Practice and innovation communities: learning to take action in the field of Library and Documentation Science

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Abstract

This study aims to provide guidelines for designing, creating and developing a Community of Practice (CoP) in the field of Library and Documentation Science. The CoP offers the potential of bringing together community members who have shared interests and objectives, and who can reap real benefits through the generation of shared knowledge. This article presents a case study involving an innovative educational project with Master Degree candidates in Documentation, Library and Archives Management at the Faculty of Documentation Science of the Universidad Complutense de Madrid (Spain). This case provides a view of the effective use of the CoP, which constitutes a sce-

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nario or network for exchange of shared knowledge, while underpinning educational learning and promoting the culture of innovation and enterprise among all members of the community.

Keywords: Planning and Management of Documentation Projects; Communities of Practice; University Libraries; Educational Innovation in Library and Documentation Sciences.

Resumen

Comunidades de práctica e innovación: aprender a emprender en el área de Bibliotecología y Ciencias de la Documentación
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El propósito del trabajo es ofrecer directrices teóricas y metodológicas para diseñar, crear y desarrollar Comunidades de Práctica (CoP) en el área de la Bibliotecología y las Ciencias de la Documentación. Las CoP presentan la posibilidad de integrar en un mismo entorno o comunidad a miembros con objetivos comunes que buscan beneficiarse de la generación de conocimientos compartidos. En este contexto de desarrollo se presenta un caso real, circunscrito en el marco de un proyecto de innovación educativa, con alumnos del Máster en Gestión de la Documentación, Bibliotecas y Archivos de la Facultad de Ciencias de la Documentación de la Universidad Complutense de Madrid (España). Dicho caso ofrece una perspectiva de uso efectivo de una CoP aportando un escenario o red de intercambio de conocimiento común, que sirve de apoyo al aprendizaje educativo y cuya finalidad principal es fomentar la cultura innovadora y emprendedora entre todos sus participantes.

Palabras clave: Planificación y gestión de proyectos documentales; Comunidades de Práctica (CoP); Bibliotecas universitarias; Innovación educativa en Bibliotecología y Ciencias de la Documentación; Universidad Complutense de Madrid (España); Estudio de caso.

Introduction

Communities of Practice (CoP) have recently been considered to provide a potential theory for the creation of knowledge from a collaborative perspective (Roberts, 2006; Pan & Leidner, 2003). The basic objectives of CoP involve group collaboration and the generation of shared knowledge. As a social group, its members are united by a shared commitment to cooperate, focusing on a subject, activity or particular interest to share knowledge and learn in a practical way. In this situation, it is perceived that principal network assets are knowledge and good practices, and both are derived from the exchange of experiences, resources and information among members.

For this proposal, the Faculty of Documentation Science at the Universidad Complutense de Madrid has developed a project known as CoP-Innova, which follows the principles of the *Espacio Europeo de Educación Superior* (EEES) (European Space of Higher Education). This, as a European political commitment, was formally adopted at the so-called Bologna Declaration (European Ministers of Education, 1999). The implementation of the EEES has implied a structural change that engenders a teaching model focused on the learning process of students, clearly aimed at the acquisition and development of proficiency, while dealing with evaluation procedures. To meet the challenge of the EEES, the Universidad Complutense de Madrid has implemented an initiative: "*Convocatoria de Proyectos de Innovación y Mejora de la Calidad Docente*" (Call for Innovative Projects and Improvement of Teaching Standards), whose fundamental purpose is to promote educational innovation, to achieve high standard university teaching following the EEES premise, whereby the student's learning process should be enriched by innovation, both in theoretical classes as well as in practice.

Creating a project within this framework indicates a commitment on the part of the Universidad Complutense for the institutionalization of good teaching practices in the teaching-learning process. The following aspects are evaluated:

- Originality of the proposal.
- Aptness of the project for improving the teaching-learning process.
- Contribution of the project towards promoting diffusion of good teaching practices.
- Experience and training of the work team in innovative education and development of resources of Information and Communication Technologies in learning.
- Progress and sustainability of projects.

- Project's potential, including the actual number of students who can benefit from the project, the applicability of the results to other subjects or qualifications and level of interdisciplinary integration.
- Adequacy of resources requested in relation to the work plan, methodology and objectives.
- Consistency of the project, including the adequacy of the methodology in terms of proposed objectives and timetable.

This innovative project, whose methodology and results we present in this work, is restricted to this initiative and is based on the conformation of a community of practice known as CoP-lnnova, which has a double meaning. Firstly, we present community practice as a structure that facilitates sharing of knowledge and promotes its circulation (Vásquez, 2011) and, secondly, innovation appears as an element that involves the generation of a value chain that is manifested in three phases: the generation of the idea, its realization and its dissemination (Hansen & Birkinshaw, 2007). CoPs are also considered to offer a context for active learning and as incubators of innovation (Holly, 2004). However, for ideas to be brought to fruition in the form of products, services or other items of value, they must be formalized. Therefore, CoP-lnnova builds on the principles and foundations of project management with the intention of promoting proposals, in the form of projects which are adapted to a pilot stage, whose feasibility will determine its applicability in real circumstances.

The theoretical context of CoP-Innova: management of innovative projects in information and documentation units

The course Project Management in Documentation Units, which is mandatory for the Master's in Documentation, Library and Archives Management at the Faculty of Documentation Science of the Universidad Complutense de Madrid and in which the CoP-lnnova project is developed, focused on the study of the application of management techniques for projects devised by information and documentation professionals. Such application is involved in the planning of this type of areas.

In this sense, project management falls in the domain of units of information and documentation management and in particular, in the field of planning. Traditionally, many authors have described planning as a function of organization management in general (Drucker, 2002; Bueno Campos, 1996) and units of information and documentation management in particular (Koontz & O'Donnell, 1972; McClure & Samuels, 1982; Lynch, 1985;

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Bryson, 1997 and 1999; Koontz and Weihrich, 1994; Prytherch, 1994; Evans & Layze-II, 2003; Stueart & Moran, 2002; Ramos Simón, 1995 and 2003; Pacios Lozano, 1997, among others).

This link between administration of projects and planning in the field of knowledge of management explains how the project formulation of information and documentation units is extremely limited to operational planning. In this sense, it is considered as a part of planning that is directly related to the strategic, but subordinate to this and hierarchically situated at a lower level. This means that long-term strategic planning establishes broad proposals describing how a unit of information and documentation must continue to proceed into the foreseeable future, whereas operational planning should translate the general guidelines for strategic plans to a more detailed and immediate level, with the principal purpose of obtaining results (Arquero & García-Ochoa, 2005: 34).

Once the scope of knowledge is identified, we highlight the literature of selected references on the matter that forms the scientific and conceptual basis of our review and analysis, in what concerns to the application of proper principles and methodology for project management.

In this context, we can cite monographic works from the 1990s that have placed project management as a fundamental and essential element, within the area of Library and Documentation Science. It is thus possible to understand the main characteristics of these publications following a short and concise evolutionary path from the establishment of two major chronological periods: 1990 to 2000 and 2001 to the present.

In the first period, works specializing on this theme, MacLachlan (1996) and Black (1996), stand out. Together, their publications include on one side, the different stages or phases of the lifecycle of the projects and then, they explain the need to make estimates of time, budget, risks and human resources.

From the second chronological period, we must emphasize several works. First we cite the contribution made by Alian (2004), which provides a resources guide for project management for all types of information services using verified methods. Studies by Carpenter (2008 and 2011) discuss the phases and activities relevant to the management of a project and address issues such as the formulation of project objectives, scope, the impact of cooperation between human resources from the information unit on project management, as well as topics included and funding programs. The work by Fagan (2009) is also noteworthy for its innovative impact, where web projects for the management of academic libraries is discussed, providing an overview of the importance and function of the project administrator, definition

of the project, equipment and various aspects related with internal and external communication.

To the content and focus of the monographic publications to which we have referred, we have to add a review of a series of additional publications, presenting the implementation approach that connects with the own orientation of the literature review of this section and the practical application of the CoP-Innova project. These publications refer to practical experiences in applying project management in information and documentation units and we can systematize them into the following groups or thematic categories: digitization (DeRidder, 2007; Fenton, 2007; Henshaw, 2011; Holley, 2004; Hull & Dreher, 2001; Levi, 2010; Londhe, Desale & Patil, 2011; Middleton, 1999; Müller & Maurer, 2011; Saikia & Kalita, 2011; Sakaguchi, Shimada & Wasserstrom, 2010), reading promotion (Roselló, 2006; Train & Elkin, 2001), user training (Betty, 2008; Murphy, 2008), content management tools (Hayman, 1997; Koontz et al, 2004; Medawar, 2007; Sharpe & Vacek, 2010), technical operations (Anderson, 1998; Martey, 2002), human resources (Anzalone, 2000), institutional repositories and other digital resources (Barwick, 2007; Chellapandi, Han & Boon, 2010; Greene, 2010; Piorun & Palmer, 2008), bilingual orientation of libraries (Evans, 2011), virtual reference services (Burich et al, 2006; Clements, 2009; Duncan & Gerrard, 2011) and integrated library management systems (Adeyoyin & Akinyosoye, 2004; Darko-Ampem, 2006; Evans & Thomas, 2007; Lewis, 1995; Otunla & Akanmu-Adeyemo, 2010).

Overall, from the review of the literature on the subject, we can derive a number of features that constitute the core of basic elements on which project management and its application in the CoP-Innova is based:

- Includes the development of successive identifiable stages (planning, design, implementation, control or monitoring and evaluation) (Webb, 2001; Winston & Hoffman, 2005).
- Projects are based on specific objectives (Rosacker, 2010) and, besides phases, require the application of certain tools, procedures and concrete expertise (Moore, 1998).
- The temporal and qualitative aspects, as well as economic resources are critical and must be considered in project management. Pat Wagner commented that "project management contemplates finishing work on time, within the budget and with the prescribed quality" (2006: 24). Another author who follows this approach is Roger Atkinson, refering in his work to the British standard *Project Management BS60794*, which indicates as essential elements in managing a project

"the motivation to achieve the project objectives on time, complying with specific costs, quality and performance" (1999: 338).

- The success of a well-managed project from a technical standpoint motivates professionals of information and documentation units to undertake more complex activities and also provokes interest in group work and work culture within organizations (Winston & Hoffman, 2005).

In short, it can be established that project management comprises applying a set of techniques, tools, knowledge and skills to carry out planned activities, to fulfill the objectives of a specific project in a limited time. In this regard, a project is conceived as a process with a defined beginning and end, which leads to the generation of a product, service, activity or specific result, and that also involves planning its design, development and conclusion.

In line with these considerations, we present a project-type model in information and documentation units on which the application of a theoretical and methodological basis in project management of the CoP-Innova has been based, integrating the following elements and principles:

- The purpose of the project is to obtain a single result (in terms of a information and documentation unit, this result is understood as a product, service and/or documentation activity).
- This product, service and/or activity is generated and projected for a recipient (it is very common that the recipients are the users of information and documentation units or the human resources who work in these).
- Obtaining the result implies the allocation of human, financial, material and technical resources; likewise, the result must be produced within a limited time (associated with a schedule and deadlines).
- These products, services and documentation activities should be planned, implemented and evaluated; i.e., these can be managed implementing lifecycle phases for a project: initiation, planning, execution and control, and end.

The institutional and strategic context of reference

The Universidad Complutense is an institution which was founded more than five centuries ago. It was founded by the Papal Bull issued by Pope Alexander VI in 1499 (Universidad Complutense de Madrid, 2002). This is one of the European and Spanish universities with greatest tradition and history. As a

significant fact, note that since 1509-1510 five faculties were already functioning: Arts and Philosophy, Theology, Canon Law, Literature and Medicine.

Today it is divided into two main campuses: the Moncloa campus and the Somosaguas campus. It has over 80,000 students enrolled, more than 6,000 teachers and offers 274 different official degrees (undergraduate, graduate and doctoral) and 187 of its own degrees (Master studies, Specialist and Expert) (Universidad Complutense de Madrid, 2013).

In this global institutional context, the *Biblioteca de la Universidad Complutense* (BUC) (Library of the Universidad Complutense) is emerging as a functional unit providing service to teaching and research. The BUC is considered the top university library in Spain and the second library in the country (with more than 2,700,000 volumes), after the *Biblioteca Nacional española* (Spanish National Library).

The structure of the *Biblioteca de la Universidad Complutense* is as follows (Biblioteca de la Universidad Complutense de Madrid, 2013):

- Location of the BUC.
- Central Services. Exercise the responsibility for the unification of criteria, coordination and standardization of library processes and services at the different centers of the Universidad Complutense (faculties, schools and research institutes).
- Historical Library "Marqués de Valdecilla". Responsible for the management, maintenance, preservation and dissemination of bibliographic heritage of the Universidad Complutense.
- Center libraries. These are responsible for the impact of library services on the university community. This consists of a total of 34 libraries interconnected via the data network of the Universidad Complutense de Madrid. From any of these, it is possible to access the general catalogue and use any of their services.

Within the framework of this structure, the Faculty of Economics and Business holds a central library, but it also serves as library coordinator at the Somosaguas Campus. The double role of this library provided relevant and meaningful requirements for the choice of the test and pilot scenarios implemented from the CoP-Innova experience, whose creation, structure and characteristics we refer to in the next section of this article. This library, selected as the pilot library, has provided a contextual base for practice and professional application of the CoP-Innova, bearing in mind the link established in the previous section between project management and planning in the context of knowledge management. Likewise, we have focused on its relationship with

the six tactical areas related to the *Plan Estratégico* (Strategic Plan) 2010-2013 (Biblioteca de la Universidad Complutense de Madrid, 2010): People, Organization and Quality, Financing and Infrastructure, Services, Library and Society and finally, Collections. The seventh tactical area known as Bibliographic Heritage, reserved for issues of preservation and dissemination of ancient library collections is excluded. The reason this area is excluded is that everything prior to the 19th century of the Library of the Faculty of Economics and Business is managed by the Historical Library "Marqués de Valdecilla", which as noted specializes in historical matters.

Material and methods. creation, structure and characteristics of the cop

As regards to the guidelines and elements for the formation and development of the CoP-Innova as a community of practice, we have initiated from the concept invented by Wenger & Lave (1991), according to which learning involves participation in a community and knowledge acquisition is considered a collective process. Authors add that communities of practice are groups of people who share a concern or a passion for something they do and that by interacting regularly, they learn how to improve this activity, which requires focusing on a topic of interest, a point or a specific task to be undertaken.

In this sense, the establishment of the CoP-Innova has been based on the three premises or aspects defined by Wenger E. (1998) (*Figure 1*):

- Mutual Engagement. All members of the CoP share their own knowledge and receive it from others (i.e., everyone has something to teach and everyone has something to learn).
- Joint Enterprise. The CoP should have common goals, regardless of whether members have different interests and needs.
- Shared Repertoire. This refers to the set of common resources of the CoP (terminology, procedures, tools, ways to perform or concepts a CoP produces or adopts in the course of its existence and become part of its practice).
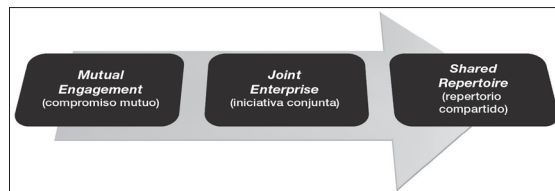

Figure 1. Aspects established by Etienne Wenger for a CoP.

This project has considered the creation of the CoP as a collaborative strategy in which work perspectives, learning and innovation among the constituent members are combined, including members from different sectors of the University (Gongla & Rizzuto, 2001; Palincsar & Herrenkohl, 2002). Following this initiative, the CoP is conceived (as suggested by Lesser & Starck, 2001) as a means to counteract the effect different hierarchical levels have on the organizations and to obtain significant benefits for our organization (in particular for the planning and management of change in libraries based on previous pilot experience). Within these parameters, the CoP which has supported the development of our innovation project has helped generate ideas for new products and services (Lesser & Everest, 2001), conceived as projects in their formulation proposals for a real context.

The structure of the CoP-Innova (*Figure 2*) is based on the integration of three key elements: the provision of technical and methodological knowledge of project management in information and documentation units, a real context for implementing a collaborative experience, and the contribution of ideas transformed into innovative projects. The combination of these elements has resulted in a real integration experience for the actors who have helped shape the CoP: teachers, researchers, librarians and students, as members and direct beneficiaries of the CoP (*Figure 3*).

Conocimientos = Knowledge
Proyectos = Projects
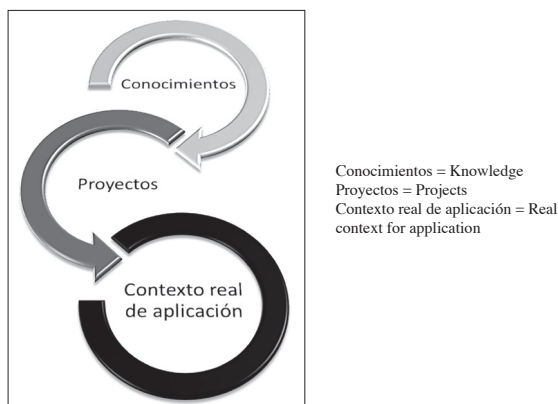Contexto real de aplicación = Real context for application

Figure 2. Key structural elements of the CoP-Innova.

The professor and researcher sector is integrated by:

- A person responsible for the project CoP-Innova who has served as CoP-manager. A CoP manager exists to facilitate and enable other members of the CoP to agree on relevant problems or issues (Gongla & Riz-

zuto, 2001). The CoP-manager must also encourage interaction by providing a correct interpretation of the varied contributions from other community members (Handley, Sturdy, Fincham & Clark, 2006). The CoP-manager also supervises and coordinates the development of activities and tasks performed by the participants (Brown & Duguid, 1991) and, ultimately, he/she takes final responsibility for the results from the operation of the CoP (including the development and delivery of the final report). In our project, this role has been played by the associate professor of the subject for which the innovation project has been developed.

- A project team made up of teachers and researchers. This team has the role of providing support and/or acting as advisor to the CoP-manager in the preparation of the technical and methodological work guidelines, as well as in the management and monitoring of the CoP itself and the entire project. The team involves consultants from academia and research who have offered support to the CoP-manager for achieving the stated objectives. The project team for this sector was composed by the following members: an associate professional, external consultant and expert in projects; a researcher and an expert associate professor in Information Economy.

The role of providing a real context for the implementation of the proposed projects in the professional arena has corresponded to the professional librarians sector in the project team, led by the Director and Deputy Director of the Library of the Faculty of Economics and Business.

The student sector of the CoP-Innova consisted of graduate students enrolled in the academic year, from both the morning and evening shift, with a total of 47 participating students divided into 17 work teams.
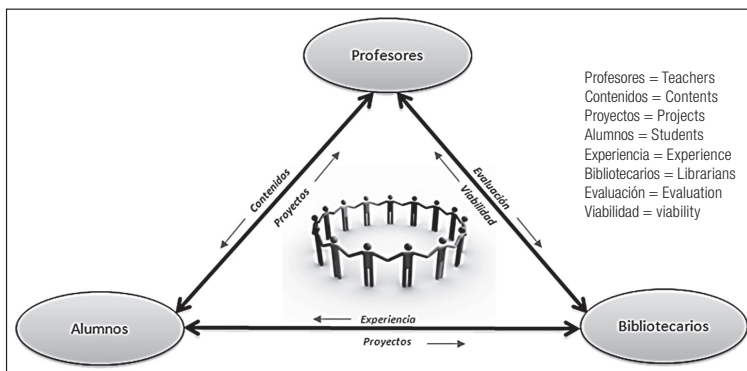

Profesores = Teachers
Contenidos = Contents
Proyectos = Projects
Alumnos = Students
Experiencia = Experience
Bibliotecarios = Librarians
Evaluación = Evaluation
Viabilidad = viability

Figure 3. Roles for participants in the CoP.

The CoP-Innova has also had access to a series of tools to support communication, social participation and collaborative work, for example a virtual campus based on the Moodle web application, with management modules, tasks, consultation, forum, resources, RSS and Atom syndication, e-mail and even a wiki module, and also a virtual private network group on Facebook. Notably, through the virtual campus, statistics concerning participation of all members are obtained, providing information to the CoP-manager regarding community management, important messages, loyalty of members, reactivation of activities, etc. As exclusive project management tools, the MS Project 2010 has been mainly used.
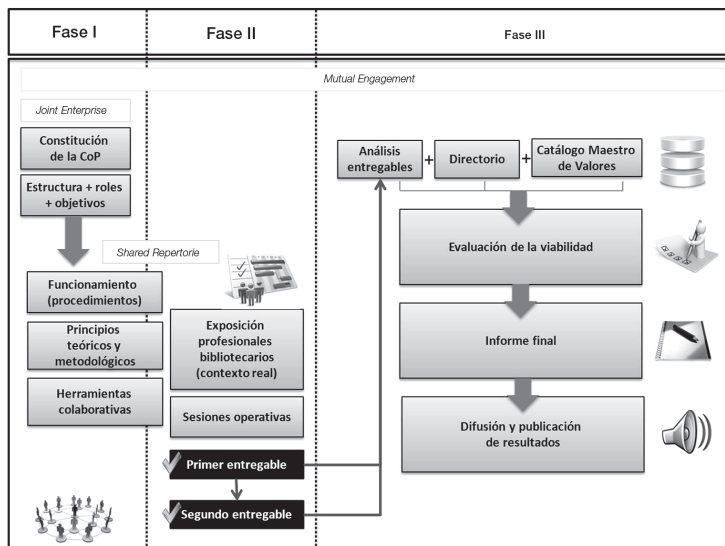
Functioning of the CoP

Figure 4. Operational model for the CoP-Innova.

Fase I, II y III = Phase I, II and III
Constitución de la CoP = Composition of the CoP
Estructura + role + objetivos = Structure + role + objectives
Funcionamiento (procedimientos) = Operation (procedures)
Principios teóricos y metodológicos = Theoretical and methodological principles
Herramientas colaborativas = Collaborative tools
Exposición profesionales bibliotecarios (contexto real) = Exposure to professional librarians (real context)
Sesiones operativas = Operative sessions
Primer entregable = first deliverable
Segundo entregable = second deliverable
Análisis entregables = analysis of deliverables
Directorio = Directory
Catálogo maestro de valores = Master catalogue of values
Evaluación de la viabilidad = Evaluation of viability
Informe final = Final report
Difusión y publicación de resultados = Dissemination and publication of results

The CoP operation is based on the model described in *Figure 4* with the following phases and work methodology:

First Phase. Bases for Mutual Engagement are shared with the formation of the CoP-Innova, the definition of its structure, identification of the roles of its members and establishment of its objectives (Joint Enterprise). Subsequently, the bases of the Shared Repertoire are established by the CoP project team from the professor and researcher sector:

- Establishing operating principles for the CoP.
- Exposure of theoretical and methodological principles for planning and project management for information and documentation units, based on the overall objectives of the course in which the project CoP-lnnova has been developed:
  - Knowledge of the theoretical and methodological principles for planning and project management for information and documentation units.
  - Comprehension and application of the methodology on which planning and project management in information and documentation units is based.
  - Search for interaction between this methodology and documentation processes conceived as projects and analysis of its implementation in university libraries.
- Presentation of tools and collaborative space.

The methodology used in this phase was based on showing students contents derived from the analysis and systematization of the contributions discussed in the section related to the theoretical context of the CoP-lnnova, indicating the adaptation of this conceptual basis to the guidelines proposed in the course and in its specific application to the actual context of the CoP-lnnova pilot library.

Second phase. Shared Repertoire bases were completed with contributions from the project team of the professional librarians sector, who essentially based on a set of good practices: powers and functions, quality commitments, procedures, services and products that are made in the pilot library. They also contributed by identifying the tactical outlook of the *Plan Estratégico* 2010-2013 of the *Biblioteca de la Universidad Complutense de Madrid*.

During this phase, strategies are implemented to facilitate collaboration and interaction between the different members of the CoP (brainstorming sessions, group discussions, online activities, forums, presentations as well

as previous cases and results, among others). Such strategies seek to channel the initial proposals for innovative projects by the different work teams. These initial proposals were embodied in a first deliverable to be submitted by each team, responding to the following scheme:

a) Prospección. Síntesis del funcionamiento y características de la unidad de información para la que se propone el proyecto en el marco de su plan estratégico y búsqueda y revisión de experiencias externas similares al proyecto que se propone.
b) SWOT[1] analysis for project proposal.
c) Choice of the area or strategic areas in which the proposal is included.
d) Development of the overall purpose of the project, the needs to which this responds and the main benefits derived.
e) Identification of the stakeholders in the project.

Finally, we undertook the formulation of final proposals in accordance with the elements of the shared repertoire and the final realization of these proposals by the different teams in a second deliverable that responded to the scheme shown in *Figure 5*.

Third phase. Involves the analysis of documents (specifically reports on proposed projects) and the creation of a final directory for these.[2] Also a *Catálogo maestro de valores* (CMV) (Master catalogue of Securities) was defined, which is the calculation tool that facilitates statistical data with the objective of providing a complement in addition to the qualitative assessment performed by experts; this was designed using the MS Excel 2010 software and has enabled the joint analysis of the various project deliverables based on the assignment of values for each variable of a deliverable. Essentially, it is a basic tool of quantitative evaluation that enables readings of generated data, either aggregated or specific. Values make it possible to group and classify common criteria, offering a minimum standard data set that facilitates the exploitation of dynamic tables and charts. Each value corresponds to a descriptor, identified by a unique code, which provides the meaning for each concept. Certain values also include other values that are at a lower hierarchical level, allowing data analysis at various levels of detail. For data related to costs (budget) and time, a Likert scale is applied based on three criteria: high, medium and low.

During this stage, final project proposals were evaluated and discussed to determine their viability in terms of possible effective implementation, paying special attention to those that could be reused and exported to other li-

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1   Also known as the DAFO or FODA analysis (*Fortalezas, Oportunidades, Debilidades y Amenazas*) (Strengths, Opportunities, Weaknesses and Threats).
2   An extract from this directory can be consulted in the Appendix.

braries in the Universidad Complutense and other university libraries. At last, the final report of the innovation project was written, proceeding to divulge and communicate the results.
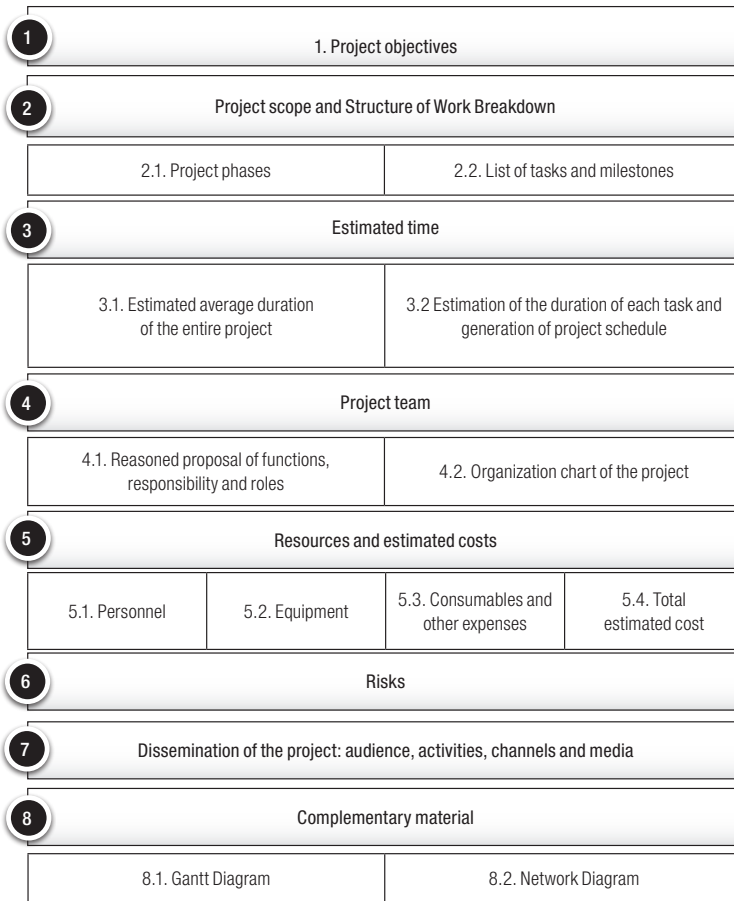
1 1. Project objectives	
2 Project scope and Structure of Work Breakdown	
2.1. Project phases	2.2. List of tasks and milestones
3 Estimated time	
3.1. Estimated average duration of the entire project	3.2 Estimation of the duration of each task and generation of project schedule
4 Project team	
4.1. Reasoned proposal of functions, responsibility and roles	4.2. Organization chart of the project
5 Resources and estimated costs	

5.1. Personnel	5.2. Equipment	5.3. Consumables and other expenses	5.4. Total estimated cost

6 Risks	
7 Dissemination of the project: audience, activities, channels and media	
8 Complementary material	
8.1. Gantt Diagram	8.2. Network Diagram

Figure 5. Elements in a project formulation model for documentation units (second deliverable).

Results of CoP-Innova

A living community of practice

We may consider that one of the main achievements and results of the experimental set-up is the vitality and dynamism it has provoked among its members. Different dissemination and communication tools have been used by

all its members who have participated at least once in the debates that have originated from any area in the active discussion. As for participation, notably the leadership of the CoP-manager has been essential for promoting debate and clarifying concepts so they can be implemented. Professionals have also played a role in providing clarification at the pilot stage and its characteristics, the duties of its members, and products and services.

The Virtual Campus and the e-mail of the campus itself were the most used tools, but classroom sessions or forums constitute those most highly valued by the working groups. These forums consisted essentially in the presentation of case studies with interventions in the form of debate.

In terms of data quantifying activity, the average daily access to the Virtual Campus was 1.3 per participant, about 69 hits per day. Global quantitative data, taking into account the four monthly duration of the course, we can consider more than 5,500 hits at an average of about 104 per participant.

Most treated or most followed issues, either in person or online, have been those related to strategic guidelines, the formulation of the scope of projects and the estimation of resources and costs.

Projects related to the strategic plan outlook of the Biblioteca de la Universidad Complutense

In the section "Institutional and strategic context of reference", the library of the Faculty of Economics and Business was established as the basis for proposals of projects related to the six strategic propositions incorporated in the *Plan Estratégico* 2010-2013 (Library at the Complutense University in Madrid, 2010), that affect the pilot library of the CoP-Innova: People, Organization and Quality, Financing and Infrastructure, Services, Library and Society, and Collections.

In relation to this context and in accordance with *Graph 1*, most projects are related to the strategic propositions People and Services, both represented by a 28%. This means that students appreciate the need for formulation and subsequent management of projects focusing on library staff policy or on the training, promotion and working conditions of the information and documentation unit staff (in the case of some projects proposed: telecommuting, job evaluation, staff turnover or balance between work and family life). In addition, projects concerning accessibility to the different library services and resources for those with hearing disabilities, conducting studies on foreign users or the creation of an institutional repository reflect the importance of continuous improvement in library services of universities.
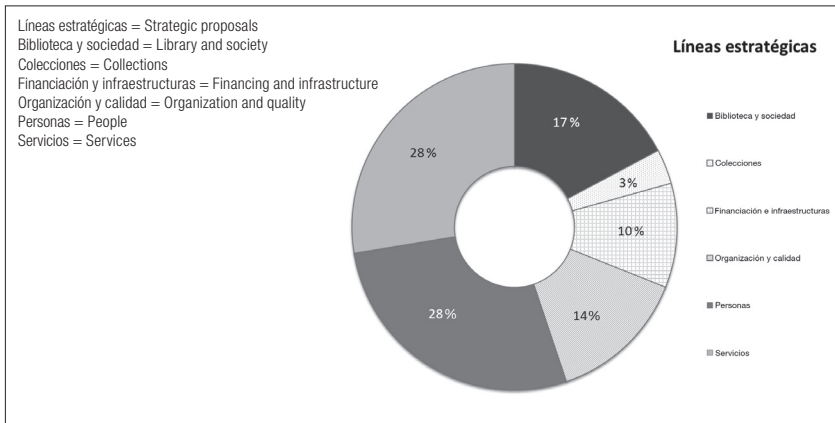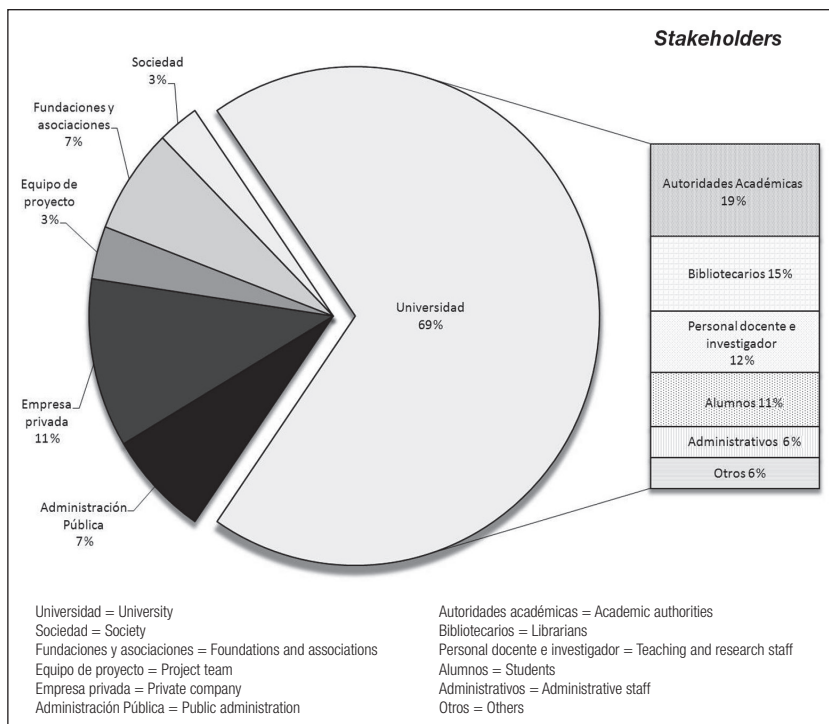
Graph 1. Identification of the strategic proposals of the Plan Estratégico 2010-2013 for the *Biblioteca de la Universidad Complutense de Madrid* in the projects proposed by the students

At a secondary level, there are remarkable projects that refer to the strategic proposal Library and Society (17%), aiming to bring the library closer to society, ensuring users and all citizens access to information, scientific knowledge and culture. This social labor is reflected in projects for library cooperation in developing countries and in those improving infrastructure and services for the elderly and disabled. Subsequently, the strategic proposal Organization and Quality has a 14%, being selected four times. Some of these projects, such as updating the library's marketing plan or the welcoming ceremony for new students at the faculty, affect on the strengthening of policies and internal quality systems of information and documentation units.

Finally, the presence of the strategic proposals Financing and Infrastructure and Collections is clear from the results. In the first case (10%), projects are related to the management of financial and physical resources (linked to projects of telecommuting and the creation of an informational repository), while the second strategic proposal is only selected to formulate the book donation project (3%).

Project stakeholders

Overall, the results obtained represent six categories of stakeholders (*Graph 2*), among which the University itself is an important part of the set, representing approximately 70%.

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Stakeholders

Sociedad
3%

Fundaciones y
asociaciones
7%

Equipo de
proyecto
3%

Universidad
69%

Empresa
privada
11%

Administración
Pública
7%

Autoridades Académicas
19%

Bibliotecarios 15%

Personal docente e
investigador
12%

Alumnos 11%

Administrativos 6%

Otros 6%

Universidad = University
Sociedad = Society
Fundaciones y asociaciones = Foundations and associations
Equipo de proyecto = Project team
Empresa privada = Private company
Administración Pública = Public administration

Autoridades académicas = Academic authorities
Bibliotecarios = Librarians
Personal docente e investigador = Teaching and research staff
Alumnos = Students
Administrativos = Administrative staff
Otros = Others

Graph 2. Identification of stakeholders in the projects proposed by students.

Given the magnitude of this type of stakeholder, it appears apt to identify the members who comprise the university complex and the degree of participation of these actors. As it is shown on the right side of the chart, stakeholders who constitute the collective "University", are mainly academic authorities, librarians, teachers and research staff, and students. Private company is in second position (11%) compared to Administration and "Foundations and associations" group, which occupy the third place, both comprising 7%. In some cases these have been identified as stakeholders involved in the financing and support of projects. It is also important to note the impact of library projects on society as a whole and the involvement of the work team (3%), since society benefits directly from their implementation, and the work team is responsible for their management.

Viability of projects in terms of time and costs

Time estimates for the management of projects proposed in CoP-lnnova are calculated both in days and hours, adopting as a general rule, a duration of

20 working days per month and days of 8 hours. As a global framework for the duration of the projects, it should be kept in mind that the CoP fixed timing requirements. It was established that the projects should adjust to the temporal scope of an operational plan, i.e. maximum time range of one accounting year.

Given this reference, it was considered necessary to establish 3 levels or degrees of duration according to a certain range of days: low duration (management proposals of less than 100 days), medium term (projects with a time frame of 100 to 200 days) and long duration (projects estimated to last more than 200 days). Results indicate that most of the projects have a medium duration, namely 7 formulation plans; low duration is represented by six proposals and only 4 projects are of long duration.

Costs are another key and essential factor in the management of any project, since not to consider this aspect would imply a lack of accountability and even define the initiated project as unviable. To avoid this situation and control the budget estimates of planned projects, 3 levels or types of cost have been established: low cost (less than €15,000), medium cost (between €15,000 and €30,000) and high cost (estimates above €30,000); percentages are represented in *Graph 3*. As presented, 47% of projects have a high cost for implementation, possibly because of the need to acquire necessary computer equipment, a common aspect of certain projects grouped under this type of cost (in the case of telecommuting or creating informational repositories). Another notable feature is the high number of projects that have a low cost, possibly as a result of the current economic crisis, reason why there is a surprisingly low number of projects estimated between €15,000 and €30,000 (medium cost) proposals.
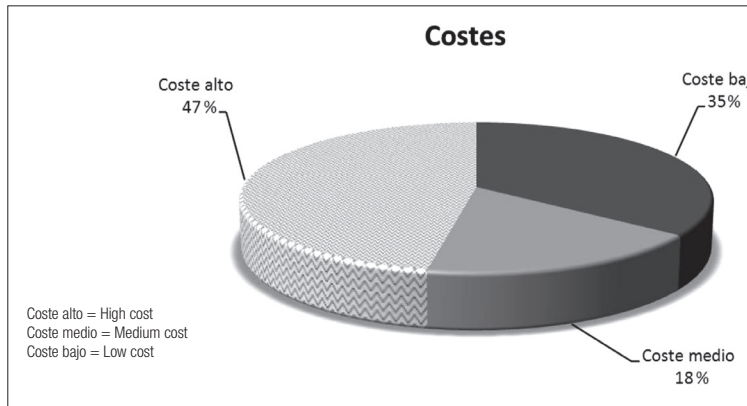
Graph 3. Cost identification (group analysis).

Consistent with this evidence, the CoP has established a relationship between the time and budget estimates during the evaluation and discussion phase of the final project proposals with a view to actual implementation, so that the viability of a project is based on an adequate relationship between time and cost, remaining aware of the impact that the economic crisis is having on the budgetary allocation for the information and documentation unit, issued by the parent organization. For this reason, high cost projects often have *a priori* a high level of unviability because of the difficulty of the investment. Likewise, as already noted, the duration of the projects may not exceed the accounting period, in order to determine the degree of compliance with the annual operational plan.

Consequently, the most appropriate projects have a profile of low and medium cost (maximum €30,000) and a low or medium term (up to 200 days, as estimated per academic year, which involves a period of 9 months with 20 working days per month, representing a total of 180 days).

De acuerdo con esta premisa, los proyectos con mayor grado de viabilidad son los que se muestran a continuación.

Table 1. . List of viable projects according to cost-duration relationship.

Group ID	Abbreviated title	Estimates			
		Cost		Duration	
002	Job evaluation	Low	☋	Medium	➲
004	Hearing disability	Low	☋	Medium	➲
008	Netvibes	Medium	➲	Medium	➲
010	Job rotation	Low	☋	Low	☋
014	Telecommuting	Low	☋	Low	☋
015	Marketing	Medium	➲	Medium	➲
017	Public Relations	Low	☋	Low	☋

CONCLUSIONS AND PROJECTION OF EXPERIENCE

A community of practice has been constituted, based on the development of innovative ideas for the planning and management of projects to support quality improvement of university libraries: the Library of Economics and Business of the Universidad Complutense de Madrid was chosen as the pilot stage since it acts as Coordinator Library of the Somosaguas Campus at the Universidad Complutense.

From a global perspective, the CoP-Innova has been formed from groups of people with shared needs and experiences derived from the same interest.

Some already trained and others being trained (students of the Master's in Documentation, Library and Archives Management at the Faculty of Documentation Science), others evaluating proposals and providing guidelines based on methods and professional experience (teachers from the Faculty of Documentation Science, consulting professionals in the field of Information and Documentation, and professionals at the pilot library of the Faculty of Economics and Business).

From this experience, several key factors become apparent: it is a dynamic that facilitates motivation and participation; having a pilot stage allows the application of theoretical foundations to a real context resulting in a better assimilation and understanding of the contents provided; the formulation of initiatives in the form of projects generates a climate of entrepreneurs well aligned to the demands of modern society and finally, professionals can reuse the proposals to improve their own centers with the prior knowledge of their viability.

The CoP-Innova has been a pioneer experience in Spain in the training and research for the planning and management of projects in university libraries. It has generated a directory of innovative projects for the context of the mentioned pilot library and developed a real experience of inclusive participation on the part of university stakeholders: students, library staff, teachers and researchers.

Quality surveys of the course carried out in the Faculty of Documentation Science at the Universidad Complutense have recorded an improvement in the quality of the learning process of students within the framework of objectives of the course mentioned and based on the essential principle of a community of practice: everyone has something to teach and everyone has something to learn.

This has constituted an immersion experience for students in a real professional pilot stage, beginning from the knowledge of theoretical and methodological principles for the planning and management of projects in information and documentation units.

Finally, we consider that from the methodological basis presented and the case study described, new applications and projections can be derived to other scenarios of innovation and entrepreneurship, including project proposals in additional types of information and documentation units and university libraries, to explore differences and similarities in development, as well as to compare results from the experience. Also, proposals may be related to other subjects or research topics in the area of Library and Documentation Sciences.

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This appendix shows a synthesis of the Directory for the 17 projects resulting from the experience developed in CoP-lnnova, corresponding to the following structure-type: Project or group ID, title of the proposed project and strategic proposal related to the *Plan Estratégico* 2010 - 2013 of the *Biblioteca de la Universidad Complutense*, which includes the projects.

ID	Title	Strategic proposal
001	*Telecommuting at the Economics Library at the Universidad Complutense de Madrid*	1. People
002	*Job evaluation in the Library of Economics and Business*	1. People
003	*Library and Society*	5. Library and Society
004	*Accessibility for users with hearing disability at the Library of the Universidad Complutense de Madrid*	1. People 3. Finances and Infr. 4. Services 5. Library and Society
005	*Promotion and diffusion of library services*	2. Organization and quality
006	*Study of information needs for foreigners at the Library of the Faculty of Economics and Business at the Universidad Complutense de Madrid*	1. People 4. Services
007	*Informational repository*	2. Organization and quality 3. Finances and Infr. 4. Servicios 5. Library and Society
008	*Proposal to install Netvibes tool*	4. Services
009	*Welcome training program to the BUC for newly enrolled students*	1. People 2. Organization and quality 4. Services
010	*Job rotation project at the Library of Economics and Business at the UCM for recently employed staff*	1. Personas
011	*Library project for underdeveloped or developing countries*	5. Library and Society
012	*Resources for information, methodology and social networks applied to Economics and Business in the EEES*	4. Services
013	*"Provide culture to your university". Campaign for book donation to the Library of the Faculty of Economics and Business of the UCM*	4. Services 6. Colecciones
014	*Home librarian*	1. People 3. Finances and Infr.
015	*Renovation of the Marketing Plan*	2. Organization and quality
016	*Balance between work and family life for personnel at the Library of the Faculty of Economics and Business of the UCM*	1. People
017	*Project for public relations between the library and university community*	4. Services 5. Library and Society

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