



iSchool Partnerships and Practices – information and proposal form

Please fill in the information below and upload the proposal form (in PDF format) at the secure submission website for consideration for presentation at the *iSchool Partnerships and Practices* track at the 2019 iConference in College Park, Maryland, USA. Please keep to the advised length or the proposal will not be considered for review.

Please consider also the key review criteria for selection:

- Transferability to other institutions
- Grade of innovation
- Pedagogical dimension
- Degree of knowledge transfer

Questions about the *iSchool Partnerships and Practices* track should be directed to the chairs of the track:

iSchool Best Practices Chairs

- [Elke Greifeneder](#), Humboldt-Universität zu Berlin
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For general questions about the iConference, please contact iConference Coordinator [Clark Heideger](#).

Name(s) of Author(s): Jordi Conesa, Eugenia Santamaria, Josep Cobarsí
Title of submission: Innovation recognition as a knowledge management practice in an iSchool: an ongoing experience from Universitat Oberta de Catalunya (UOC)
Area (please check the applicable area description with an x): Curriculum Teaching Student experience Research Administrative management Other (please enter the applicable keyword): Innovation in wide sense, including teaching and administrative facets.
Submission abstract (max 150 words):

We present our experience of design and implementation of an internal system of recognition of innovation in our iSchool (Faculty of Computer Sciences, Multimedia and Telecommunication at UOC, Barcelona). The system retrieves innovations done by the faculty members, reviews them using a peer review approach, elicits innovation actions done every year and share them among faculty members. We discuss the impact of this experience as an internal initiative and practice of knowledge management in our academic department. We think this experience may be extended to our whole university or to other iSchools, with potential similar benefits we have tested in our iSchool.

Submission description (max 2,350 words):

1.- Motivation

Innovation is a way of gaining valuable knowledge that allows improving organizations, resources and processes (Seidler-de Alwis & Hartmann 2008) (Nonaka, 1994). A lot of small innovations are done in most organizations, but their real impact is negligible when the innovations are neither implemented or when their lessons learnt are not made explicit and shared.

This experience began three years ago, when our iSchool, the Faculty of Informatics, Multimedia and Telecommunication at UOC in Barcelona (BCN iSchool from now on) thought about the real impact of its past innovation activities and the human effort invested in innovation. The goal was to find out what amount of knowledge was gained during innovations, whether that knowledge was shared and how much of them have been applied to improve the university. The conclusion was that a lot of effort was dedicated to innovation, but their results were not applied, neither shared, efficiently. Therefore, from the Faculty perspective, innovation was a mostly useless effort.

The proposal presents the different actions conducted to create a knowledge management system to elicit innovations, the knowledge obtained from them, the most innovative people, and share this information among the faculty members. The main actions have been the creation of an innovation strategic plan, the crowd-definition of innovation and the definition of a process to accreditate innovations.

Next section describes the state of the innovation at the beginning of the process and the strategic plan proposed. Section 3 presents the definition of innovation adopted by the faculty and how it was crowd-defined by its faculty members. Section 4 describes the accreditation process defined, explains the two accreditations performed up to now and the obtained results. Finally, last section presents conclusions and planned further steps.

2.- The initial state: lessons learnt from innovation were tacit and unshared

It was collected data about the innovations in which faculty members collaborated from the period 2011-2017. Since the information was not present in any institutional information system, we gathered it from the eLearning Center, which is the university department focused in promoting educational innovations. As a result, we get data from the innovation projects financed by the university during the period 2011-2017 (no

more data available). We are aware that this data does not represent a complete view of the innovation done by the faculty members, just a good indicator.

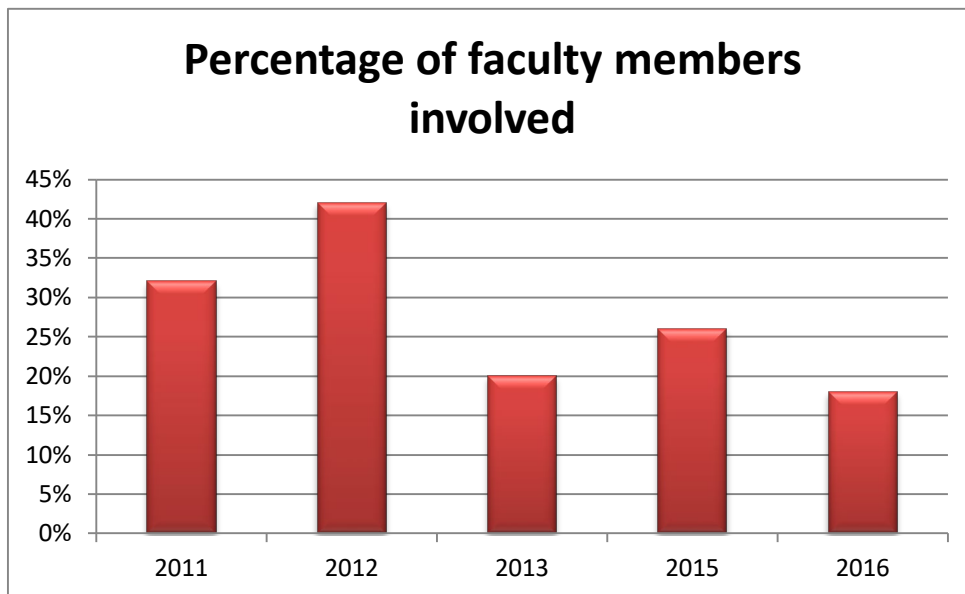


Figure 1: Percentage of faculty members involved in innovation projects by year.

After analyzing the data, we found that most faculty staff were involved in innovation projects (see Figure 1), being over the 20% of faculty members in most years. Further analysis (see Figure 2) shown that, even the iSchool faculty is just 1 of the 7 faculties in the university, their members have a very relevant role in the university innovation projects. The average percentage of innovation projects participated by faculty members was over 50% and even a 100% in the last year. Therefore, we can conclude that BCN iSchool is one of the main assets in university innovation but that innovation projects have a big toll regarding faculty dedication.

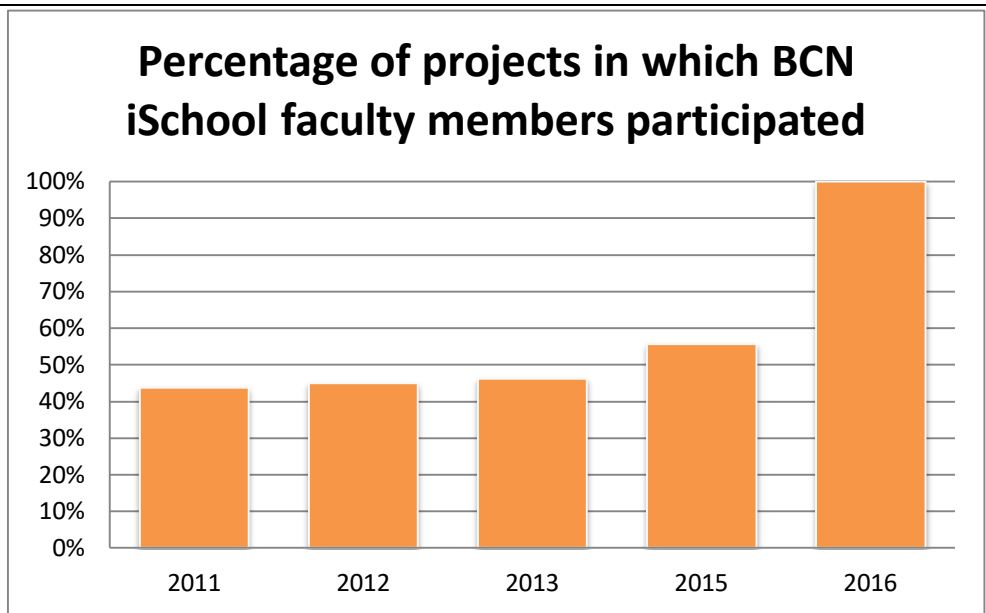


Figure 2: Percentage of projects in which BCN iSchool faculty members participated

Next step was to find out what innovation projects have been finally implemented. Since there was no explicit information about it, we asked to some of the participants in the selected innovation projects. Unfortunately, many of the innovations were neither promoted to real environments, nor their resultant knowledge was shared internally. Therefore, from the BCN iSchool point of view, a lot of effort was invested in innovation with negligible results. In that context the decision was made to create a knowledge management information system to make innovations explicit, to share their results and to promote their application to real environments.

To address the chosen solution a strategic innovation plan was defined and aligned with the strategic plan of the BCN iSchool. Its alignment with the university strategic plan was not done, since university had not a clear direction about innovation. Next sections present some of the actions conducted according to such plan.

3.- The necessity of defining the term innovation

To specify innovations explicitly, first we should know what an innovation is. Institutionally, there was no definition of innovation. In addition, when asked to different persons, perceptions of what an innovation was were very different. In particular, the differences between innovation and improvements were not clear.

Therefore, our first step was to create a definition of innovation in the context of the BCN iSchool, shared by all its faculty members.

Several definitions were considered, but since the goal was to identify, elicit and share all relevant knowledge gained during all innovations, no matter its size, we opted for a light definition of innovation, based on the Oslo definition (Oslo 2005). The proposed definition was:

The conception and implantation of significant changes in the resources and/or services, the processes, the diffusion or the organization of the university with the purpose of improving the learning / teaching results, research, management, knowledge or iSchool recognizance.

Innovation implies the use of new knowledge or a new combination of existing knowledge.

In order to differentiate between improvements and innovations, we added two new conditions that innovations should satisfy: to generate new knowledge and to share the generated knowledge within the BCN iSchool. Therefore, any potential innovation was not considered in the context of the iSchool when their results were not analyzed and shared.

A document that presented the definition proposed was created. The document contained the following information:

1. A little information about the strategic plan (to put the action in a context),
2. The proposed definition, defining in detail the meaning of the terms which appear in the definition (significant changes, service, process, diffusion...),
3. Different kind of innovations to consider: product, process, organizational, technologic, institutional and social (to make visible any kind of innovations, not only educational ones),
4. A differentiation about innovation projects and innovation actions (to make visible small actions as innovations), and
5. Some examples and counterexamples of innovations (to make clear what is and isn't an innovation).

After sharing the document with the faculty members, we sent a questionnaire to them in order to find out the innovation ecosystem of the iSchool, the suitability of the proposed definition and to fine tune it from faculty members' comments. The questionnaire had questions with different goals:

1. To find out whether the definition of innovation was necessary,
2. To find out what kind of innovation people do,

3. To find what kind of innovation people want to be recognized (projects or also small innovation actions),
4. To find out the opinion of people about the proposed definition and what changes they propose, and
5. To find out whether past innovations of faculty members were covered by the current definition.

The questionnaire was answered by the 53% of the faculty members (27 from 51 persons). 92,6 % of the participants manifested that it was necessary to have a clear and shared definition of innovation. This answer gave ground to our proposal.

According to the questionnaire, most past innovations were focused to innovate in products (over 81% of the faculty performed innovations of this kind), processes (over 66%) and the useful use of technology (over 81%). Social and institutional innovations were less popular (33% and 29% respectively). Institutional innovations are financed by the university, this is the ones considered in Section 2. Therefore, it is clear that the effort of faculty members in innovation is even greater than predicted, since previous results only shown the 30% of the faculty efforts.

When asked to faculty what kind of innovations should be considered, all (including small innovation actions) or just innovations addressed by financed projects, faculty concluded that all kind of innovations should be taken into account (85% of the respondents).

As can be seen in Figure 3, the proposed definition was promoted by most respondents, but some improvements were proposed.

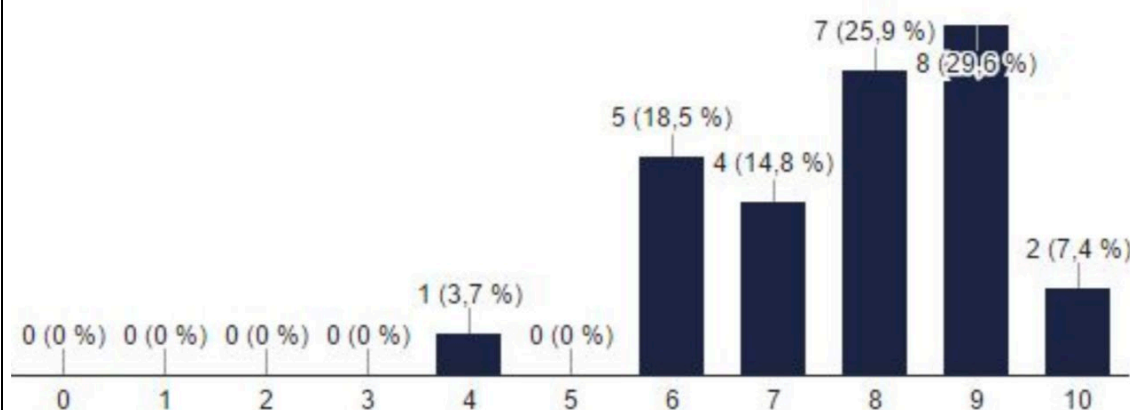


Figure 3: Answer to the question “My agreement with the proposed definition is ...” (values 0 to 10).

Last questions were addressed to find out whether the definition covers iSchool innovations. Then we asked about whether their previous innovations were covered by the proposed definition. Most people (70%) manifested that the current definition does not cover their past innovations. The reason is the imposition of analyzing the innovation and sharing their results. If these processes would be adopted from then on, they considered that their innovations will be 100% covered. Less people (30%) manifested that all their innovations follow present definition. Potentially, these are the faculty members that work in eLearning and usually evaluate the results of their actions to give ground to their publications.

At the end of the process, the definition was improved with the gathered knowledge. Then a final document was created and shared with faculty members. Now the BCN iSchool has a framework to identify whether something is or isn't an innovation.

4.- The process to elicit and share innovations: the accreditation

Next step was to establish framework to elicit and share innovations. The goal was to establish several light processes, which require minimum effort to complete, to identify the innovations done every year, to explicit information about the innovation and the lessons learnt and to share them within the BCN iSchool.

The goal of the process is not to evaluate innovations, but to accreditate them. That simplifies the process and reduces the amount of information that should be provided. The accreditation process defined contains the following steps:

1. **A call for innovations is proposed:** at the end of the year the BCN iSchool sent a call of innovations document to all its faculty, explaining the accreditation process, the relevant dates and remembering the innovation definition.
2. **Potential innovations are presented:** people may present the innovations done during the current year. For each innovation a two-page proposal should be presented. This proposal has a pre-defined format and contains the following sections: title, coordinators, participants, start year, end year, implantation year, innovation type, goal addressed, motivation, novelty, description, context of application, evaluation, conclusions, links and time spent writing the proposal (we use that information to estimate the cost of the whole process).
3. **Proposals are evaluated:** a peer review process is followed, involving all the faculty of the iSchool. Every innovation proposal is sent to 2 evaluators. Assignations are constrained by interest conflicts and friendship. Reviewers should indicate, per proposal, the quality of the document (using a provided

rubric), whether the proposal is an innovation, a short text that justifies its decision and the time spent in evaluating the proposal.

4. **Proposals are accredited:** the accreditation committee evaluates the proposals, considering the information from reviewers. This committee is composed by the responsible of different areas in the BCN iSchool: innovation, teaching, laboratory, research, deputy-dean and a responsible of the eLearn Center. The committee focus in the proposals with disparity of opinions.
5. **Results are shared:** a personal email is sent to the coordinators of each proposal, indicating whether the proposal has been accredited and providing the feedback of the reviewers. A certified of the accreditation is attached for further use. In the denial case, an allegation process occurs.
6. **Final version of innovations is sent:** authors of the innovation may send a new version of the innovation proposal. That version is used for dissemination.
7. **Dissemination of innovations:** at the end different outputs are generated in order to disseminate innovations done and lessons learnt from them: a certificate for all the members of the accredited innovations, a yearly interactive document that contains, per each faculty member, the innovations accredited in which she has participated and an innovation map.

To test its suitability, the process was tested by asking the faculty members to propose up to three innovations done before 2017. The goal was also to find out the most relevant innovations conducted during the last decade. As a result, 85 innovations were proposed, from 1997 to 2016 (distribution can be seen in Figure 4). From them 80 proposals were validated after the allegations (93%). The 80 innovations accredited were very relevant and provided unknown information about past innovations. So it was a very valuable knowledge source for the iSchool and for its members. In addition, the process required little dedication: an average of around 35 minutes for writing each proposal and an average of 12 minutes per review. However, all the management behind the process was manual and very intensive.

Number of innovations by year

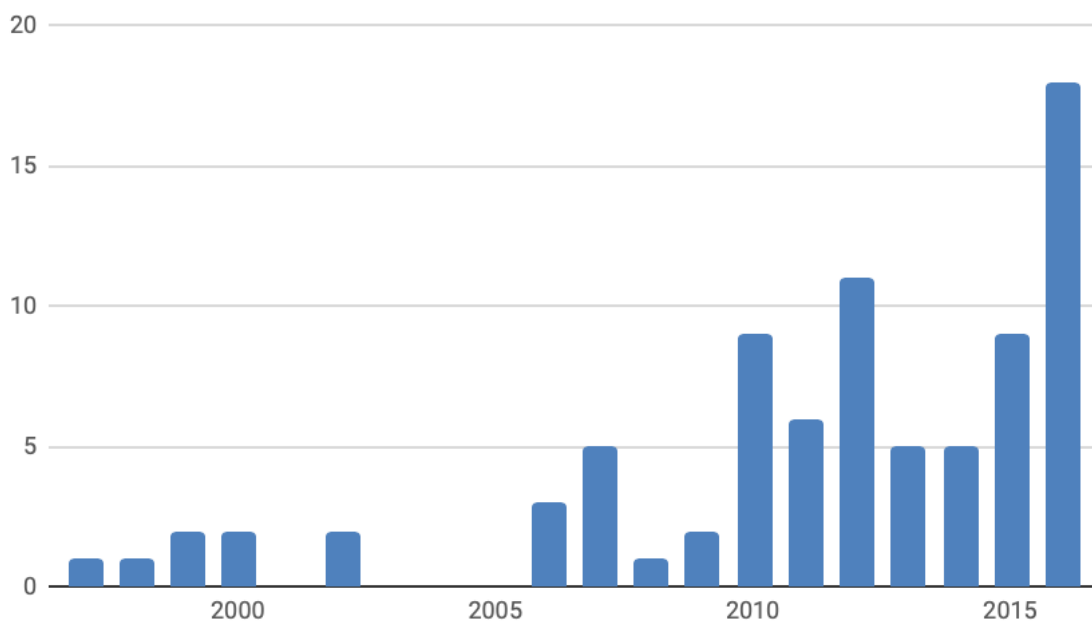


Figure 4: Number of innovations accredited by year

In 2017 the process was performed again to evaluate the innovations performed during 2017. The process has been greatly automated. In this edition, 27 proposals were presented and 23 were accredited (85%).

Figure 5 shows an excerpt of one of the deliverables of the process: the innovation map. This map is interactive and its data is stored in a database, so inferences can be done. For example, we may ask for the percentage of innovations by type and we will get the answer immediately: product innovations are the 28% of the total innovations, process innovations represent the 32% and technological innovation is the most popular with a 40% of the total innovations.

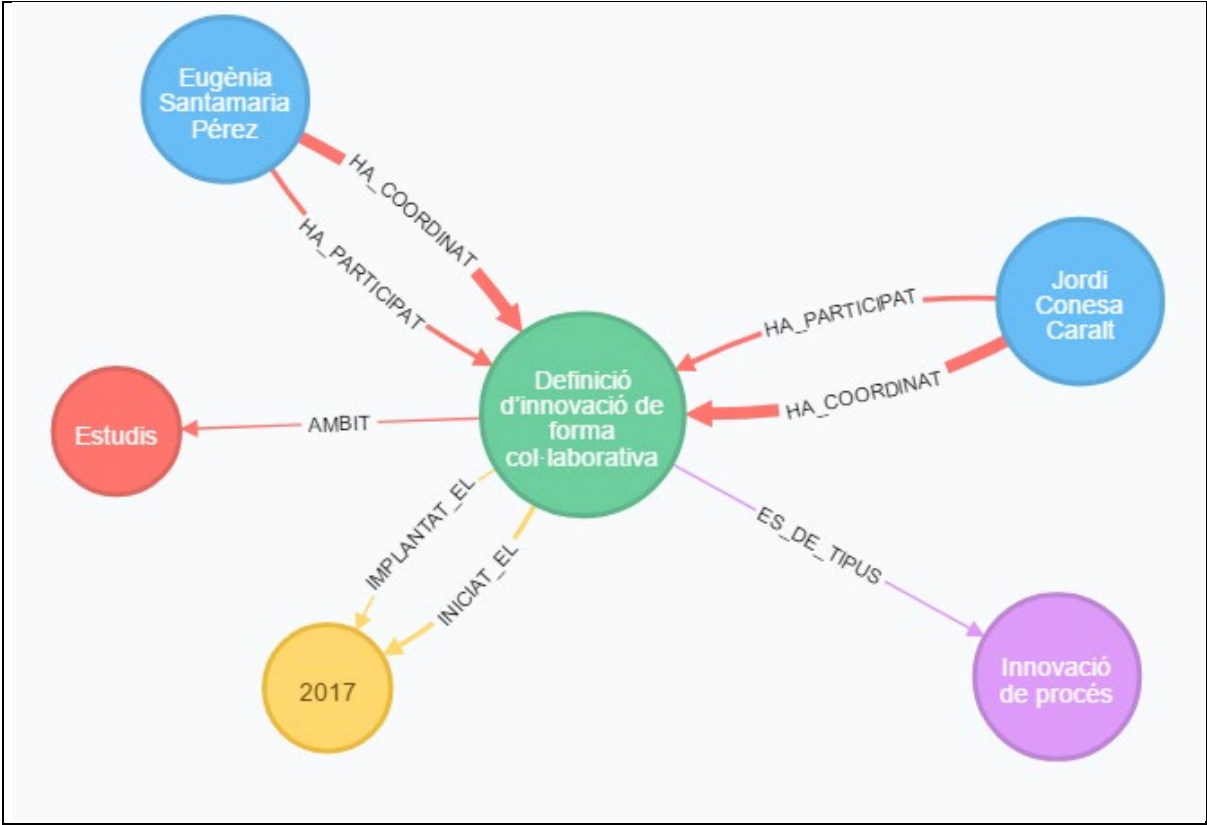


Figure 5: Excerpt of the innovation map that shows the information related to a given innovation (in green). Blue nodes denote the participants of the project, red nodes where the innovation was applied, yellow nodes show the year of the innovation and the purple ones the kind of the innovation (process innovation in this case).

At the end, the process was considered mature enough to be promoted to the university presidency. In order to have evidences that support such promotion, a new questionnaire was performed. The goal was to find out whether 1) the faculty members found necessary to go on accrediting innovations, 2) the satisfaction of people with the process, 3) the satisfaction of people with the results, and 4) get some improvement comments. Results were quite good.

5.- Conclusions and further work

The present paper summarizes the experience of the creation of a knowledge management system for eliciting, sharing and understanding the innovations conducted in the context of the BCN iSchool. As it has been shown, results have been very positive for many reasons: 1) the number of knowledge generated: 107 innovations have been made explicit and shared, 2) the information created and shared in the process, 3) the consensus reached: a new definition of innovation has been adopted by the iSchool faculty members and 4) other externalities: accreditations have been used to adjust the workload of the faculty staff according to their innovation dedication and insights about the expectations and necessities of the faculty members according to innovation.

In future, we will mostly focus in the generalization of the system at the university level. And we think as successful and engaging knowledge management practice, this experience could be adapted to replicate in other iSchools, being the potential benefits similar to those we have tested in our iSchool.

References

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