
The logo for the eLeNe-EE project. It features the text 'eLeNe-EE' in a blue, sans-serif font. The 'e' is lowercase, while 'LeNe' are uppercase, and 'EE' are uppercase. There are two small yellow squares: one above the 'e' and one below the 'e'. A horizontal blue line runs through the text, with the yellow squares acting as markers where the line crosses the text.

E-LEARNING PROGRESSION IN UNIVERSITY OF NICE SOPHIA ANTIPOLIS: FROM A NEW WAY TO LEARN TO TECHNICAL IMPLEMENTATION

Thierry GARROT

GRÉMAN, University of Nice Sophia Antipolis

Maria PSILLAKI

University of Nice-Sophia Antipolis-GREDEG-CNRS

Sylvie ROCHHIA

University of Nice-Sophia Antipolis-GREDEG-CNRS



***E-LEARNING PROGRESSION IN UNIVERSITY OF NICE SOPHIA ANTIPOLIS:
FROM A NEW WAY TO LEARN TO TECHNICAL IMPLEMENTATION***

Thierry GARROT

GRÉMAN, University of Nice Sophia Antipolis
IAE de Nice, avenue Emile Henriot 06050 NICE Cedex
Thierry.Garrot@unice.fr

Maria PSILLAKI

University of Nice-Sophia Antipolis-GREDEG-CNRS
250 rue A. Einstein, 06560, Valbonne
maria.psillaki@gredeg.cnrs.fr

Sylvie ROCHHIA

University of Nice-Sophia Antipolis-GREDEG-CNRS
250 rue A. Einstein, 06560, Valbonne
rochhia@gredeg.cnrs.fr

We are grateful to Christophe BANSART (Director of the ICT for learning Center) and Olivia ROUX (Assistant) for excellent research assistance

Résumé : Cette communication porte sur une étude de cas à propos du développement du e-Learning à l'Université de Nice Sophia-Antipolis. Elle utilise pour cela un tableau de bord prospectif élaboré par des équipes d'universitaires français, italiens et polonais impliqués dans le projet européen eLene-EE. En plus d'une vision descriptive, les auteurs cherchent à évaluer l'intérêt du tableau de bord pour la conduite au niveau stratégique et opérationnel des activités de e-Learning.

Abstract: This paper is a case study on the progress of the e-Learning activities at the University of Nice Sophia Antipolis. It uses a balanced scorecard (BSC) worked out by the French, Italian and Polish university teams involved in the European eLene-EE project. Our aim is not only to describe the trend but also to evaluate the accuracy of the BSC in strategic and operational management for e-Learning activities.

Mot-clés : e-Learning, pilotage, enseignement supérieur, tableau de bord, stratégie, contrôle.

Key-words: e-Learning, management, higher education, balanced scorecard, strategy, control.

1. Introduction

The main purpose of this paper is to answer for the period 2004-06 in the context of the University of Nice Sophia Antipolis the questions: Are e-learning activities progressing? And if yes how are e-learning activities progressing?

To reach these objectives, we choose a particular way a Balance ScoreCard (BSC) that provides information for managers.

This BSC, adapted for e-Learning activities in High Education Institution, is inspired by KAPLAN R. S., NORTON D. P. (1997). They developed a scorecard, which gives a balanced representation of the life of a company by combining the indicators from 4 perspectives: financial, customer, internal processes and organisational learning.

Bring into our e-Learning context, the BSC used adapted the 4 dimensions detailed into specific indicators. In the most summary form, we should present it in the table below:

Financial	Customer / Student
<ol style="list-style-type: none"> 1. Proportion of expenditure of the establishment allocated to e-learning (general running costs, investment and maintenance of investment) 2. Proportion of profit generated by e-learning in relation to total profit. 	<ol style="list-style-type: none"> 1. Proportion of students enrolled in e-learning/ Mixed formula/ enhanced face to face in relation to total numbers. 2. Proportion of instructors using e-learning/ Mixed formula / enhanced face to face 3. Proportion of courses offered in e-learning/ Mixed formula/ enhanced face to face 4. Number of complementary Internet services offered (administration, CROUS, library, leisure...)
Internal business processes	Learning and growth
<ol style="list-style-type: none"> 1. Pedagogical matrix: Proportion of digital media available and rate of evolution per category in terms of media and tutoring offered. 2. Infrastructure dedicated to e-learning measured in terms of capacity and charge rate for the servers, network and staff. 3. Training: Proportion and average number of training hours followed by the student, administrative staff and teachers in the use of e-learning tools. 4. Degree of overall satisfaction with e-learning on the part of e-tool users. 	<ol style="list-style-type: none"> 1. Degree of university participation in an e-learning related event (all types of communication). 2. Number of national or international e-learning projects organised by the university. 3. Number of new e-Learning partnerships with public or private organisations.

Table 1: Balanced scorecard on e-learning development in higher education (full version in appendix)

This work was done in the “workpackage 3 (WP3)” of the eLene-EE¹ project. It is one of the three projects of the network named “eLene”² for “e-Learning network”, funded by the European Commission in the framework of the e-Learning programme.

The three partners involved in WP3, the METID centre at the Polytechnic University of Milan³, the Polish Virtual University⁴ and the CANEGE consortium⁵ are all in the emergence and structuring of their model of learning via the Internet. They clearly need to show, within their own establishments, how their e-learning activities are progressing. All eLene-EE partners collectively decided to focus the study on higher education establishments and to adopt a resolutely managerial approach in a European perspective.

This decision was taken because e-learning activities brought important stakes for the future of higher education establishments, and there is an apparent lack of tools to monitor the development of e-learning activities. Consequently these changes will lead to more and more

¹ For further information, please see the website: <http://www.elene-ee.net/>

² For further information, please see the website: <http://www.elene-centre.net/>

³ Centro METID (Metodi e Tecnologie Innovative per la Didattica) -Politecnico di Milano

⁴ Marie Curie Sklodowska University in Lublin, on behalf of the Polish Virtual University

⁵ University of Nancy 2 and University of Nice Sophia Antipolis on behalf of the CANEGE consortium.

changes in the way university operates. Universities will find themselves in an environment in which information circulates faster and where changes with a financial impact occur more quickly. The management, solely based on an annual budget with a balanced distribution of resources, will be insufficient to have an accurate management in an environment where changes will inevitably accelerate. So, WP3 focused efforts on a Balance scorecard approach.

Now through the BSC elaborated in the eLene-EE WP3, we will present the case of the University of Nice Sophia Antipolis. From historical aspects, strategic aspects and Impacts and issues, we should be able to draw the e-learning evolution observed from 2004 to 2006 in our establishment. We will conclude our paper by a discussion on the BSC interests.

2. Historical aspects

The University of Nice Sophia Antipolis was founded in October 1965 with two main missions: higher education and research. Second multidisciplinary University in France in students number with 27 000 including 17% foreign students, the University is spreading out all across the southern region of the French Riviera. With eight Teaching and Research Units, two Institutes and one University Polytechnic School, it covers disciplines as: Law and Political Sciences – Economics and Management – Business Administration – Letters, Languages & Arts – Human and Societal Sciences – Sciences, Technologies & Health – Faculty of Sports.

The University offers also full-fledged graduation courses from undergraduate to postgraduate studies (Doctorate) in career-oriented graduating programs. In didactics aspects, we found students who followed alternate vocational training, initial and continual vocational education also via e-learning at BA, Master's and Doctorate level ⁶.

Since 1999, University of Nice Sophia Antipolis was involved in the development of ICT mediated learning with a clear involvement of the Presidency of the University.

Before that, some professors had experienced ICT in learning in scientific and business fields in a self-learning perspective. Also in law few degrees had continuous training students at distance, and the pedagogical persons in charge were interested to improve the training quality provided. They wanted to test the usefulness of ICT in their Master degrees. In the same time, the faculty of medicine had organized a specific service to implement several ICT tools in its current functioning. They created a videoconference's room and they experimented open source software to set up online exercise and online pedagogical learning system.

Awarded in 1998 by the Ministry of National Education for developing the continuous education in its establishment, the presidency of the University decided to focus efforts on e-learning. With three new civil servants and an annual budget dedicated to the improvement of continuing education through e-learning, the first step was the recruitment of a specialized person in ICT for learning activities and the constitution of a specialized service.

The work was organized in two directions and in two dimensions. The new service had tried to support in both time: *individual initiatives* to give a better feeling about ICT in learning for each person motivated to do something and *collective projects* done in common with several actors in or out of university. It also worked in two dimensions **one bilateral** between the University and the Ministry of National Education through the four yearly contract regularly negotiated (1/01/2000 to 31/13/2003) and **one multilateral** it conducted the specialized service to network with others universities and partners to give answers to calls for projects applied by the Ministry. It is evident that both dimensions tried to solve the critic question: how could we finance e-learning activities?

⁶ For further information, please see : <http://portail.unice.fr/jahia/page3522.html>

In the individual and collective direction, the two parts were lead differently.

The *individual one* was organized around an E-learning Commission with representatives of each establishment of the University (see above 10 structures). It gave micro funding to original projects using ICT to support learning in one structure of the University.

The *collective one* was directly conducted by the specialized service. It represented the presidency of the University and it associated others persons from Teaching and Research Unit or Institute concerned. These projects were possible thanks to the networking capability of the responsive of the ICT learning service. They had ambitious objectives in accordance with National political orientation and they needed a high level of coordination between partners in order to reach the objectives given by the Ministry.

In the **bilateral** and **multilateral** dimension on funding aspects, the expertise of the person in charge of the specific service had been determinant. To start, this person has taken the initiative for a commitment of the University in the e-Learning construction, so she decided to draw up all ICT and E-learning part of the four yearly contract with one part on videoconference investment for each campuses (see the localization of the university above, “*all across the southern region of the French Riviera*”) and another part to support initiatives for ICT integration in learning practices.

On the **multilateral** aspect, the work began by the introduction of the University in the existing networks. After a first time to choose partners, from other universities and others structures, few answers had to be built for the Ministry. It applied in the year 2000 for the constitution of French Virtual Campuses. The main purpose was to offer complete degree fully online via Internet.

The University of Nice Sophia Antipolis was one of the first universities in the program of National Education in the implementation of virtual campuses in French Universities. Because of investments required, the partners involved in the constitution of virtual campuses decided to mutualize efforts to provide common training courses and to propose diplomas in an harmonized approach. After the two years of call for projects from Ministry of National Education, University of Nice Sophia Antipolis through its ICT learning specialized service was strongly involved in three virtual campuses (CANEGE: Economy and Management, ESQUAD: Quality and Risk in Healthcare and PEGASUS: degree to access to university). The specialized service was less implicated with two others: MIAGE Computing in Business field and PCSM: Undergraduate in Sciences in self-learning.

At the end of 2003, University of Nice Sophia Antipolis had few diplomas provided by web in Economics and Management (two years after school-leaving certificate), in Business Administration (Master degree for lay people in Business but post graduate in another field, something close to an MBA), in Medicine (Master degree specialised in Risk and Quality in Health) and for the access to the university in Literature studies. Others things existed from others virtual campuses, but they didn't provide whole courses to get a degree at the university. One or two others experiences were conducted by Teaching and Research Unit or Institute in itself and without cooperation, but they had strong problems to follow the project. Universities involved in Virtual Campuses began to offer theses numerical resources to learners with perception of specific fees. An E-learning student was charged for the standard universitarian fee plus an extra contribution for ICT services provided.

University of Nice Sophia Antipolis had a few number of students on web degrees, at least less than 50 had applied on the beginning of the universitarian year in 2003. But, it gets several ICT courses integrated media and with virtual campus partners they developed an adapted pedagogical approach for Online courses.

At the same time, with financial means from the four yearly contract between the Ministry and the University, the university encouraged and sustained various initiatives of faculties. On

the web-enhanced part, Scientifics improved number of self-learning resources for students, and others teachers tried to implement simulation games by web or didactics supports for students in alternate vocational training during the period out of University. The main idea was to coordinate, highlight and if possible mutualize ICT uses experiences in learning with reinforcement of own E-learning Commission.

The development of e-Learning during these 5 years (1999-2004) was enough important to give rise to a service devoted to e-learning activities. However, the new four yearly contract (2004-2007) and the new politic of the Ministry of National Education have driven University of Nice Sophia Antipolis to change some of its strategic decisions and notably to review this organisation as we are going to see it on the basis of following data.

3. Strategic aspects

From our BSC approach, financial and internal business process dimensions designed Strategic aspects. **The financial perspective** would appear to be fundamental in demonstrating the emergence of e-Learning. **The internal process perspective** attempts to monitor the way in which the financial resources mobilised by e-Learning are used within the organisation.

First when we have a look on the **financial data** (Figure 1 indicators F1 and F2), we see the confidentiality of the e-Learning activities in the University budget. Even if in the University of Nice Sophia Antipolis common feeling, e-Learning activities are quite expensive. At least, the reality is that less than half percent of the budget is dedicated to e-Learning on the period. And when we compare expenditures and incomes, we should realized the low level of own resources put by the University in e-Learning. When we know that the annual University budget is balanced, we may conclude that the higher financial effort consent is not more 0,22 percent on 2004-2006 period.

So even if in the other dimensions, we will observe progression in number of students, for example, we can say that in the University of Nice Sophia Antipolis case the financial aspects are not determinant to explain the e-Learning progression in the Institution. We should have to balance this position because during the period the University budget has increased and political institutions (Ministry and Region) have support the e-Learning projects.

Effectively, in the early beginning of the period, the Ministry of Education changed his strategic approach to integrate ICT learning uses in universities with invitation to tender Numerical Universities in Region (UNR) and Numerical Thematic University (UNT). First was devoted to share hardware and software investments in ICT and networking between all universities of the same French Region. Second was dedicated to bring together existing numerical resources in the same topic in order to create Thematic Database of pedagogical resources available on Internet.

University of Nice Sophia Antipolis was involved, by their ICT learning service, in the constitution of the UNR from the East South of France and was active in slightly all the existing UNT, we present them by date of creation: French-language Virtual Medical School (UMVF), Numerical University Engineering and Technology (UNIT), French-speaking Legal Numerical University (UNJF), Digital Thematic University for Economics and Management (Aunege), Virtual University Environment and durable Development (UVED).

With its participation on UNT, Nice ICT learning service can help teachers who want to put their courses on Internet specifically on pedagogical, technical and financial aspects. This service follows initiatives from the early beginning to the complete project realization.

So we should observe this on the **internal business process perspective**. Four aspects are distinguished according to this viewpoint: the quality of the learning media, the quality of infrastructures, training efforts and user satisfaction about training tools.

Our literature review and our experiences showed that behind e-Learning, you could find a lot of distinct realities. So, to be more relevant in terms of what sort of e-Learning tools we are using, we made a typology with media aspects and interaction with 3 levels on the both:

- *A low level* of mediatisation corresponds to a textual medium taken from a word processor or a presentation with slides, *a medium level* also includes a voice or video recording of the lesson, *a high level* benefits from a co-ordinated mediatisation approach offering student interactivity or simulation.
- *The low level* of interaction between teacher and student corresponds to the absence of any tutorial system, *the medium level* offers tools like a messaging service, discussion form or chat room (direct textual communication via internet, a kind of instant message service for a discussion between several people at the same time) and finally, *the high level* of interaction consists in using collaborative tools to create content, such as Wikis (dynamic website, a collaborative communal tool allowing users to modify the contents of the pages) or blogs (a media form rather like a personal e-diary or a small private forum that can be accessed by others on the Web, allowing interaction between reader and publisher). [DUCREAU F., GARROT T., LAUCH B. (2007)]

Figure 3 indicator I.1.a and I.1.b show a balanced situation on 2004 and 2005. The University have pedagogical resources with a good level of media, the most part of the support are on high and medium level. On the interaction part, the main model is using traditional tools for interact on Internet. They are not strong changes before 2006 as present on the evolution rate. All investments have been done before 2004 and during two years, the situation was quite stable.

But in 2006, it appears strong efforts on number of resources put on Internet (see Figure 3 for data indicator I.1.a. and I.1.b., and Figure 4 for graphs on top of the page). We observe both on media side and interaction side a huge increasing of means to learn. This was done on a simple way because numbers increased in low level. So professors get text or slides presentation used in traditional courses and put it on Internet. At this stage they didn't plan and organize interaction with their students. This fact could be explained by the introduction of a technical tool a "Virtual Desk", which is detailed on the innovative part below.

So in terms of quality of the didactic tools used in the University, we can say that after a first investment on such up level of resources, the second phase is oriented on number more than quality provided.

If we follow studies of data set on the technical aspects (see Figure 4 indicator I.2.).

In the hardware side, the situation is stable. The charge rate of servers seems very low if they are uses so we don't comment it. The network capacity is strongly improve (multiplication by ten), that bring a real comfort on Internet uses especially when you use high-mediated e-learning resources. The e-Learning team, staffs employed in the specializedservice, knows variation during the period that should be in relation with the marginal position of e-learning activities in University. When the person in charge of the service moved to another position, the question of reorganisation not only of the service but also of all e-Learning activities has arise.

The third aspect is the training of people involved in e-Learning. The table presented on the Figure 4 indicator I.3. on the appendix should present the main elements:

The proportion of persons (student, professor and administrative) is increasing slowly. Except for the professor, less than one percent of student and administrative have received a training session on e-Learning tools. With the evolution of the number of resources available, we see an increasing of people trained but it is not yet a majority.

On the teacher side, we can note something strange. We saw before that the university was involved in medium and high level of media and medium level of interaction, but professors aren't get long training session, at least around 2 hours per person. Of the situation of the University of Nice Sophia Antipolis can be understood by a brief literature review. Researchers are agreed to highlight that the centre of the teacher/learner relationship and the relationship to knowledge has shifted [BIZARD E. (2001), LEBRUN M. (2007)]: the university lecturer, previously at the centre of the knowledge relationship, as a transmitter during face to face classes with students, henceforth finds himself in the role of supporting the learning process. In the University of Nice Sophia Antipolis this cultural change required from professors wasn't be attended by an intensive training session during the period. But with the introduction of the "Virtual Desk", training means were dedicated to improve efficiency of professor on this tool.

To conclude this part on the strategic aspects, we have a look on the User's satisfaction. Unfortunately, first data were collected in 2006. Results are encouraging because up to 70 percent of persons are satisfied but a margin of progression exist with the 16% of people unsatisfied.

Focused on internal aspects until now, we can move to an external approach which tries to catch on impacts and issues of e-Learning strategy developed by the University of Nice Sophia Antipolis.

4. Impacts and issues

We know about the strategy developed by the University of Nice Sophia Antipolis during the 2004-06 period but we haven't analyzed the reaction of persons concerned by this program. Rather, it is question to see if e-learning activities have brought pedagogic innovations, if they have consolidated University reputation and even if they have favoured partnerships

4.1. E-Learning users of University

We want to study the behaviour of students and professors involved. If the first are strongly impacted by the implementation of ICT tools in learning in terms of services provided for their studies. As for teachers, they are in an equivocal situation. On one hand, they have to transfer knowledge through technology so they are like providers and on the other hand they are like customers for two reasons: Firstly, in the University of Nice Sophia Antipolis, teachers are volunteers for each lecture put online and secondly teachers' supply are frequently intermediate by developers who have a role of go-between. This specific situation constrained the ICT learning service to be adaptable. They would have to convince teacher of ICT interest in order to develop offer of courses in the university.

In order to do the link between the internal approach and the external one, we begin to analyze in Figure 2 the indicator C.2. Percentage of e-Learning students.

As we have underlined, e-Learning initiatives and developments have been quite various in the University of Nice Sophia Antipolis. So, we do not simply restrict ourselves to measuring the global numbers, but chose to define three categories of Internet uses in higher education:

- Online: refers to students or trainees who spend over 70 % of their scheduled course time in their distance pedagogical model via the Internet,

- Blended learning: refers to students or trainees who spend over 30 % of their scheduled course time in their distance pedagogical model via the Internet.
- Web-enhanced learning: refers to students who make use of the pedagogical resources (course media, cases, corrections, discussion forums) that are put on web by an instructor through a university site/server.

These three categories show how University decided to combine their didactics resources in terms of services provided to student and other customers. From the fully online service pack to ICT supporting traditional learning, it is drawing a rank of use off course, but also a set of customers or persons interested in. In the case of the University of Nice Sophia Antipolis, it may be two or three different markets.

First Online (more than 70% of courses provided by Internet) has progressed during the period, but the increasing is very slow, from 60 persons in 2004 the University of Nice Sophia Antipolis has more than 100 students at the end of 2006. This kind of training is dedicated to persons who haven't enough time to follow traditional learning at University. In our experience, it needs several conditions to become popular: communication, technical trustworthy, regular administrative and didactic interaction and we need also good networking condition and time on the customers/students side. Also, even if the University is doing effort to improve the didactical quality of resources, all students are not common with technical aspects and with the way to learn.

Second Blended, the last fact notes on online perspective opens another market for others learners. Most of them are like the first with little time available and they want specific conditions to learn, but they are not so confident with ICT aspects and they like to have real contacts with lecturers. It's why in 2005, a diversification in blended learning with a mixture of lessons provided by Internet and traditional lessons at university was experiment. So since 2005, we had a short offer of Diploma, which represent less than 20 students per year.

Third Web-enhanced is completely different because it is an added service for traditional student totally free in terms of payroll. The University doesn't ask for extra charges for the Web-enhanced learning. So as you can see on the Figure 2 (indicator C.2.) on the graph, Web-enhanced learning is the most popular way of e-Learning in our University. It is up to 98% at the end of 2006 in terms of number of students involved.

But with this description of how the University is attracting people thank e-Learning activities, does not show proportion of people involved in ICT uses. Please see on Figure 2, others indicators (C.1. and C.3.).

A short part of students (less than 5 percent in 2005) get services provided by Internet and it was in web-enhanced activities for traditional courses. At the beginning of the 2006, first effects of the Virtual Desk appear. After that, ICT uses in learning spread rapidly and slightly than 30 percent of students work with pedagogical resources available on Internet at the end of the period. The virtual desk (BV) will be integrated at the beginning of next year in a numerical environment of work with some others services.

Lecturers represent the community the most involved in ICT uses in learning. In fact, they had to move their traditional lecture to the numerical environment. So at the beginning of the period in 2004, existing offers of E-learning concerned about 5% of lecturers (see number of teachers trained to ICT tool) and now with the spread of the Virtual Desk more than 20% of professors used ICT tools with their students. But unfortunately, they do it on a few number of courses, at least in 2006 the average number of courses taught by e-Learning is less than an half by teacher.

Concerning the administrative personal, it's necessary to wait entering upon action of Virtual

Desk to see a significant number of persons implicated on ICT uses for learning. Before that, university had only secretaries of the pure E-learning Diplomas concerned. So between 2005 and 2006, we could see an increasing of the proportion of staff since less than 1% to 25%.

In customer dimension, an overlook of the Digital Workspace aspect is done by an indicator relating to the complementary online services offered to students engaged in learning via the Internet. Unfortunately during the period, University didn't increase the number of its.

Nevertheless, ICT uses in Web-enhanced learning seem to be less intensive than those in the Online Diplomas. In spite of efforts realized in ICT uses in learning, proportion of courses available for E-learning is small, the University of Nice Sophia Antipolis have only 7% on numerical form. It has a good margin of progression because large part of courses is represented by resources at a low level of media and a low level of interaction.

4.2. Innovation

On this part, we will analyse technical, organizational and didactics aspects.

From the technical side, the most important point during this period is the settlement of the Virtual Desk, called in French "Bureau Virtuel (BV)" starting in 2005 and generalized in 2006. It will be improved by increasing services provided on numerical environment of work. Students' access, except the email box existing before, to a numerical space of work with: agenda, repertory, forums, space of storage for own files, ability to create work groups and access to pedagogical resources offer by his lecturer with his universitarian subscription. The BV will be integrated at the next beginning of next year in a numerical environment of work with some others services.

On organizational side, the first service dedicated to ICT in learning move from a simple delegacy of the president cabinet to a formal and organized service shown in the general organization of the university. The four yearly contract gave opportunities to follow the policy of providing ICT services for learning activities. The ICT central service was in charge of initiating, supporting and conducting all ICT integration in learning activities, between the web-enhanced to the Online learning. The ICT central service provides integrated solutions for all students in the numerical environment of work and in the BV. It allows an open source platform for distance learning activities with maintenance call J@LON. It works on the development of an intelligent tool generating multi choices questionnaire used in a lot of disciplines (WIMS). It participates at meetings of UNT and collaborates to the UNR of the East South of France. It is now a structure dedicated to ICT and helpful for teachers who want to implement e-Learning, it is like a Centre of Resources.

Another innovation in terms of organization is the experience taken in management of collaborative projects between actors of Higher Education, even in International context. We should explain it below.

On the didactical side, University moves from a high quality self-learning representation of ICT in learning to a more pragmatic approach. The first representation was taken place at the beginning of the experience, before the period studied. The objectives announced were really ambitious approaching self-learning with mediated ICT tools, on a full time web degree with strong interaction between lecturer and student. The cultural changes supposed to reach that objectives were too important to complete perfectly each aim.

But the work done gives to the University opportunities of testing several solutions. So now, with a more pragmatic approach, we know that ICT in learning it is a way to solve problems, to improve the didactical quality and designed new services to new public: we should have to be cautious to determine the good means with ICT for the precise needs. Even if, the

economic aspects are not best point in mind, we are experienced on the cost and on the value bring by ICT in learning.

The last positive aspect is about the communication and the way to collaborate with others High Education Institution.

4.3. Reputation and relationship

On the last dimension of the BSC, a table shows the events where University is doing something on e-learning activities.

About conferences, University of Nice Sophia Antipolis is represented in average on 15 events, with great differences. In 2005, only four papers or slide presentations were done in conferences but in 2006, with the co-organization of an event, the number of paper increase to eighteen. We should compare this activity with the others partners and this situation seems to be quite low with few people involved in the communication aspect. E-Learning actors are much more concentrated on action than communication.

The other aspect presented in the table is the new partnership and new projects. The University have regularly new partnership and new projects, during the period trend is increasing. It should be a sign to show that University is developing its networking capacity. In fact, one of the common practices in e-Learning is the partnership form of project. As drawn up in the point about Innovation, University of Nice Sophia Antipolis learnt a lot about cooperation. E-Learning bring this way to work and political institutions reinforce this organizational form at the regional level with the UNR (Numerical University in Region) and at the national level with UNT (Numerical Thematic University). It was very challenging at previous period because universitarian structures were not common with this organizational form and a lot of question has to be solved in the same time with e-Learning project. At least, it was a very good experience for the establishment because now Nice is not henceforth the Extreme South of France but Nice is in PACA Region and near the North of Italy.

5. Conclusion and discussion of the BSC interest

Drawing a conclusion on University of Nice Sophia Antipolis is not so easy because elements of comparison with others universities are missing at this first level of analysis. The main purpose of our communication was indeed to present the case of our University.

Nevertheless, we should like to put this description in perspective with Lorenzo's work (2006). George Lorenzo describes the Online Education of nine American institutions in terms of business models. In fact, this contestable choice was support by ambitious goals of the EUROPEAN COMMUNITY COMMISSION (2001) and the referent position of US Universities in the e-Learning area.

The younger experience presented on the paper begin in 1997 directly on Online Education, they get funds from an external consortium. Others have experienced for years Distance learning on paper form or on video recording form and moved progressively to e-Learning form. Most of them are in a market approach focused on a well-known public with good forecast of incomes. One of vice provost questioned, said that for him time of investment is past and he should be very cautious with all new investments. These universities offer several kinds of services about e-Learning. We should find models for "For-Credit Fully Online Graduate Programs", or for "Non-Credit Professional Development Courses and Certification Programs", and also an e-Core tuition program focused on the needs of students who need help in learning or who want to applied for different lectures done on the same time.

The experience in e-Learning of the University of Nice Sophia Antipolis appears quite recent. It didn't have a Distance learning experience organized at the central level and it didn't have significant experience on video form tuition. The University presented seems to do its first experience on Distance learning with the numerical form: e-Learning. It was involved in several consortium of universities founded by the State. So, the business model is nearer a public one than a market one. The market studies and the forecast of incomes were done but not in a professional way so we had bad evaluation of the market capacity: less students than planned with a very slow increase.

The University of Nice Sophia Antipolis offers two kinds of services in e-Learning: the "For-Credit Fully Online Graduate Programs" and the "Web-enhanced learning for students" without extra fee. Finally, this university is quite exclusively on one market on e-Learning activity. Cases of American universities described don't give any information about web-enhanced learning or it seems to be more a service provided to student than a real market.

To conclude this paper, a discussion about the BSC used will be interesting. The tool use to present the case is the best output produce by the WP3 of the eLene-EE project. It is designed for decision makers in university and also for person who support e-Learning activities in High Education Institution. The version of the BSC give in appendix is voluntary done with proportional information. It is an external version without too confidential data.

Probably the main interest is the presentation: because in fives pages, four dimensions and eleven indicators, you have an overview of the e-learning development in one University. A President or a Provost should find in an internal BSC version a way to define how could he act on the field. What does he have to decide?

Another interest is the flexibility of the tool each institution could adapt her BSC and highlighting a part more than another and detailing another but it is done in a frame. So, you should keep all in coherence.

When you go deeper on the tool you should find interesting and quite original data provided especially on market side. You should consult the indicator C.2. (see Figure 2) with the distinction between student involved in e-Learning, blended learning, or web-enhanced learning also if you have a look about other customers (see indicator C.1., Figure 2, unfortunately empty in the University of Nice Sophia Antipolis) you should have a mean to know how many people are in a "Non-Credit Professional Development Courses and Certification Programs".

Another originality is the characterization of the didactical resources used by the University. Indicators I.1.a and I.1.b. show quality of pedagogical support develop and use by the university in two aspects mediatization and interaction.

At the end, we would like to drawn some ways to improve the BSC, but first we would like to point out difficulties known in the data collection. Especially in the French context, the culture of evaluation doesn't exist and tools available for management are very global, thus the methodology required by the BSC need a hard work on information system and on data collection.

But except this general purpose, we should go ahead on the classification of indicators in the dimension. Is student, administrative and teacher ICT training being in Internal and Business Process dimension as currently, or is it more appropriate in the Learning and growth dimension? The same for the indicator "C.1. People concerned by e-Learning", is it more on the Customer/Student dimension or in the Learning and growth dimension? We have also some doubts about the indicator "I.4. Users' satisfaction with ICT E-learning tools uses", it will be better to put in the Customer/Student dimension than in Internal and Business Process dimension.

At least in our case, a multidisciplinary university, it will be interesting and useful for

decision makers to detail some indicators by large discipline or faculty in order to see the development by sector. It should be useful to adapt communication and external initiatives to different partners or customer in terms of market needs or users needs.

This paper is one part of a stage in a process. The three others presentations done on the same spirit are our first test of the BSC, it would be useful to change some elements of the BSC to have a more relevant tool for High Education Institution when they want to manage their e-Learning activities.

6. Bibliography

BIZARD E. (2001). " La présence au temps de la distance ". [online] Actes des Deuxièmes Rencontres Réseaux Humains / Réseaux Technologiques. Poitiers, 24 June 2000. " Documents, Actes et Rapports pour l'Education ", CNDP, p. 11-16. Available at <<http://edel.univ-poitiers.fr/rhrt/document424.php>> (consulted 13/04/2007)

DUCREAU F., GARROT T., LAUCH B., *e-Learning dans l'enseignement supérieur: représenter le changement pour accompagner les acteurs*, Colloque TICE Med 2007 à Aix en Provence France. See http://www.elene-ee.net/4._Dissemination/Events.

EUROPEAN COMMISSION. Communication from the Commission to the European Council and Parliament: *eLearning Designing tomorrow's education* [online]. Brussels 2001. Available at: <http://europa.eu.int/eur-lex/fr/com/cnc/2001/com2001_0172en01.pdf> (consulted 15.03.2007)

KAPLAN R. S., NORTON D. P., *Le tableau de bord prospectif*. Les Éditions d'Organisation, Paris, 1996, 311 translated pages, by KAPLAN R. S., NORTON D. P., *The Balanced Scorecard*. Harvard Business School Press, Boston, 1996.

LEBRUN M., *Théories et méthodes pédagogiques pour enseigner et apprendre. Quelle place pour les TICs dans l'éducation ?* 2nd Ed. Bruxelles : De Boeck, 2007, 216 pages.

LORENZO G., *Business models for Online Education*, Journal of Asynchronous Learning Networks, Volume 10, Issue 2 - May 2006, p. 69 à 95, ISSN 1092-8235

7. Appendix

Figure 1: Financial dimension	13
Figure 2: Customers/Students dimension.....	14
Figure 3: Internal business process dimension (first page).....	15
Figure 4: Internal business process dimension (second page)	16
Figure 5: Learning and growth dimension	17