

Study Visit Report

**UNIVERSIDAD POLITECNICA DE VALENCIA
(UPV)**

Valencia, Spain, 27th-29th June 2011

By

Lucio Pisacane – Istituto Superiore Mario Boella, Italy

Index

- 1. – Description of the University visited**
- 2. – People met during the study visit**
- 3. – Comprehensive features of the Best Practices**
- 4. – How to measure and evaluate Third Mission activities?**

1. – Description of the University visited

The Universidad Politécnica de Valencia, UPV, is based in the Region of Valencia, one of the 17 Spanish autonomous regions. The region is located on the East coast of Spain and has a population of more than five million inhabitants. The Valencian economic model is based on SMEs, having 99% of all businesses in the region less than 50 employees. However, some multinational companies are present as well, such as Ford, which has long-standing partnerships with the Universidad Politécnica de Valencia. The UPV has four campuses: two in the city of Valencia and two in other towns of the Region of Valencia (Alcoy and Gandía).

The Universidad Politécnica de Valencia (UPV) was established in 1972. The UPV is a public institution with legal entity and its own patrimony, and has financial and academic autonomy under the complex regulations and restrictions of the Spanish university law. The UPV is dedicated to research and teaching activities with strong bonds with the social environment. The UPV is a research-oriented institution in the field of Engineering, Architecture and Fine Arts. It has 34,000 full time students, a department of continuing education with 36,000 students, a Scientific Park and a strong international activity, especially in Latin America, where it owns several campuses. By research outcomes, it is the 5th out of 70 Spanish universities and it is the first benefitting from external funding.

Currently, the UPV is also composed of 12 engineering schools and three faculties. In the academic year 2005-2006, there were 35,579 enrolled students in study programs leading to 58 undergraduate and graduate degrees. In addition, the university's Life-Long Learning Centre offered 1,633 courses to 45,671 students, having the largest offer of life-long education in the Spanish University system. In the same year, the university employed 4,600 academic and non-academic staff. The UPV budget for 2006 was 320 M€. The UPV has a total of 44 departments in total.

2. – People met during the study visit

The visit took place during two days at the Universidad Politécnica de Valencia UPV from the 27th to the 29th of June 2011. It focused on two specific Third Mission dimensions: Technology Transfer & Innovation and Continuing Education. The departments visited in the university were the Centre for Innovation, Research and Technology Transfer (CTT) and the Continuous Training Centre (CFP). The interviews were conducted in the two structures with the support and organization of the Third Mission (E3M) coordinator, Centro de Gestión de la Calidad y del Cambio, that operates in the same

Universidad Politécnica de Valencia. In order to avoid conflict of interest and to facilitate frankness of the interviewees, all the interviews were conducted exclusively by an external E3M expert involved in the study visit.

The people interviewed were:

- **Fernando Conesa Cegarra**

Deputy Director, **Centre for Innovation, Research and Technology Transfer (CTT)**

The CTT provides support to successfully carry out R+D projects that have been set up with public funding. It facilitates and channels the development and transfer of knowledge into industries and businesses. The UPPV plays an important role in technological innovation and regional development. Its technical and scientific competence provides a considerable partshare of the qualified personnel employed in the Valencian Community.

<http://www.ctt.upv.es>

- **Mónica López**

Deputy Director, **Continuous Training Centre (CFP)**

The CFP offers over 1,200 courses from a wide range of areas, most of which offer a free choice of academic credits. On the other hand, the CFP helps teachers organize lifelong learning activities, from the proposal of the course to its assessment.

<http://www.cfp.upv.es/formacion-permanente/index/index.jsp>

3. – Comprehensive features of the Best Practices

Centre for Innovation, Research and Technology Transfer (CTT)

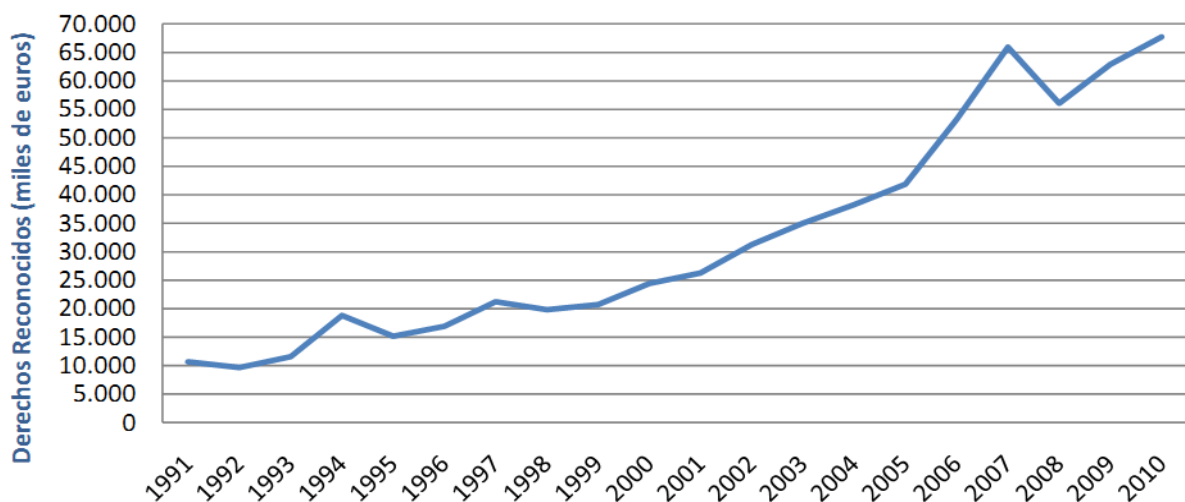
The project within the Centre for Innovation, Research and Technology Transfer (CTT) which can be defined as a good practice is UPAS, Universidad Politécnic de Valencia Awerness Scheme. The Scheme, from its inception just after the CTT in the early 90s, aimed to develop academic involvement in innovation activities. Fernando Conesa, the CTT director, defined the Scheme's objectives as innovation actions which are carried out in collaboration or in partnership with local and national industries, underlining the importance of the openness of the academic institutions to the external world. The UPAS project has hitherto increased the percentage of UPV academic staff involved in innovation activities from 20% to 55%. This was a commendable achievement because it contributed to change the academic staff's approach and attitude towards innovation. The key elements for the success of the project were the promotion of participation in collaborative project (with industries and firms from local and international level), the creation of opportunities of consultancy and joint research projects (at national level and through European projects) and the establishment of services for industries: laboratories, licensing, patent protection and joint research centres. The Centre tried to change the scopes of the university and move from a traditional academic culture to a more entrepreneurial approach. The main indicator used to monitor the UPAS development was basically the number of academic staff involved in applied research in collaboration with industries and/or in research project with external partners. In addition to internal facilitating factors, the success of the project is linked to a number of external factors. The first one has been the constant support of the Rector, who strongly supported the project from the very beginning. Secondly the institutional and legal context was particularly relevant because the Universidad Politécnic de Valencia benefitted from many legal measures from national and European institutions.

The actions of the UPAS project were focused on administrative services and support for the staff that started the above-mentioned innovations. Our team helped to simplify administrative measures (i.e. contacting procedure) and services within the project management. These changes in the management structure were possible thanks to the fact that the Centre for Innovation, Research and Technology Transfer was represented in the university administration board and was strongly supported by the Rector. This was a successful achievement for the Centre. However, after over twenty years, the UPAS project has been terminated because the University had reached the maximum number of academics that Fernando Conesa thought possible to involve. Moreover, Prof. Conesa underlined that some of

the academic staff will never be able to work with external partners and will never foster innovation or Technology Transfer. This kind of professors can be proficient teachers and academics but the UPAS would not be able to involve them in innovation activities and in Third Mission activities. There are several reasons for this, including the specific research field (in some cases very theoretical). However, a key factor is certainly age: young professors are more prone to be involved in Third Mission activities because they look at the university as a multi-channel workplace, in which they are ready to catch opportunities of collaboration and not focus completely on their specific sector or teaching activity. Another relevant factor is related to the Spanish university system: this was built on two types of faculties: one very technical and practical (which in other countries would not be part of the university system) and which is very focused on research; another with a more humanistic approach, which is more focused on teaching.

TodayNow the scenario has changed after the Bologna process Cooperation Research Centre for Vehicle Industry, Electronics and Logistics but a heritage still weighs on the culture of the Spanish academics, particularly on that of older professors. The result of the UPAS project was the changing of mentality of UPV staff, which improved their capability to collaborate with external partners. Prove of this is the volume of projects funded by external resources, as shown in the graph below.

Graph 1- Financial evolution of R&D with external funds



Source: CCT annual activity report, 2010

Another successful story reported in Fernando Conesa's interview is the Prove of Concept Program, which does not exist in any other Spanish university. It consists of an internal open competition based

on patents that are already registered and that need more technical details to allow that patent an entrance into market. For example, the Prove of Concept Program is used to verify that a prototype created for a company has a marketable patent or, otherwise, when a chemical new process proves to be very effective at something but that has only been proven in a scientific laboratory and therefore industry will not consider it as an industrial process. The Prove of Concept Program allows patents to be recognised outside the academia. The Program is designed and managed by the CTT but the funding and the initial input came directly from the Rectorate and this again confirms the importance of central management support in innovation activities and for all Third Mission projects. The approval and the support of the central management have been in this experience absolutely crucial. Also for another project, CARTA, an information system by which CTT collect invention disclosures from the academic and converts this inventions in patents (looking after the administrative and commercial assessment), the Rectorate support has been crucial and beneficial also thanks to the fact that it was perceived as an institutional operation coming directly by the Rectorate.

Finally, Fernando Conesa highlighted the fact that public research and basic research in University need to be connected with the Technology Transfer process, as it is crucial to conceive of the creation of knowledge from the perspective of the use of this knowledge. Without this perspective, basic public research would have no future.

Continuous Training Centre (CFP)

Another aspect analysed in the Valencia study visit is the Continuous Training Centre, which provides over 1,200 courses from a wide range of areas, most of which offer a free choice of academic credits. The CFP helps teachers to organize lifelong learning activities, from the proposal of the course to its assessment. Our liaison was Mónica López, Deputy Director of the CTC.

The good practice analysed in CFP has been linked to the Centre commitment in EFQM and to its quality management for twenty years. This excellence model helped the Centre to shape its activities, management models and courses. Continuing education was not a core activity at the University Politécnica de Valencia and only the tenacity of the Centre management permitted to reach the level and independence that the CFP have today. The Centre is a bridge between teachers and learners and between organisational and logistic aspects: this is its key for success. EFQM helped the Centre to improve its internal organisation in a more effective way and to set several goals, ranging from the idea or the need for a course to its final evaluation. The Centre gained over the years a central position in

the university activities but this was only for the good results achieved. Moreover, the independence within the institution came from its good results and from the 2200 course that the Centre offers every year.

The CFP became strategic thanks to its results and not for a high management support also because, as Mónica López underlined, Continuing Education is not well recognised part of Third Mission activities. The university legislation in Spain states that a core element of higher education institution is to spread culture and knowledge through Continuing Education, but for a long time CFP courses have been considered as a secondary activities and minor aspects of the University's activities. Spain is still missing a real culture of knowledge spreading: the general perception is that the different between Continuing Education and Technology Transfer is that TTI are more important because closer to the first or second university mission while Continuing Education activities, on the other hand, are less relevant because the university already offers "real" teaching activities. At the University Politécnica de Valencia Continuing Education is not part of the Third Mission strategy. Mónica López is convinced that many of her colleagues think that "*good teacher do the traditional teaching and the one who are not so good do continuing education courses*". Therefore, a big cultural change within the University is still needed, although it must be recognised that the EFQM process helped the Centre improving its internal organization. A great change took place in twenty years: the number of CC students has been increasing constantly and the Centre has today the same student number of whole UPV. This numbers resulted in an increase of the importance of the Centre in the University; however, Mrs. Mónica López underlined that a big cultural change is still needed. Continuing Education started over the past years to be recognised at institutional level thanks also to the Bologna process, the EU policies and the ministries of education which pushed in this direction and required data and information on these activities. In the opinion of Mrs. Mónica López this external factor has had a great influence in favour of Continuing Education policies in Valencia and in Spain in general.

A specific element which has helped the Valencia Centre achieve its success is its extreme independence from the rest of the University. The Centre structured its organisation in function of a real independence from the central university administration and management. The Centre is today completely self sufficient, from the web designer and management to the course logistics, and this allows freedom of choice to all our activities. Mrs. López conclude that the Centre for Continuing Education has the efficiency of a private structure also if operate in a public body; unfortunately efficiency and effectiveness are often very far from the public organisation.

4. – How to measure and evaluate Third Mission activities?

Comments on TTI E3M indicators

Mr. Fernando Conesa Cegarra's opinion on the Third Mission activities indicators is very positive; Mr Conesa Cegarra reckons that they are relevant to measure Third Mission activities. On the first set of indicators – the one that register the existence of a strategic plan on Third Mission - his opinion is that it would be better to specify the different peculiarities and not to consider Third Mission activities and policies as whole. Therefore Mr. Conesa Cegarra suggests the usefulness of conceiving of different indicator to register the existence of a policy or a strategic document on student involvement, patent protection ad research contract. On the indicator 'revenue from commercialization' Mr. Conesa Cegarra deplores a too generic use of the indicator, highlighting the importance of detail when defining the commercialisation of knowledge. Many universities include in this definition the revenue of the European project and not strictly the revenue of the market. This means that, for example, indicators on this kind of Third Mission activities measure different elements and are not comparable. On the indicator 'number of spin offs of start ups' the opinion of Mr. Conesa Cegarra is that the peculiar relevance of these activities is not considered within different contexts, so that is very difficult to measure their quantity and compare these data. At the same time Mr. Conesa Cegarra underlines for the importance of a Third Mission oriented University to create an entrepreneurial habit and also to measure the number of new companies with commercial activities coming from the knowledge generated within the institution.

The indicator on 'consultancy' is crucial for Mr. Conesa Cegarra because it shows the capacity to allow access to higher research institutions to the productive environment and to a real relationship with industries.

The best indicator for Technology Transfer is the number of academic staff in advisory board of larger companies, which can ensure a great impact. This will give a clear image of what are the needs of the industry and can easily apply these demands within the University and vice versa.

Comments on Continuing Education E3M indicators

Mrs. Mónica López, Deputy Director of the CTC, comments positively on the E3M indicators. The first set of indicators, those on the presence of continuing education (CE) in mission and strategy, has been defined as crucial. In the case of the Valencia University, continuing education projects are not merely a part of the mission rather than the core of the mission itself. Mrs. Mónica López

underlines the importance of the flow from indicator to indicator. To record useful data, it is crucial to have a competent organisation and functional internal procedures. Liked to this have a quality assurance and evaluation in Continuing Education is, for Mrs. López, very important as her Centre achieved positive results with EFQM in terms of management strengthening. On the indicator ‘number of active CE courses’ Mrs. López underlines that it would be better to indicate hours and not course, as it is possible to have short course (few hours) as well as years long courses. Therefore to have a good activity indicator is better to have a homogenous base of measurement. On the indicator ‘number of CE courses in collaboration with companies’ Mrs. López observes that it is important to have a strong bond with companies, although that does not indicate the quality of the CE offer but only the capability of drawing the attention of external institutions. The best option to measure the volume of the activities is for Mrs. López the number of credits offered to the enrolled students, and this should be used as a indicator to compare the volume of different CE institution.