Ending nineties, UPC decided to push a Development Education program embedded in its usual education activities, jointly with campus-based co-operation for development groups. The proposal was initially included in a four-year university strategic plan, and it has been politically prioritized since then. The origin and main characteristics of the program 2000-2005 are presented here (see [1] and references therein for more details).

1.0 Introduction
Development Education is recognized as a specific tool of the international co-operation system by Spanish and Catalan laws and corresponding co-operation for development master plans [2,3]. It can be defined as “an active learning process, founded on values of solidarity, equality, inclusion and co-operation, [which] enables people to move from basic awareness of international development priorities and sustainable human development, through understanding of the causes and effects of global issues, to personal involvement and informed action. It fosters the full participation of all citizens in world-wide poverty eradication, and the fight against exclusion, and seeks to influence more just and sustainable economic, social, environmental, human-rights-based national and international policies.” Definition approved by CONCORD during the General Assembly of November 2004 [4].

UPC has been, through its Co-operation for Development Center, www.upc.edu/ccd, actively promoting the involvement of its community in co-operation for development activities from beginning of nineties (mainly throughout competitive budget assignment for small projects, mobility grants and aware-rising activities). Some introductory elective courses were pushed during those years, directly from CCD and in partnership with different UPC-UNESCO Chairs. However, by the end of the decade, community was prepared to make a step further and invest supplementary efforts in more academic activities. The first choice was to promote the inclusion of co-operation and development topics within overall studies and educational activities, following spirit of Development Education definition cited.
On the other hand, from middle nineties, UPC campus-based co-operation for development groups were in contact with similar ones from other Spanish Universities through the network Engineering without Borders (EWB). This helped the formulation of the proposal itself, as lessons learned from previous engineering-focused experiences, especially from other Spanish technical universities, were taken into account from the beginning. Previous UPC experiences in environmental awareness raising and embedding technical studies with environmental topics were also a decisive background of the proposal (see [5] and references therein).

2.0 Local partnership

During the program, UPC was able to support economically some activities and to facilitate community enrollment and participation in the program, but it was not possible to dedicate budget to coordination, diffusion and pedagogical support (i.e. additional staff) without affecting the established program of grants, neither to ask for specific public funds, as at that time this option was reserved to NGOs. This was one of the main reasons why the experience presented was developed in partnership with the NGO Catalan Association of EWB. It is also worth to highlight that the EWB was, in Barcelona and at that time, a small-size NGO but also a campus-based organization with a very active participation of students (graduated and undergraduated) and young lectures and teachers. This was a distinctive characteristic that helped the participatory connection between classroom, campus, local civil society and in-field contexts, and therefore a desired component of the program.

A memorandum of understanding was signed in 2000, after starting above mentioned UPC strategic plan. Also in 2000, the Catalan Association of EWB approved in general assembly a strategic framework including Development Education. Next year, 2001, first grant of the Catalan government to EWB to promote Development Education at UPC was assigned. Yearly grants were assigned until the end of the period.

Thanks to the program, and the empowerment route traced within, UPC has being able to continuously pushing Development Education activities once the program
finished, adapting the proposals to the new context defined by Bolonia’s reform of higher education in Europe. Moreover, from 2006, the new Catalan government co-operation for development grants for universities has helped UPC to go further in its commitment with sustainable human development promotion, including postgraduate studies and applied research activities within its academic activities.

3.0 Objectives
The final goal of the program was to include a stable offer of Development Education proposals within University, specifically designed for engineers and technicians, and in a coordinately way between engineering schools and engineering-focused co-operation for development organizations. Working lines included in the UPC Development Education program 2000-2005 were the following [1,6]:

- Specific elective courses dealing with co-operation and development topics with a Development Education focus, offered to all engineering studies.
- Transversally incorporation of Development Education concepts and methodologies through the curricula, including the elaboration of teaching materials covering different disciplines and related with UPC in-field co-operation for development projects.
- Training of faculty in Development Education concepts and methodologies, specifically designed for technical and scientific studies.
- Promoting social volunteering, NGO participation and internships in developing countries within the framework of co-operation for development programs.
- Promoting final degree projects and master thesis related with technical issues relevant in the co-operation for development sector.
- Creating a documentation center on Technology for Sustainable Human Development within the university library system, as a support initiative of the overall program.

Specific activities were target to the teaching community, not directly to students. To increase knowledge and capacities of teachers in this field was included as a preferential and efficient way to reach the program goal, with the aim of contributing to its own sustainability.
Moreover, a relevant specificity of a Technical University as UPC regarding Development Education is that although it has some departments with academics from social sciences and even humanities, they are just few when compared with the overall university teaching capacity. Moreover, they have reduced lobby capacity and no expectations of increasing their presence in a context extremely competitive and with reduced resources. Thus, in order to promote and disseminate Development Education proposals, it is mandatory to involve technical and natural sciences academic staff.

4.0 Resources and Results
Funds for the overall program came from different origins, as explained in the introduction, some from the UPC itself and others from the partnership with EWB. Grants for specific courses and teaching materials were assigned from UPC engineering schools (with amounts from 1000 to 2000 euros/year for each course or teaching material under elaboration). By the end of the program more than 20 courses (of 40 hours teaching, as a mean value) were offered and two teaching books finished (see [6] for scope and contents). On the other hand, the annual UPC 0.7% campaign (around 400.000 euros/year of private funds collected) was dedicated to promote volunteering participation in in-field projects and final degree works, with mobility grants, and aware-rising activities both of single individuals and campus-based volunteer groups and NGO. Over 200 people (students, academics and administrative staff) have directly participated in abroad co-operation activities each year thanks to these funds. Also UPC economical support was provided to training of faculty seminars, courses and learning materials (see [7]), and the consolidation of the specific library collection. All activities were supported with annual grants ranging from 1000 to 3000 euros (per person or initiative, depending of each case, see CCD annual reports at www.upc.edu/ccd).

Finally, an annual budget about 120.000 euros was provided by local government to EWB for supporting UPC Development Education activities. These funds were mainly dedicated to staff contract for coordination, diffusion and pedagogical support to the program (around 75%). The rest was dedicated to direct funding of activities.
Remarkably, government funding of EWB proposal started year 2001, but not in 2000 when the program started. Year 2000 proposal was focused in one engineering school with the aim of following a bottom-up scheme, but it was not accepted. First proposal with activities covering all UPC was formulated and funded by Catalan government in 2001, and a second phase in 2002. After that, years 2003 to 2005, the EWB proposals were extended to all Catalan universities, keeping the engineering scope. This was done because of two main reasons: Training of faculty activities (which needed a broader scope than just one university), and the starting e-learning work (spread and postgraduate courses) with the Open University of Catalonia, UOC, which Rector at that time was, remarkably, a former rector of UPC during the end of eighties.

Just to complete the big picture of the initiative, let's remark that at the end of year 2002 the Development Education strategic program of the Catalan Association of EWB was extended to the Spanish Federation of EWB, with the same scope but proper modifications due to the change of scale. This facilitated the fulfillment of several proposals that needed the coordination between different EWB Spanish groups, mainly those related with Catalonia, Valencia and Madrid Technical Universities. Highlighted results are the Technology for Human Development Awards for Final degree works, Masters and PhD thesis, and a specific journal covering the relationship of different technical areas with human development promotion (see www.isf.es for further details on EWB-Spain activities and annual reports).

5.0 Recommendations
Some advises to other technical universities willing to include Development Education activities in their academic programs follow:

- To start with aware rising activities inside the University (campuses, schools…), facilitating the collaboration of university community in them. It is not an expensive working line and community aware and active participation is mandatory for deeper proposals.
- Importance of promoting and taking care of a participatory network around the university (groups, NGO…) in order to facilitate volunteering enrollment and practical collaboration of university community. University can provide highly
motivated and professional people, but it needs partners for practical and in-field work. It should not be or look like an NGO.

- The role of the university in the co-operation for development sector needs to be explained continuously, both inside the university itself and around. It should be non-profit but costless, if desired. Moreover, the distinction between international co-operation university activities and co-operation for development activities between universities has to be traced. Self regulation of university community is possible if information is made available.

- Teaching-learning opportunities of introducing development issues in engineering courses needs to be specifically highlighted and supported. Academic staff collaborating in development initiatives should return their in-field engineering experiences through the classroom work. Recall that university staff will ‘always’ be there. They should be the major promoters of development education activities.

- Top-level lobby, jointly with an active community, can help in the promotion of specific university funds (as overheads of private-firms – university contracts, optional salary discounts, donations with the payment of academic fees…) that can be used to promote community participation in actual projects.

- To valorize university implication in the co-operation for development sector (monetary funds, human resources, annual activity reports…) and then look for additional economical support of local government or private corporations can be more successful than expected. However, some care about which private funds are directly related with solidarity activities should be taken. University community should demand institutional coherence.

- To get and keep in contact with similar experiences in other universities is mandatory, promoting shared activities, especially those targeted for academic staff. University networking could also help, especially if specific targets are identified.

References
Quality Award and Jaume Vicens Vives Award from the Generalitat de Catalunya, Barcelona, España.


