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T-GameL3: Development of an interdisciplinary lifelong e-learning experience in an international context

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Abstract: The T-GaME L3 project (Teaching computer Graphics and MultimEdia LifeLong Learning, http://t-gamel3.ub.edu.ar) intends to provide a learning environment for computer graphics and multimedia contents mainly focussed on computing and architecture domains. It is based on the cooperation of several higher education institutions from Europe and Latin America by means of technologies, methods and learning processes related to distance learning.

The developed course contents are being used in a pilot experiment, from March to July 2006, involving a selected group of post-graduate students from all participating countries.

The available courses have been customized to the different national educational environments by sharing the digital teaching resources of project members. The designed program has taken into account ECTS (philosophy and accounting) and Diploma Supplement recommendations. For now, the participating institutions have reached a multilateral agreement to support this effort.

Evaluation results will be available by the end of July and we hope to:

- Demonstrate the feasibility of the process.
- Show the benefits for students/teachers (flexible methodology, extensive and coherent educational offer).
- Offer ways of carrying out lifelong learning to the participating institutions and the EU.

Before the end of the project an external quality evaluation will be made in order to meet current European quality standards.

In the long term, the partners intend to extend this cooperation to other institutions in order to reach a sustainable academic program of continuous education.

Keywords: Distance learning, Computer Graphics, Multimedia, LifeLong Learning, International cooperation

1. Introduction: What is T-GAME L3

The T-GAME network's main goal is to show that it is possible to cooperate between several institutions in order to offer a joint continuous training program as an extension service of our universities. We propose to use new technologies (Internet) and teaching and didactic methodologies based on distance learning (we may benefit from both our experience in implementing telematic support in our face-to-face universities, and from our experience in distance learning at our universities, as for example within the G9 group for the two Spanish universities, http://www.uni-g9.net). Of course we have to adapt the academic offer to the academic and social conditions of every partner's university.

The main idea behind this project is to share teaching resources among the members of the network, which broadens that particular offer of every university and at the same time we try to verify the following aspects :

- Recognized study periods
- Multiple modules offered
- Different profile student admitted
- Unified didactical methodology & administration?
- Single platform
- Means to have a quality assesment & impact among the final users

The study fields where the different activities are carried out are Multimedia, Graphics & Architecture. The different partners have already enough material concerning these areas, some of them already have some experience in distance learning in these fields. In our opinion the possibility of extending the academic offer (within a continuous-training context as it has been explained before) of each partner with others partners' offers has a big potential for the future. The main challenges we have to deal with in order to manage this kind of activitiy are :

- To create a common curricular organization
- To establish common methodological agreements for teaching and evaluation
- To adopt a common E-learning platform
- To agree on different aspects like language, timetable, etc… taking into account the international context, multilanguage group, different hemisphere, etc…

Table 1 shows the different partners of this project.

Table 1: International team

Institution	City	Country	Responsible
FHWS - Fachhochschule Würzburg-Schweinfurt	Würzburg	Germany	Bernd Breutmann
UB - Universidad. de Belgrano	Buenos Aires	Argentina	Monica Fernandez
UNSL - Universidad Nacional de San Luis	San Luis	Argentina	Roberto Guerrero
UFPEL - Universidad Federal de Pelotas	Pelotas	Brasil	Adriane Borda
UPNA - Universidad Pública de Navarra	Pamplona	Spain	Alfredo Pina
UZ - Universidad de Zaragoza	Zaragoza	Spain	Francisco J. Seron
IPP - Instituto Politécnico do Porto	Porto	Portugal	Carlos Vaz de Carvalho
UdelaR - Universidad de la República	Montevideo	Uruguay	Marcelo Paysse

In the main part of the paper we analyse how the group is dealing with all the problems in order to show the feasibility of such an activity. At the current moment we have partially carried out the project, so the results and reflections we are giving in this paper are provisional. By the end of July we should have a complete set of data concerning the experience.

2. Preparing the contents for the e-learning experience

2.1 Cooperation: Face to face meetings & Electronic communication

In order to be able to make this distance training offer, we have needed many « face to face » meetings .
We have known each other since 2001, but for the purposes of the activity proposed in this paper we had the following meetings (4 working days every time) :

First meeting in March 2005 (Porto, Portugal).
Second meeting in July 2005 (Würzburg, Germany).
Third meeting in November 2005 (Pamplona, Spain).
Fourth meeting in March 2006 (San Luis, Argentina).

The two following meetings will be :

Fith meeting in July 2006 (Montevideo, Uruguay).
Sixth meeting in November 2006 (Buenos Aires, Argentina).

But we also have to say that we have a huge amount of communication via email; we have not quantified this but it is an important effort that we have been and are still making.

The combination of this "face to face" work, the electronic communication and the local work is one of the keys of the (for the moment) relative success of the experience (if we analyse the comments of both teachers & students)

2.2 Deciding on the e-learning platform

We have decided to use one of the e-learning platforms of one of the partners : the one from the University of Zaragoza, Spain (WebCT) as it is shown in Figure 1.

Figure 1: User interface of the common course

In fact, we have seen that for the experimental purposes of this project it was no so important which one had to be used, and we have chosen this platfom for several reasons such as:

1.- At least 4 of the partners already knew the tool
2.- We had enough training material to offer to the students and to the other partners
3.- We had an adequate technical support (from Zaragoza University)

Most of the partners already have an important experience in e-learning within their own universities, mixing different technologies (Cerezo et al, 2005).

2.3 Deciding on the methodology: ECTS & LifeLong Learning approach

European universities are developing a reform process in order to adapt themselves to the EUROPEAN HIGHER EDUCATION AREA (EHEA) formally defined since the declaration of Bologna. An important part of that process will require organizational changes about teaching and learning; it necessarily requires carrying out changes in the designs of the university degrees. An important part of the changes in that area of reform is focused on the use of the ICTs, more specifically, the use of the so called platforms of e-learning, used like tools of communication and collaboration that facilitate the management of the different resources handled by the teaching staff; moreover, they are a natural way to improve the educational methodology by which the convergence to EHEA is sustained.

We outline three interesting aspects that could benefit from the use of this technology (Benito et al, 2005).

Seen from an educational point of view, the student becomes the center of the learning process. One of the great challenges, however, consists in the task of making the student responsible for his own studies; therefore we have to be able to promote autonomy in our students. A common and shared active virtual space can be of help in this task

Another great challenge lies in the use of a common language concerning the content of learning for our students between universities and among European employers. It is important to identify core and specific learning results (knowledge, skills, competence, etc…) as outlined in the Tuning Project (http://www.relint.deusto.es/TUNINGProject/index.htm). This aspect demands collaboration and coordination, therefore these tools will also be of great assistance.

The third important challenge is called Lifelong Learning (LLL) according to the Prague 2001 proceedings. This calls for great changes in the organization of the traditional university in order to offer continuous education counting on sufficient flexibility in time and space: again we are talking here about virtual environments, communication tools, etc…

We have also decided to use an ECTS approach, both for accounting the workload of the student and for the « philosophy » of the European credit (autonomy of the student, collaboration among students and teachers, skills and competences, etc…)

2.4 Some reflections about languages

The group is using 3 different languages to communicate between the different partners, Spanish, Portuguese and English (to communicate with our German partner). At the beginning of our relation, we tried to make translations of most of the created contents between these 3 languages. But we have seen that it is quite difficult to translate everything, especially when we want to give the lecture, the different professors were not able to deal with the other two languages.

What we have done, and we believe that this it what happens in Europe with so many different languages, is that everyone uses his own language, for giving the lectures (on-line) and for creating his material. A student has to deal with the « official language » of the lecture, but we agreed that the teacher can use either his native language or English if the student needs it.

3. The Students

For the experimental part of this project, we have selected 33 students, from the different countries of the partners, with different profiles (previous education and current professional status). Figure 2 shows where the students come from.
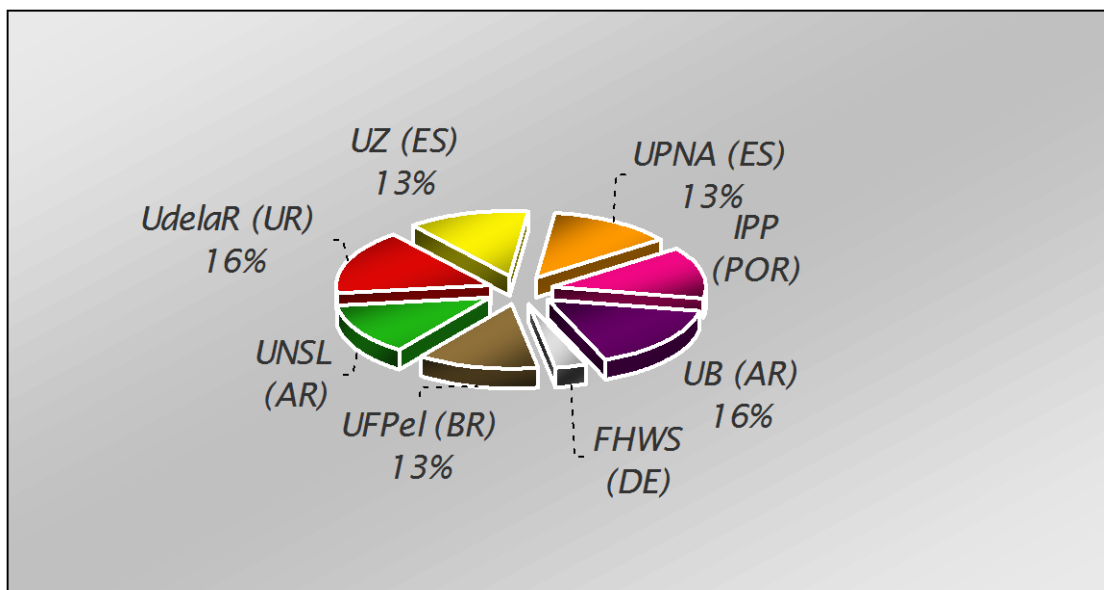

Figure 2: Universities and countries of the students

As a consequence of the used language (mostly Spanish and Portuguese) we can see that we have few German students, mainly due to the language problem.

Figure 3 show the students' profiles, where we find mostly architects & computer scientists, but also 4 other study fields.
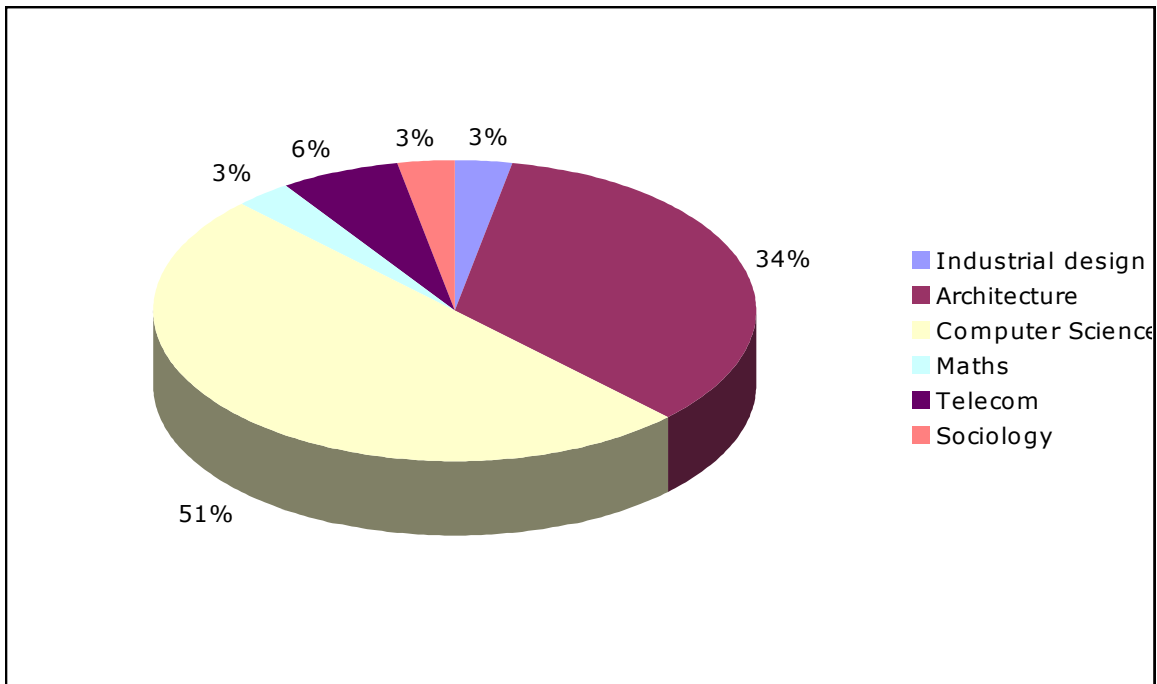
Figure 3: Students' profile

4. Following the course

Every student has to choose 3 modules (1 lecture and 2 workshops), with a total of 10 ECTS (250h of total workload for the students). The teaching period will be between the 20th of March and the 30th of June (this is due to the timetable problems between the North & South hemisphere). We consider that the training on e-learning is an effort that the students that need to follow it have to make out of the 10th ECTS.
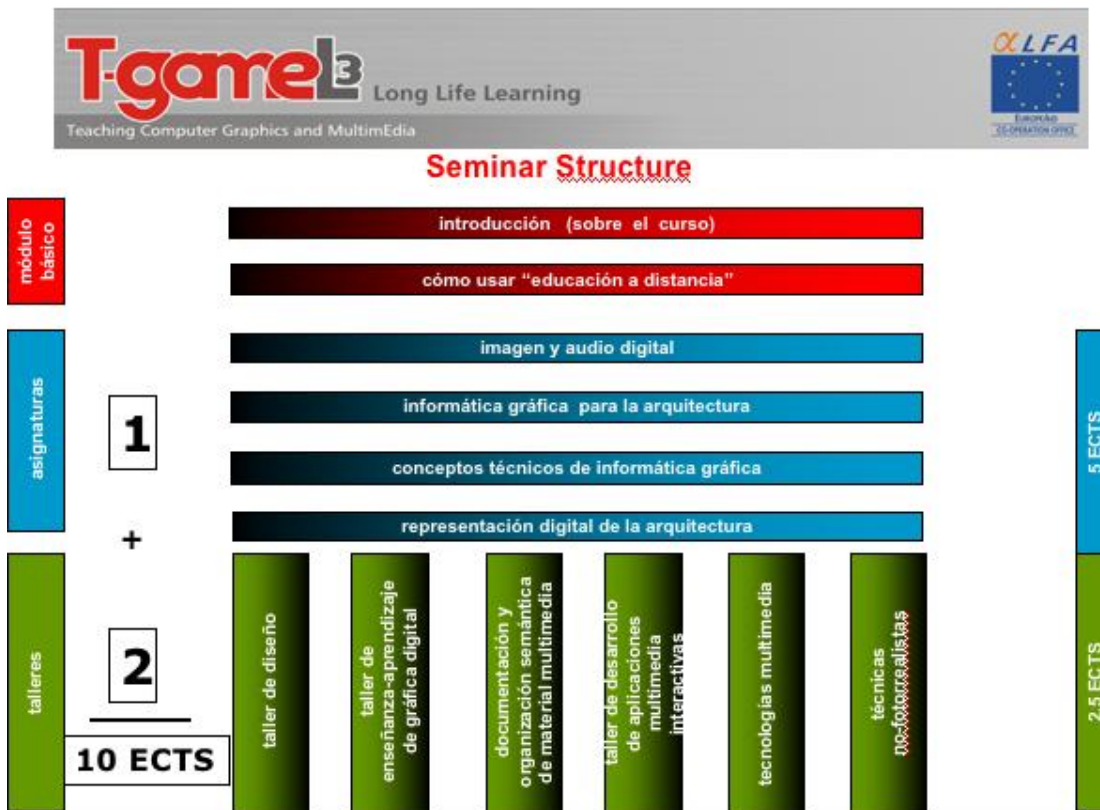
Figure 4: Structure of the serminar: in red an introductory course in elearning, in blue the lectures, in green the workshops.
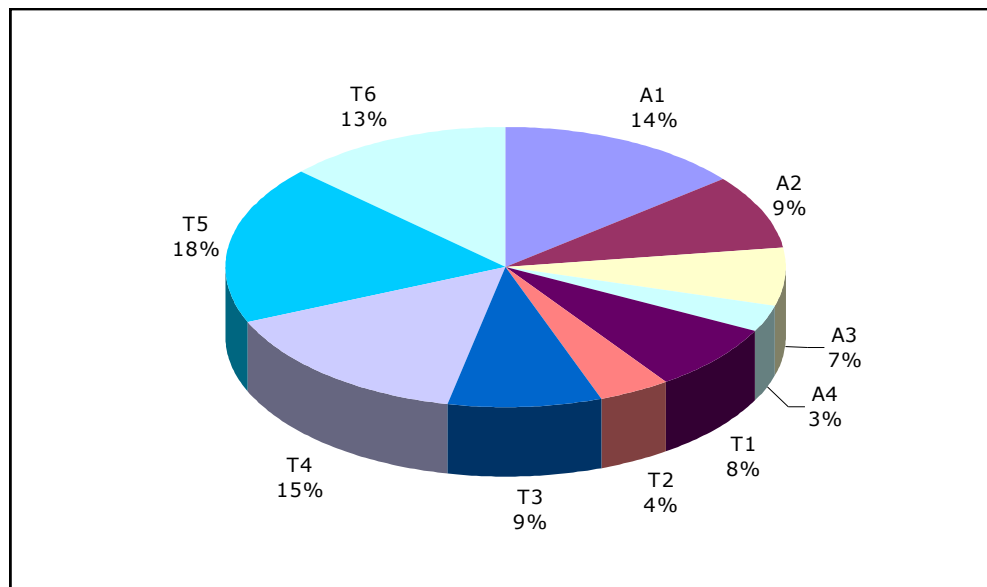

Figure 5: Number of students in every module (A: lecture, T: workshop).

The 5 ECTS modules have been taught between March & April 2006. We are now "compiling" the results in order to analyse what happened.
Some of the comments from the teachers & students are:

- Good collaboration among teachers & students
- Practical approach

- Results show an interesting evolution of the students, both in theory & practice
- The lack of a larger number of students made it impossible to do group developments

By the end of July we will have a complete analysis of the Courses and Workshops, as well as feedback from students and we will design an external quality assessment, following European quality standards.

5. Conclusions

For the moment we have demostrated the feasibility of such an approach: international, interdisciplinary, e-learning and sustainable. This is one interesting aspect for EHEA implementation (mostly in LLL but also in using e-learning as tools for supporting new & flexible methodologies, methodology, and to design an extensive and coherent educational offer).

In July we will have some more results and we expect to make a complete analysis (quantitative & qualitative) taking into account both the point of view of the teachers/partners and the students.

We are also going to make an external quality assessment at the end of the teaching period. At this point the T-Game partners want to check some of the education quality indicators that have been used in Europe (European Commision 2002). The indicators we want to verify are related with Access to LifeLong Learning and Participation in LifeLong Learning as well as ICT in Learning (Information and Communication Technologies).

In a situation where the mobility of workers and learners is growing, where citizens increasingly combine education and training from different countries and where lifelong learning has become a necessity the communication between these frameworks increasingly matters (European Commision 2005). Questions related to progress, transfer, accumulation, recognition and quality development can only to a limited extent be treated in the context of single (isolated) national or sectoral frameworks; the challenge is thus to build bridges between these frameworks and systems enabling communication, comparison and mutual trust. All the partners of T-Game L3 are and will be working form constructing these bridges.

6. Acknowledgements

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