et enfin de centraliser les différentes initiatives eLearning afin de renforcer leur efficacité et ainsi de favoriser la généralisation et l'essor du eLearning sur tout le campus. La stratégie eLearning a ainsi été intégrée dans le contrat quadriennal signé avec le Ministère de l'Enseignement Supérieur et dans le plan signé avec le Conseil Régional de Rhône-Alpes. Un service autonome dédié au eLearning, appelé PRACTICE (Production, Réalisation, Aide, Conseil pour l'enseignement basé sur les TIC), a donc été mis en place. Il a la responsabilité de créer des ressources pédagogiques multimédia et tout autre support pédagogique au format électronique en collaboration directe avec les enseignants et a aussi pour objectif la diffusion et l'essor du eLearning dans l'établissement. L'équipe a développé un LCMS, appelé SPIRAL, dont elle assure depuis la maintenant et qui est actuellement (2006) utilisé par 60% des étudiants et par presque 50% du corps enseignant. Parmi

les facteurs clés de succès de la stratégie eLearning de l'UCBL, nous pouvons citer: la vision, l'implication et le soutien forts de la présidence, la présence de personnes dynamiques et charismatiques à la tête de l'équipe de PRACTICE qui ont su inspirer la confiance du corps enseignant et se constituer une équipe autour d'eux, la reconnaissance du eLearning comme une activité classique d'enseignement pour les professeurs, la mise en place de mesures incitatives fortes pour prendre en compte notamment la gestion du changement, l'existence d'un noyau d'enseignants disséminant leurs expériences avec leurs collègues, une large stratégie de communication sur le campus, un budget dédié provenant du plan quadriennal et du conseil régional, la très grande qualité des contenus pédagogiques multimédia mis à la disposition des étudiants, et l'amélioration générale que les technologies de l'information ont apporté à l'enseignement et à l'apprentissage.

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## 1. INTRODUCTION

Officially created in 1971, the University Claude Bernard Lyon 1 (UCBL) is one of the fourth biggest public universities in France. It is financed and administered by the French Ministry of Education and by the Rhône-Alpes Region Council.

Organized in 14 faculties, located on 10 different campuses in the suburbs of Lyon, it offers to its 30,000 enrolled students Bachelor's, Master's and PhD degrees in Sciences, Health – Medicine, and Sport. Around 2,300 full-time faculty members belong to 102 research units and 5,000 staff work for the university.

There is an open admissions policy for most of the undergraduate programmes, while graduate programmes often require competitive exams or a similar selection.

Even if one of the most wide-spread ways of teaching is traditionally “face-to-face”, the university became interested in ICT-based teaching and learning in the early 1990s. A first dedicated eLearning department, NTE (Nouvelles Technologies Educatives or *New Educational Technologies*), and a research team focusing on Technology Enhanced Learning were created at that time. Among the first successful creations were: virtual practicals financed with aid from the Rhône-Alpes Region Council, the largest administrative division in France; and the first implementation of continuing education in Medicine programmes. Nevertheless, these successful actions were not considered as a core priority in the institution's strategy.

## 2. IMPLEMENTED ELEARNING STRATEGY

In 2002, with the democratization and boom of new technologies and with an increasing demand of the 200 teachers assisted by the NTE, the university board decided to give a new dimension to the use of ICT for teaching and learning within the institution.

As a large university which does not select their undergraduate students at entry, the board of directors was aiming, and still aims, to foster the chances of student success and to improve as well the overall quality of teaching and learning. One of the main characteristics of the students which had to be taken into consideration is their wide diversity in terms of knowledge and competencies. Therefore their ability to learn and their learning paths for a given topic would vary consequently.

The eLearning policy and strategy was defined by the *Conseil des Etudes et de la Vie Universitaire* (Council of Studies and Academic Life), and was then integrated into the quadrennial contract with the State. This was a key factor to ensure the sustainability of the eLearning strategy and to make sure that all stakeholders in the institution would feel concerned by it. The eLearning strategy was later included in the formal contract signed with the Regional Council. This strong political involvement was the result of willingness of both the president, Mr. Domitien Debouzie, and the university board of administrators, as well as a real mobilization of researchers and teachers for technology based teaching and learning.

The main strategic priority is the use of ICT to enrich and complement face to face sessions for all kinds of teaching experiences. Technology is “just” one dimension used by pedagogy and no pedagogical model has been imposed on any teacher. This is without any doubt a key success factor to ensure the wide spread use of ICT.

The eLearning policy is also based on the strong desire to centralize and federate any action or creation made using ICT based teaching to prevent a dispersal of initiatives, success, and a potential duplication of efforts within the university. Last but not least, concrete accompanying and incentive measures for teachers were also introduced to maximize the chances of success.

As a key starting point, a dedicated autonomous service was created in 2002, called PRACTICE (Production, Realization, Assistance, Consulting for ICT based teaching) working in close cooperation with the Academic Service of Pedagogy (*SUP – Service Universitaire de Pédagogie*). Since its creation PRACTICE has had its own board and budget. In 2002, PRACTICE was composed mainly by a team of full-time people, all involved at different levels of eLearning and eTeaching. An intense training policy was then introduced for the team members to foster their knowledge and expertise. To face the general increasing demand, numerous part-time workers were recruited and a subsequent redevelopment and reorganization of PRACTICE was carried out. The service is now split into two entities in order to be present on the two main campuses and to ensure a better “local responsiveness” to the needs of teachers.

The concomitant development of the IT-infrastructure facilitated the penetration of PRACTICE’s work and developments within the campus.

### 3. CHALLENGES AND TRIBULATIONS

Given the ambitious strategy strongly supported by the university board, the challenges have been numerous and complex to manage. The institution is indeed huge and the wide spread use of eLearning is a real new issue, especially if eLearning must be disseminated and made accessible to all. For the first time, eLearning must be one of the real core activities and such spread has never been an objective before. The previous initiatives, even if successful, were still limited in terms of scope in the university.

The profile of teachers, the needs and constraints of the different fields, the adoption of eLearning not only by teachers but also by students (the two populations being heterogeneous) are among the most difficult challenge to be tackled as well. Potential scepticism in the teaching staff must be fought as well, and especially their desire to see eLearning considered as a regular activity in their yearly mandatory time of teaching.

Of course, the traditional organizational and economic constraints are also critical. France is still one of the few countries in the world where the state is spending more for a secondary school student (8.000 €/ year) than for one in higher education (6.800€/year). Among the OECD countries, the average is 7.300€, while in Europe it is closer to 9.000€. This is still far from the situation in USA which spends more than the double (18.500€), although massively financed by more expensive tuition fees. In France, most of the university budgets come from the state or local authorities, as tuition and fees are minimal (200€/year for those who do not get a scholarship, based family income). As a result, the budget per student at French public universities is still very low compared to other countries and one of the main preoccupations of the institution is to find suitable organizational and technological solutions to ensure the same level of service for all teachers and all students.

The Virtual Learning Environment (VLE) is naturally one of the key pillars of the eLearning strategy. The choice to be made for the VLE must not only take into consideration the previously mentioned constraints but also ensure preservation of resources and continuity of service.

## 4. ESTABLISHED PRACTICE

### *ORGANIZATIONAL APPROACH*

PRACTICE is now composed of more than 30 full-time persons, including three administrative staff, one person in charge of public relations and one person in charge of the organization of the different courses offered. The main organizational characteristics are a board composed by the Head of Department, the Chief Technical Officer and the Head of Development, two project managers and a team of IT developers, administrators and content creators. The two project managers take care of the teachers' requests when they want to create or update course materials. They analyze the demand, make sure it is clearly detailed and precise enough to be able to evaluate the associated person-day effort, and identify the different creation steps and validation points. In order to develop not only a real knowledge and understanding of constraints and desires of professors but also to provide a customized service and relationship, the project managers are split into two areas: one project manager deals with Health fields, the other with Science and Sports.

The staffing of the content developers and web-developers is made by the project managers and validated during a brief session with the developers to ensure that estimations are accurate. One must note that a maximum of flexibility is kept, to make sure that planning can be easily updated to face last-minute change or delays etc. There is a very dynamic and effective team-spirit with strong mutual support and a desire to enhance capabilities and features offered to users. The PRACTICE team's drive to reach and go beyond its objectives is impressive. Its organization seems to have been well-thought given the context and its objectives. One can note the pertinent roles played in the past by Jérôme Randon, the former Head of PRACTICE Unit, by Martine Heyde, his successor, and Christophe Batier, Head of Development, who act as facilitators within the institution, focused on getting concrete results and apparently very complementary. The break-down of dedicated project managers also seems to be a good and appreciated solution, not only because of the different campuses but also because the different disciplines can require different expertise. It also fosters personal relationships and customized service provided by PRACTICE. Professors

pointed out the important roles of Ms. Cecile Chevanas and Ms Nora Van Reeth as being particular strengths of the PRACTICE unit.

### ***A TAILORED MADE LCMS: SPIRAL***

Concerned about the life-long preservation of resources and its requirement for the massive deployment of its eLearning services, the University of Lyon 1 conducted a 10-month benchmarking study of the different available Learning Content Management Systems (LCMS) in 2003. While commercial offers were considered as too expensive as a mid-term solution, the free open-source solutions were not offering enough features to be seen as a credible option at that time. As the department core competencies included web development, a few features were already available. In 2003, SPIRAL (*Serveur Pédagogique Interactif de Ressource d'Apprentissage de Lyon 1 – Interactive Pedagogical server of Learning Resources of Lyon 1*) became the only LCMS financed and supported by the institution. This decision also took into consideration the close relationship existing between the features implemented and the requests from teachers and learners. An incremental approach was chosen to include, step by step, new features and various improvements thanks to the feedback received. The SPIRAL homepage is illustrated in Figure 1.

Serveur Pédagogique Interactif de Ressources d'Apprentissage de Lyon 1

# Spiral

IDENTIFIANT:

MOT DE PASSE:

[Mot de passe perdu] [Accès rapide]

RECHERCHER:

Modules SPIRAL
  Sites web
  UE

Connexion par le service central de l'Université (ma 1ère connexion - Authentification CAS)

Avril - Juin 2006

## LE PLAN DE FORMATION

Découvrez vite les formations PRACTICE

- ▶ La 3eme journée Spiral...comme si vous y étiez... [\[plus d'infos\]](#)
- ▶ Nouvelle brique: WIKI [\[plus d'infos\]](#)  
30/05/06 - Cette nouvelle brique permettra à tous vos étudiants de diffuser de l'information, mais aussi de créer et modifier un projet de travail collaboratif
- ▶ Apprendre l'urgence médicale à distance [\[plus d'infos\]](#)  
23/01/06 - Une première mondiale à l'Université Claude Bernard Lyon 1
- ▶ Nouvelle brique : Gestion de Projets  
02/03/06 - Planifiez des projets liés à vos modules, gérez les projets tutorés de vos étudiants...
- ▶ Practice Infos Flash [\[plus d'infos\]](#)  
10/05/06 - Nous vous présentons ce mois-ci la technologie FLASH, utilisée par les enseignants de l'université dans leurs réalisations pédagogiques.

### Côté enseignants

[Créer un compte enseignant](#)

- Le plan de formation Avril-Juin 2006**  
Découvrez les formations proposées par le service Practice
- Vidéos des Matinées TICE**  
Découvrez les vidéos Richmédia des matinées TICE du 06 et 16 juin (retours d'expériences des appels à projets TICE 2005)

### Côté étudiants

[Comment vous connecter sur SPIRAL](#)

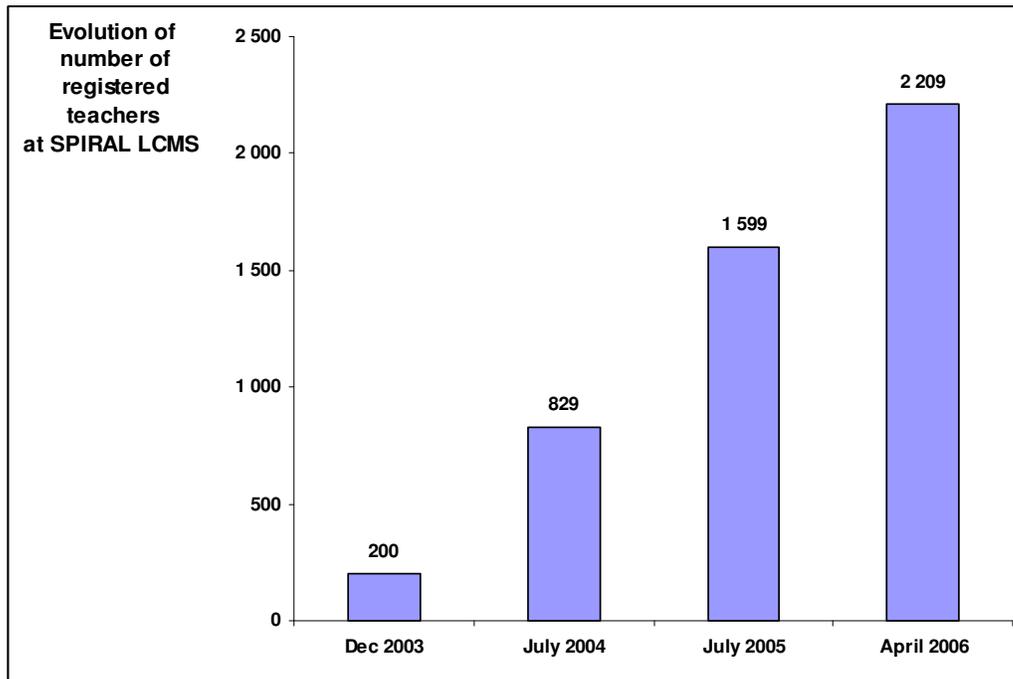
- Offre de formation**  
Les parcours pédagogiques  
Les unités d'enseignement (UE)
- Contenus pédagogiques en ligne**  
Tous les modules de cours disponibles en accès libre sur la plateforme
- Mon Bureau Virtuel**  
Cliquez ici pour avoir un accès direct à votre BV

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Figure 1: Home page of SPIRAL, a tailored made LCMS

SPIRAL has become the key pillar of all eLearning activity on campus. Although all registered students automatically get an account, teachers must make a request to get one. Figure 2 shows the evolution in the number of accounts for teachers and Figure 3 shows the evolution of the number of learners logging into SPIRAL.

The increase in the number of registered teachers is quite impressive, reaching 166% over the last two years. With more than 2200 teachers authenticated, almost half of the teaching staff is a regular user of the eLearning services.



**Figure 1: Evolution of the number of teachers registered at SPIRAL LCMS**

The students are also using SPIRAL more and more on a regular basis. While only 4,500 students were using SPIRAL in 2003 when the project was launched, there were more than 18,000 using it 2 years later (Figure 3). This impressive increase (+311% in 2 years) is expected to rise in the coming years with the new content created and the key role that SPIRAL is now playing in the learning experience of students.

As a result, in March 2006, the SPIRAL portal had almost 97,000 authenticated connections from Students and almost 11,000 from Teachers.

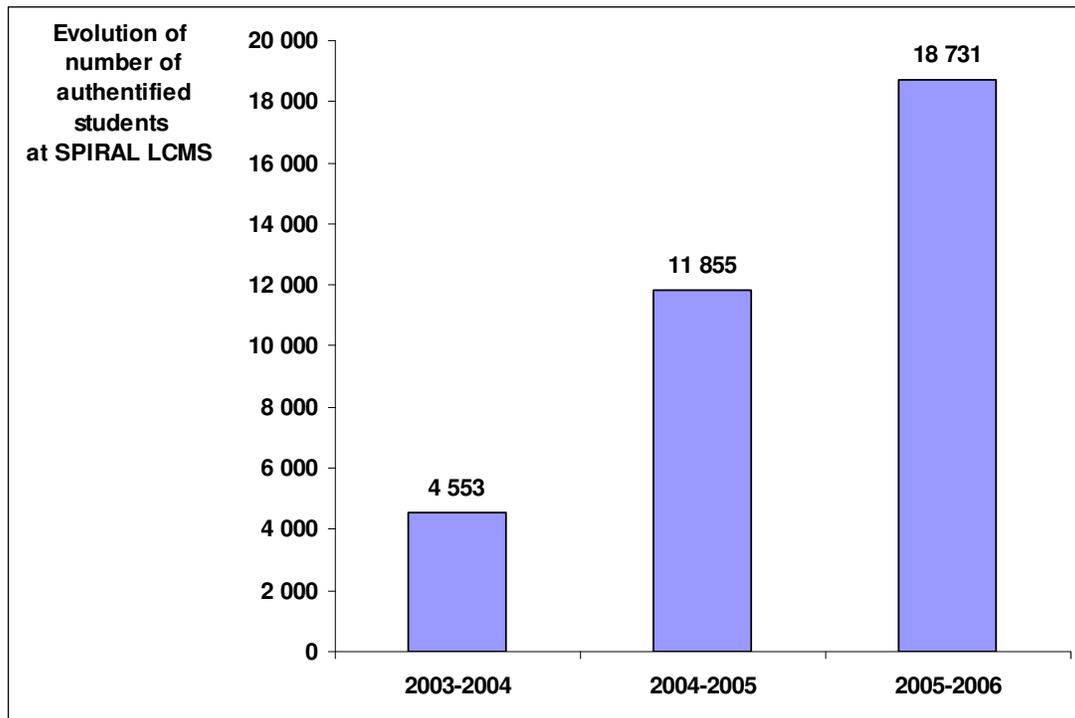


Figure 2: Evolution of the number of students using SPIRAL LCMS

### ***MOVING TO AN E-LEARNING BASED INSTITUTION: CHANGE MANAGEMENT***

Managing change has been a key issue for the PRACTICE department to maximize the chances of success of the overall strategy. This strong commitment has been materialized by a set of actions which if they had been taken separately would not have had a significant impact, but gathered together has fostered change management within UCBL.

The spreading and sharing of information among the teaching staff has been a key priority. Teachers, who are also researchers, have multiple activities which can include administrative tasks as well. One of the main tasks was to make sure that professors be aware that eLearning will not impose a given pedagogy, will allow them to keep their total freedom, even if it might still change some aspects of it. Numerous initiatives, such as leaflets, internal communication, training sessions in small groups, individual training sessions, and coaching were introduced. Follow-up on those actions was organized as well. The training sessions do not focus only on the technological aspects but also help professors discover new aspects,

new possibilities, potential constraints and the services offered by the PRACTICE department. From February 2002 to December 2005, 68 days of training were organized by the PRACTICE unit for 784 teachers.

### ***TEACHER SUPPORT***

Providing support to teachers has been carried out in different areas: creation of learning resources, online upload, communication on creations and use. Two processes have been used: call for proposals and on-demand help.

A call for proposals targeting teachers who would like to create (or update) new learning content is organized each year by the PRACTICE unit. In 2006, 74 projects were submitted involving 260 teachers. A wide majority was accepted and realized by PRACTICE. Table 1 shows two strong evolutions and trends. Not only has the number of funded projects increased tremendously (from 16 in 2003 to 69 in 2006, +331%) but also the proportion of projects funded has risen significantly (from 53% in 2003, to 93% in 2006), as illustrated in Table 1. This can be explained by a better understanding by the teachers of the requirements for eLearning creation.

*Table 1: Evolution of the projects submitted to the call for proposal*

	2006	2005	2004	2003
<b>Number of projects submitted</b>	74	54	40	30
<b>Number of funded projects</b>	69	52	32	16
<i>Health</i>	55%	37%	28%	6%
<i>Sciences</i>	45%	63%	72%	94%
<b>Number of teachers involved</b>	260	139	N/A	N/A

Source: Practice Department – University Lyon 1

Punctual on-demand support and help has required a dedicated organization within the PRACTICE team, combining flexibility and efficiency to make sure that all team members

can be available but also be productive enough to meet the demands. Advice and consulting services can be provided over the phone through the project managers. Teachers are always welcome in the PRACTICE offices when they have a special request or problem. Dedicated PCs are available to make demos or to solve any kind of issues.

Adapting, accompanying, and diversifying the services provided to teachers are the main goals and assets of change management within UCBL.

### ***ENCOURAGING THE USE OF E-LEARNING***

In most French universities, among the most commonly encountered barriers for a wide spread use of eLearning is a lack of structure given to professors. They lack an awareness of eLearning features and the recognition they can get for the time they devote to eLearning in their mandatory annual teaching hours. In UCBL, all new teachers hired benefit from a 40-hour teaching discharge to follow a pedagogy training seminar in which the ICT-based teaching plays an important role.

Within the framework of the yearly call for proposals, the university offers more than the help and expertise of PRACTICE to teachers. Those whose projects are accepted can then apply for a teaching discharge to realize and work on their eLearning project. As a result, 900 hours have been granted each year since 2002 and those hours spent on ICT-based teaching are therefore considered as a regular face-to-face teaching sessions.

Furthermore, to foster the use of eLearning, state-of-the art devices and materials (MP3 players, Cameras, Archos, Tablet PC, votingbox, laptops) are made available to teachers so that they can evaluate them and find a suitable pedagogical use-case for them. Laptops can be provided to teachers on a yearly-basis if required.

Last but not least, live statistics about usage of learning resources are available and are very often a very important additional motivation factor for teaching staff. It has become a real incentive for them to see how their work is actually used. This feature is a part of SPIRAL LCMS and is of course totally automatic.

PRACTICE also funds the teachers' participation at national and international conferences and congresses dealing with pedagogy. They can therefore share their work and outputs.

The PRACTICE unit organizes each year a one-day conference on Campus for teachers so that they can discover the new features and services offered, make special requests and discuss with colleagues from other disciplines. A small ceremony is organized during the conference to highlight the excellence of a given learning resource, or the resource which has had the highest number of visitors, the most innovative etc. Around 130 professors attended the conference in 2006. The high level of teacher involvement is very impressive. They are interested in all the new features and are truly happy when one of their requests of last months is finally implemented and made available. The crowd was very heterogeneous, both in terms of discipline, background, age etc. Many of them point out how students are becoming demanding of online resources. Some teachers have even been pushed by student “complaints” to open a SPIRAL module which has really changed their way of teaching and interacting.

### ***CONTENT CREATION AND EXPLOITATION***

To ensure up-to-date quality content, the PRACTICE unit has chosen to work in an iterative approach (SPIRAL process) to foster the update of learning objects. The first main step is the creation of a first working prototype so that the teacher can try and test the resource with students in a real environment. After his/her feedback, the learning object is quickly updated to take into consideration potential problems. Each new version is tested in real conditions.

The quality of the content is impressive. It can incorporate complex animated and interactive 3D objects, which add a real new learning dimension and undoubtedly additional pedagogical value.

**Table 2: Evolution and typology of the content created**

	March'04	July'05	April'06
<b>Modules</b>	254	714	1,304
<b>Accessible modules</b>		550	939
<b>Accessible questionnaires</b>	248	494	912
<b>Multimedia objects</b>	9,274	25,648	90,003
<b>Forums</b>	117	266	341

Source: PRACTICE Department – University Lyon 1

A special focus was put on the modularity and granularity of learning objects. They can be composed, reused, and combined in different learning resources within the SPIRAL LCMS. Questionnaires are among the object that are the most reused of course. An important effort was invested in making the available object easily accessible and easily modifiable. Teachers are a strong incentive for IT and web developers to stay up-to-date. They submit new requests; they bring up issues that foster innovations within the whole team. PRACTICE unit members are also constantly seeking innovation and solutions: SMS-based exams, Mobile-based exams through Bluetooth mobile phones, and use of multimedia portable devices, in various pedagogical approaches.

### ***MANAGING CHANGE FOR THE STUDENTS***

The UCBL has been very active in the Digital Working Environment (*Environnement Numérique de Travail*), an initiative fostered and funded by the French Ministry of Higher Education and the Rhône-Alpes Region Council to enhance the seamless web-based set of e-services for university staff and students. UCBL set up and deployed such a system early in 2005 which is used in many others HEIs in the Rhône-Alpes Region council.

At the same time, with the democratization of the internet, students have become more and more familiar with e-Services and of course also with computers. 95 % of students with a SPIRAL account have a personal computer while 88 % have a personal high speed internet access at home. The university has also introduced financial aid purchasing computers or lending them. So far, 1,000 students have received a 400€ funding to buy a laptop.

Some teachers have therefore started to collect student requests and ideas to include ICT in their pedagogy. Thanks to the positive feedback from students, these first specifications have led to the several prototypes of the LCMS SPIRAL which since then have been updated and enhanced regularly.

It is interesting to notice that PRACTICE chose deliberately to focus first on teachers that were seen as enthusiasts before dealing with students.

Today, several major initiatives have been organized to foster the use of eLearning for students. Leaflets and posters presenting all services are disseminated on campus. A mandatory 90 minute training session is also provided to all freshmen who are following a multidisciplinary course.

Students can benefit from dedicated online help, or personalized support by e-mail or telephone.

### ***THE E-LEARNING ADVANTAGE***

Many surveys and studies are carried out regularly, online with the SPIRAL LCMS or during class through the professor's questions, to measure and evaluate the level of satisfaction of students. Students point out the very positive aspects and provide general feedback about the experience of eLearning. They appreciate notably the fact that all resources are grouped and available on a central common server using one common tool.

More surprisingly, students seem to express a certain sense of belonging to SPIRAL which fosters its usage as well. Nevertheless, they have proved widely a real preference for face-to-face sessions which are seen as more interactive, with eLearning as an additional asset. Indeed, eLearning allows them to have more autonomy, and therefore to have more

flexibility in their learning path. But it is still very difficult to measure and quantify precisely the additional benefits of eLearning.

Many teachers have mentioned the fostering of exchanges among teachers and learners thanks to online tools such as forum, chat sessions, etc. This is true in particular for classes with a large audience, students often being reluctant to ask a question in front of all their colleagues during the class. Some teachers have clearly stated that they feel more reachable and closer to their students. The relationship between teachers and students has in fact become stronger in some cases thanks to regular exchanges on forum.

Another very important impact of eLearning in the University Claude Bernard Lyon 1 is a real democratization of learning in some classes. One student following a required module taught during the first year of Medical School was quoted as saying “*impossible to do without SPIRAL. SPIRAL saved my life and made my task feasible*” declared Christian Scheiber, the professor responsible for this course. Because at the end of the first year of Medicine there is a very tough competitive exam, many fake duplicated lectures notes are disseminated by some students, and other students attempt to make sure that a part of the amphitheatre cannot hear the teacher, etc. As a consequence most of the students in the first year of medicine are, taking private lessons outside the university to increase their chances of success on the final exam. Thus eLearning has been a real means to give equal and fair access to pertinent and accurate information to all.

Last but not least, eLearning has been also a way to compensate the lack of budget or materials available in the university. Learners have access to real simulations on equipment that they do not easily have access to. For example, UCBL provides an online simulation of an oscilloscope, a very expensive piece of equipment for physics, which is used in Bachelor’s degree course. Without this online simulation, it would be physically impossible to ensure decent access to all students. Now, students can use the simulation as if they were using the real equipment directly.

## 5. KEY POINTS FOR EFFECTIVE LEARNING

Among the main key success factors that have been identified, the first one is without any doubt the strong commitment of Mr. Domitien Debouzie, the President of the university. His strong desire and the concrete measures taken (financial, administrative and organizational) have made all the strategy possible. On that particular point, the role of the Rhône-Alpes Region council must be stressed and must be set as an example of pertinent cooperation and local authority involvement.

Of course, this is far from being enough. This strategy would not have been possible without the human resources “in the field”. The work done by the PRACTICE team: their expertise, commitment, availability, reactivity; their focus on overcoming problems and to perpetually improve the services offered, the content created have, all been key pillars of this outstanding accomplished work. The complimentary of Ms Martine Heyde (and her predecessor Mr. Jérôme Randon) and Mr. Christophe Batier is without any doubt an important point as well. They have been real facilitators, thanks to their dynamism, charisma, formal and informal networks within the university.

Being able to convince a first dynamic core of teachers seems to have been crucial as well. Little by little, they have been able to show their colleagues, talk to them about the outcomes and benefits of using SPIRAL and eLearning. The fact that teachers were given consideration and that their requests were listened to by the PRACTICE unit is also a key success factor. The teacher is in the centre of the processes and feels as such. A minimum of constraints are set up for him to make sure he/she does not feel discouraged by an overly bureaucratic administration or by the complexity of tools etc.

Communication has relies on the combination of several elements to reach a maximum of students and professors: leaflets, poster, evangelism sessions, introduction training, personal training, mandatory sessions, informal and formal networks. All the teams work with strong pragmatism, conciliating flexibility and a given framework. Support for example is provided, in different ways to maximize the results.

Several threats and opportunities for the university have been identified. The PRACTICE unit does not yet have an expert in eLearning pedagogy. It is one of the short term goals of the department to hire a person with such expertise. Moreover, the PRACTICE unit seems dependent on the funding of the Regional Council. A significant part of its workers are short-term contract staff. One wonders what the effect of a drastic budget cut by the Regional Council might be. Opportunities in terms of diversification in funding could be considered as well if possible. The implication of the different stakeholders (national, local authorities) is nevertheless an almost ideal scheme. Eventually a private actor could enhance the partnership again and make it more stable over the long term. To foster the use of eLearning and in particular the proportion of teachers using ICT, one wonders if the current ways of evaluating teachers is the most pertinent (research activities being the ones which really count for career advancement).

## 6. CONCLUSION AND RECOMMENDATION

By widely spreading the use of eLearning both among the teaching staff and among the students, it is clear that the strategy followed by the University Claude Bernard Lyon 1 has been a success. Thanks to the support of the direction, strong national support, support from local authorities, the implementation of the planned eLearning strategy has been possible. Considering the involvement of professors in eLearning activities as a part of their “regular” tasks is strong commitment from the direction. The dedicated eLearning unit has proven its efficiency through its project-based approach, its high level of expectations in services provided, its expertise in content creation and its efficient communication policy, mixing various formats and methods. Thanks to a first group of early adopters among the teaching staff, eLearning has become a reality for now more than half of the professors of the university. By being reactive, creative and innovative, the different actors of the implemented strategy have implicitly pointed out the ideal ingredients for a successful eLearning strategy at a large public university in Europe or elsewhere.

The strong involvement of the University Claude Bernard Lyon 1 in eLearning will be carried on with the next institutional plan and with the 2007-2010 Regional plan for Higher Education and Research. Among the main goals, the perpetuation and long-term stabilization of the PRACTICE unit and provided services will be a key priority to ensure a successful future for University Claude Bernard Lyon 1.

## 7. ADDITIONAL INFORMATION

### *Overall Cost of the e-learning strategy*

The cost of all the eLearning services spread widely over the last 4 years would not have been possible without the strong support and funding of the Rhône-Alpes region council. It has followed the project closely and efforts made by the university and the region continue to increase. In 2006, the global cost of this ICT-based learning strategy reached 1,215,000 €, without taking into account the general expenditures and overheads paid directly by the university, i.e. an average cost per student close to 44€.

### *Availability of SPIRAL LCMS*

The LCMS developed by the eLearning unit, SPIRAL, is available for free for any Higher Education Institution which gets in touch with PRACTICE. The source-code is available upon request. The University Claude Bernard Lyon 1 is even providing hosting services for instances of the LCMS for some French schools. A strong desire to share and to get feedback and enhance the platform has been expressed by the members of PRACTICE.

### *Moving Towards international e-learning based cooperations*

China and Tunisia have recently started to share PRACTICE expertise and experience. Several SPIRAL implementation projects have already started. Mr. Laurent Flory is leading this initiative for PRACTICE.

### *Contacts*

Additional information about UCBL activities can be obtained by contacting the following persons:

- Dr. Martine Heyde, head of the PRACTICE unit, [martine.heyde@recherche.univ-lyon1.fr](mailto:martine.heyde@recherche.univ-lyon1.fr)

- Christophe Batier, head of IT development unit, [christophe.batier@recherche.univ-lyon1.fr](mailto:christophe.batier@recherche.univ-lyon1.fr)
- Nora Van Reeth, eLearning project manager, [nora.van-reeth@recherche.univ-lyon1.fr](mailto:nora.van-reeth@recherche.univ-lyon1.fr)
- Cecile Chenavas Morin, eLearning project manager, [cecile.chenavas@recherche.univ-lyon1.fr](mailto:cecile.chenavas@recherche.univ-lyon1.fr)
- Laurent Flory, Chief Technical Officer, [laurent.flory@recherche.univ-lyon1.fr](mailto:laurent.flory@recherche.univ-lyon1.fr)

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