

## **Faculty-librarian partnership: a practical approach at Faculty of Pharmacy – University of Lisbon**

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Library at Faculty of Pharmacy – University of Lisbon

### **Abstract**

University libraries have played a key role in scientific research as well as in the support of education-related activities. Their main goal is to provide its users with immediate access to relevant information through updated information sources. Science evolves rapidly and so the daily information needs on health matters are large and require rapid access to the sources.

As services to support research, Libraries should create and develop mechanisms that answer positively to these issues. These services should look at users as customers seeking a service - information - and for whom all the efforts will be made to respond at all information needs. So, it's necessary to adjust their services to new needs and kinds of users, more dependent on the use of information technology but not always prepared for the overwhelming information that is discovered on the Web.

However, Librarians face a constant struggle to convince students and faculty that information skills are important and needed by all. The argument is that everything is available on the Web. If, with the advances in technology and the increased technology skills of undergraduates, it is easy to find "something" to answer most any question and students can apparently find answers to simple information needs, it's not more trustful that students are unable to explore deeper concepts or determine if their answers are rigorous. Since students feel successful in answering simple questions, they don't believe they need information literacy instruction (1).

At the same time, for technology, funding agencies and competition reasons faculty is forced to reorganize the curriculum in particular content and teaching. Similar pressure is felt by university librarians to rethink their role in higher education. The need of students and faculty for viable information skills is moving librarians into the teaching field (2). In that way, the Library of the Faculty of Pharmacy at University of Lisbon has been, in the last few years, establishing a variety of activities in partnership with the academic colleagues to work more closely with them and to try to integrate information skills into the curriculum.

In this paper, we present all the efforts done to find the best way to get our goals and the role of activities that were made during the last years, as training sessions, libraries presentations, collaboration with some master's courses and integration of information skills in the pharmacy degree course, among others.

**Keywords:** University Libraries, Information skills, Users training, Balanced Scorecard, Electronic Resources

### **Introduction**

The Faculty of Pharmacy of University of Lisbon (FFUL) had its origin in the School of Pharmacy attached to Medical-Surgical School of Lisbon, founded in 1836. Since then and until today, many were the curriculum as way to track important changes occurred in the field of Pharmaceutical Sciences.

With the introduction of the "Bologna Process" into the national system of higher education, the Faculty of Pharmacy adapted its earlier plan of studies that conferred the degree in Pharmaceutical Sciences. Thus, the reform of 2006 introduced the first

changes in accordance with the guidelines of Bologna. However, in 2007, has been introduced new changes in curriculum and adjustments were made for the transition of the two reforms. Currently, the curriculum of the MSc in Pharmaceutical Sciences, adapted to the "Bologna Process" consists of three scientific areas: Life Sciences, Pharmaceutical Sciences and Chemical Sciences. The disciplines that make up each of the scientific areas are spread over 10 semesters and the internship include the preparation and public discussion of its report (3, 4).

The introduction of new changes in Portuguese higher education and, particularly in the Faculty of Pharmacy curriculum, has wide repercussions for libraries. University libraries have played a key role in scientific research as well as in the support of education-related activities. Their main goal is to provide its users with immediate access to relevant information through updated information sources and, in many cases, this represents a great challenge with the introduction of new innovative teaching methods (5).

Therefore, the Library of FFUL has always tried to follow the technological development, having been the first library of the University of Lisbon to provide a computerized library catalog and a website (6). Also, aim to maintain their bibliography always quite up to date with the acquisition and signing of both printed and digital documents as well as specialized databases, journals and e-books. In recent years has focused on the continuing education of his team as well as in user training, particularly in the use of electronic resources (7).

## **Objectives**

As services to support research, Libraries should create and develop mechanisms that answer positively to users' needs. So, it's necessary to adjust their services to new needs and kinds of users, more dependent on the use of information technology but not always prepared for the overwhelming information that is discovered on the Web (5). If, with the advances in technology and the increased technology skills of undergraduates, it is easy to find "something" to answer most any question and students can apparently find answers to simple information needs, it's not more trustful that students are unable to explore deeper concepts or determine if their answers are rigorous. Since students feel successful in answering simple questions, they don't believe they need information literacy instruction (1).

The main goal of activities undertaken by the Library was to bring the user to the Library (not only into library space, but to all of the services), to publicize their services and give them the essential tools to establish research strategies, to select the available information resources and to improve their bibliographic information skills.

Therefore, among other activities, we proposed to:

- Promote training session about electronic resources
- Prepare didactic materials
- Update our library website
- Use web 2.0
- Evaluate the Library services through a questionnaire

All these activities have contributed to the success of the Information Literacy project

## **Methodology**

Our first step was to apply the Balanced Scorecard at FFUL's Library. The balanced scorecard is a strategic planning and management system. Its implementation has as main advantages the possibility of signaling the priorities of an organization, to confront the goals with the results, biases and causes (internal and external factors) and to define

corrective measures. Therefore, allows meeting and monitoring the organization, looking to the future and to distinguish the organization. To apply the BSC is essential to define the organization's mission (which does), vision (where you arrive) and corporate values (how to act to accomplish the mission and achieve the vision) and to know the organization's internal and external environment (8). Thus, there should be a stakeholder analysis (all involved in the organization) and a SWOT analysis (strengths and weaknesses, opportunities and threats) to defining the strategic vectors (**Figure 1**).

<b>Mission</b>	To serve the community by providing updated documentation and information in order to study, research and teaching of Pharmaceutical Sciences								
<b>Vision</b>	The Library of FFUL desires to remain a reference point and a center of excellence, at national and international levels, in the creation, transmission and dissemination of culture, science and information aimed at the development of Pharmaceutical Sciences.								

<b>Corporate Values</b>	Communication	Essential between services to better serve the community, maximizing all the resources (human, economic, financial and material)							
	Motivation	Essential to motivate staff. This allows creating a cozy and well attended ambient as well as creating the necessary conditions for success, promoting respect and teamwork among staff and other services							
	Quality	The quality of services and their suitability to user needs is an important value. Thereby, services should promote quality teaching and research in pharmaceutical sciences, by providing relevant, referral and updated scientific and technical information.							

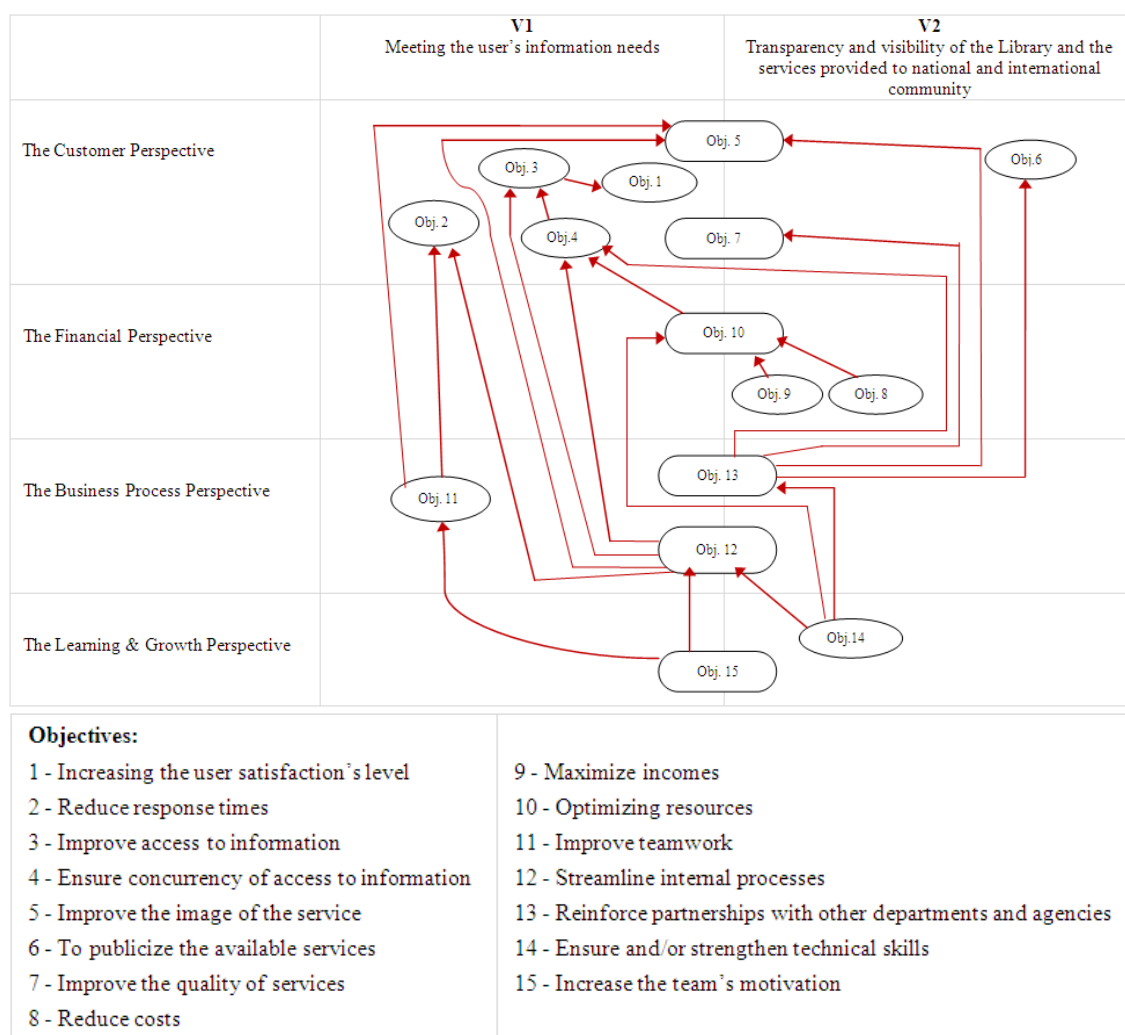
<b>SWOT Analysis</b>		<b>Weaknesses</b>					<b>Strengths</b>			
		Computers (obsolete and sparse)	Lack of human resources	Lack of Continuing Education Courses for certain professional groups	Limited Financial Resources	Building structure and architecture	Quality of Services	Focusing on Electronic Resources and new technologies	Qualified Staff	Quality and update bibliography
<b>Threats</b>	Budget Reduction	-		-	-					
	University of Lisbon Reorganization		-	-			+		+	+
	Security and Environmental disasters					-				
<b>Opportunities</b>	Cooperation protocols with other Libraries	+	-		-		+	+		+
	University of Lisbon Reorganization	+	+			+	+		+	+
	Continuing Education Courses for Human Resources by Funded Courses			+	+				+	
	Collaboration with the FFUL Scientific and Pedagogic Council		-				+		+	
	Implementation of the University of Lisbon Institutional Repository	+	+		-		+	+		+

<b>Strategic Vectors</b>	V1	Meeting the user's information needs	To serve the community, the Library should guide their activities and strategies to meet the information needs of its users.						
	V2	Transparency and visibility of the Library and the services provided to national and international community	By making the library and the quality of services rendered visible to the outside, Library can be a reference and center of excellence (nationally and internationally)						

**Figure 1** – First stage of Balanced Scorecard applied to FFUL's Library

At a second stage we designed our Strategic Map, with the several perspectives, the strategic vectors and the objectives (**Figure 2**).



**Figure 2 – Strategic Map**

According with balanced score stages we could identify our priorities. Thus, as you may see at Figure 2, the first seven objectives belong to the customer perspective. To ensure that we would achieve these seven objectives, we identify the following issues:

- *Training sessions and training materials*

In 2005, the Library initialized an information literacy project, after have received a proposal to collaborate with a Master Course. The objective was to give a brief explanation about how to use the search tools available at Pubmed. Although teachers have some understanding on the subject they were not comfortable to explain it. The library saw an excellent opportunity to achieve their goals and develop a range of activities previously identified.

Simultaneously, the Biblioteca do Conhecimento Online (Online Knowledge Library) appears to provide access to full texts of a vast number of international scientific and academic publications to research and higher educational institutions. B-on (Biblioteca do Conhecimento Online) has its own site and portal (9, 10). It was important publicize it and help user to optimize searches to get the best results. As result of all the

information literacy activities, in 2006, the Library received a new proposal to participate with a lecture in the context of the internships complementary activities. In 2006 and 2007, the curriculum changes with the “Bologna Process” and the efforts previously done by library team with the pedagogic council finally have results: Library comes to the classroom. In September 2008, at the beginning of the academic year and for the first time, we could promote our services to the young students, in the classroom, and perform a Library guide tour for them. During 2009, we establish a training plan with some teachers to include information literacy contents into curriculum and we start it in the second semester of the 2009/2010 academic year.

Thus, since 2005 until present Library have collaborated with several courses at FFUL, namely:

- Pharmaceutical Sciences Degree:
  - Internships
  - Discipline of History of Pharmacy and Therapeutics
- Masters Courses:
  - Pharmaceutical Care
  - Community Pharmacy
  - Hospital Pharmacy
  - Advanced Pharmacotechnics
  - Herbal Medicines

To prepare training sessions it was necessary to identify the appropriate resources. For that we analyzed each curriculum and identify the main requests of our students. At the same time, we thought important identifying the resources more used at FFUL and for that we analyzed the usage statistics given by publishers. As result of that study we select the resources and thematic according to library goals (**Figure 2**).

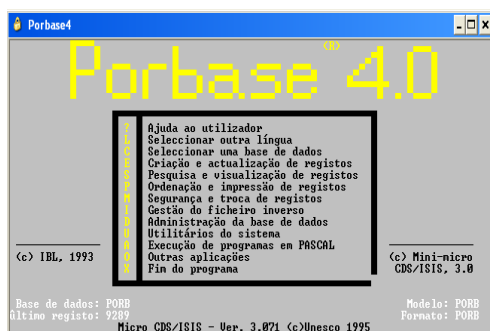
Furthermore, Library has promoted several extra-curriculum training sessions namely for teachers, researchers and scholarship students. During this year are scheduled several workshops regarding online resources for doctoral students. In 2011, we will start to use a new WebConference platform – Colibri – available to all the higher education institutions that allows video and audio interactions between teacher and students as well as sharing presentations (e.g., PowerPoint documents and/or Webpages) (11).

Regarding materials, we developed some training materials on the following subjects:

- Research strategies and techniques
- Main search tools in the following resources:
  - Academic Search Complete (EBSCO)
  - Web of Science (ISI)
  - Current Contents Connect (ISI)
  - Journal Citation Reports (ISI)
  - Online Knowledge Library (B-on)
  - Pubmed
  - International Pharmaceutical Abstract
  - Medicines Complete
  - Mylibrary
  - EndnoteWeb

- *Library website and Web 2.0*

As we already said, FFUL's Library was the first library at University of Lisbon that had an automated and online bibliographic catalog (since 1997 and 1998, respectively) (**Figure 3**) and a website (since 1998) (**Figure 4**) (6, 12).



**Figure 3** – Library's automated and online bibliographic catalog



**Figure 4** – FFUL Library's website (1998-2007)

With the technological development, it was necessary to adapt and improve our website. Therefore, celebrating ten years of existence, was inaugurated in 2007 the library's new website (**Figure 5**) (13) and the Library's blog (**Figure 6**) (14).



**Figure 5** – Library's Website (2007- Present)



**Figure 6** – Library's Blog

Designed to be a modern and user friendly website and blog, we would like to give access to our resources, to give general information regarding library and faculty, to facilitate contact between users and library's staff.

However, after only four years, we need to implement a set of tools and mechanisms, at library website, as a CMS (Content Management System) facilitating the management and updating of contents. Simultaneously, we intend to be linked with social networks. In a few years, we experienced a stunning boom of social networks in particular Facebook. Soon, we realized that everyone had a Facebook profile and that could be a great tool to keep all our users informed about our activities and news. Also could be a precious tool to get to know our online users and to keep them informed and talk with them. Thus, in March 2011, it was created the Library's profile at Facebook (**Figure 7**) (15).



**Figure 7** – Library's profile at Facebook

After 1 month of existence we already have more than 120 'likes' and this tool continues the library's blog that will kept as archive of all the activities and products developed by FFUL's library between 2007 and 2010.

- *Evaluate the Library services through a questionnaire*

In June and November 2009, Library applied a questionnaire to evaluate their services. This allowed knowing the user's opinion about several library services (not only the online resources) and enabling us to change or fix the identified gaps. On the other hand, both questionnaires, based in ISO 11690 standards (16), allowed identifying the operating areas for general improvement of services provided. Both questionnaires have a 54 questions set as below indicated:

- 5 questions: Customer characterization
- 1 subset of 22: Satisfaction with Services
- 1 subset of 9: Satisfaction with Facilities
- 1 subset of 17: Use of electronic resources
- 1 open question: Opinion

We used the following evaluation scale:

- 1 – Poor
- 2 – Satisfactory
- 3 – Good
- 4 – Excellent



## Results

Statistical methods can be used to summarize or describe a dataset and this is useful to communicate the results of experiments. In addition, statistics are used to draw inferences about the process or population being studied. In this section we present some results of our activities and efforts (17).

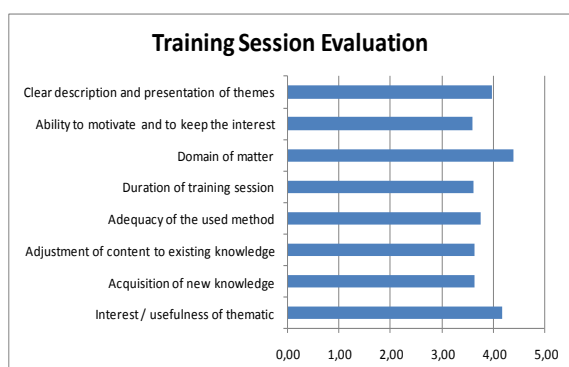
### ▪ *Training sessions and training materials*

As you can see in the charts below (**Figure 8**), although the number of sessions and number of hours has been somewhat irregular over the years, the number of users who participated in these sessions has increased. The disparity in the number of sessions follows the curriculum changes introduced by the "Bologna Process" and the efforts done by Library staff after launch the evaluation of Library services in 2009.



**Figure 8** – Training session's graphics (nr. of users, nr. of hours, nr. sessions)

At the end of some training sessions, we launch a questionnaire to evaluate that training sessions (**Figure 9**). As result of that analysis, we could have a feedback of our efforts. This kind of evaluation it's very important to improve some adjustments in future training sessions.

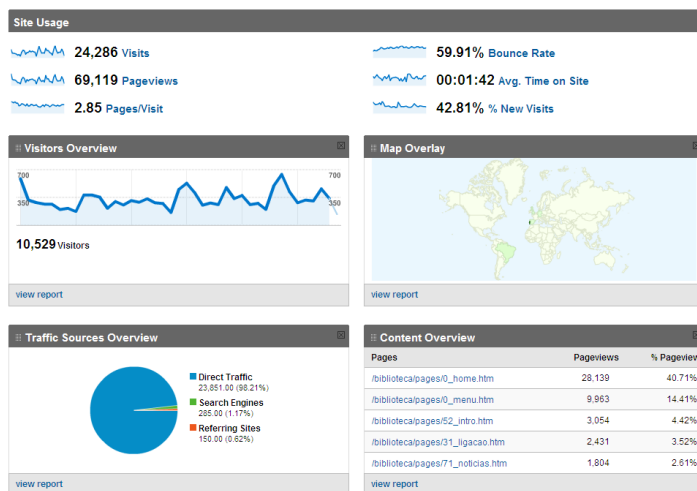


**Figure 9** – Training session's evaluation



- *Library website and Web 2.0*

Since November 2007, the Library website had 24.826 visits from 51 countries and 98% of access refers to direct traffic. As you might see (**Figure 10**), the website has 59,91% of Bounce Rate. As Google analytics explains, bounce rate is the percentage of single-page visits or visits in which the user left the site from the entrance page. One of the website goals is to provide access points to several information resources. As you can see below, the homepage is the most page views (40%) and is the entrance page of the website most used. Analyzing the homepage, we see that it's possible to have quickly access a wide range of resources. This explains the high bounce rate and the low-average time on site.



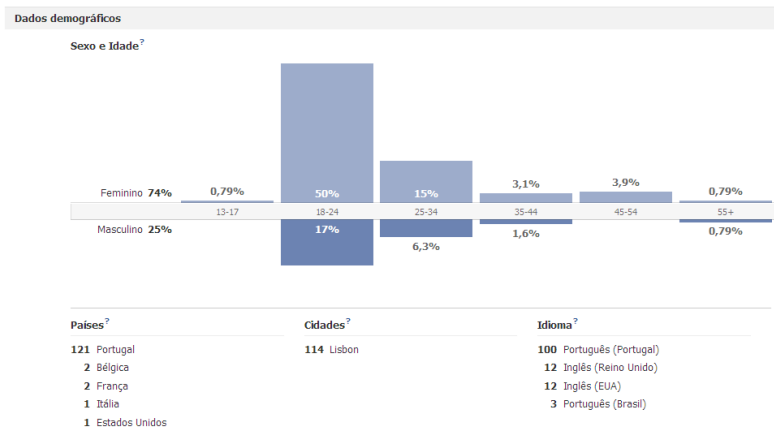
**Figure 10 – Website statistics**

The blog had 5.121 visits from 52 countries and a bounce rate of 62,66%. Library use it as archive and an easy tool to promote and disseminate activities and events. As you may see, traffic sources (49%) is from search engine and 39% from referring sites (library website) (**Figure 11**).



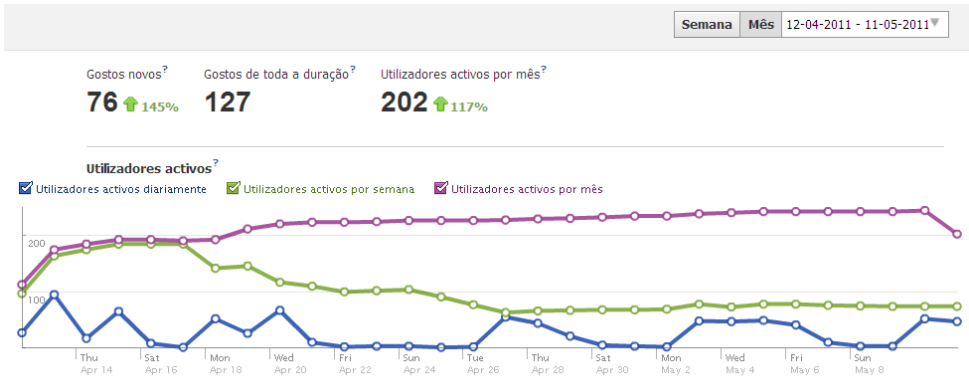
**Figure 11 – Blog statistics**

As we said before, the Facebook Profile has only 2 months. However, it’s possible to give a general overview of library profile statistics.



**Figure 12** – Facebook profile users statistics

Regarding our followers statistics, 74% are female and 25% are male. 67% of them have 18-24 years old (**Figure 12**). Between April 12<sup>th</sup> and May 11<sup>th</sup> we registered 76 news “Like” and 202 active users by month (**Figure 13**). Library’s profile also registered 11.549.



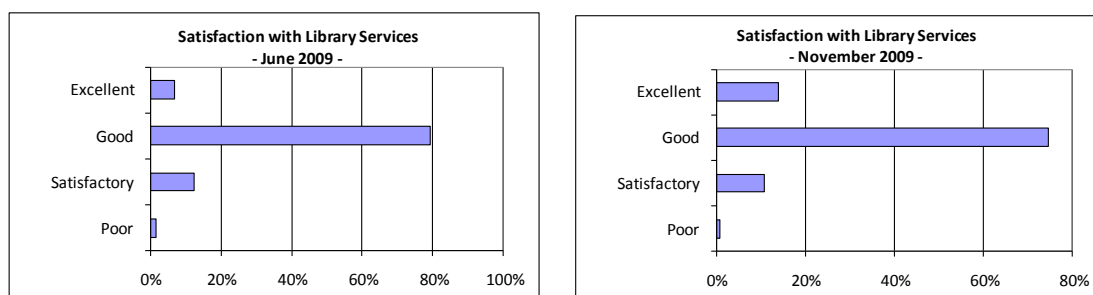
**Figure 13** – Facebook profile activities statistics

- *Evaluate the Library services through a questionnaire*

The characterization of users via both questionnaires is mirrored in the following table (**Figure 14**)

	June 2009	November 2009
<b>Function</b>	Student (83%)	Student (85%)
<b>Type</b>	Internal (88%)	Internal (95%)
<b>Age (Median)</b>	22	21
<b>Gender:</b>	Female (69%)	Female (75%)
<b>Frequency in the Library</b>	Several times a week (45%)	Several times a week (50%)

**Figure 14** – Customer Characterization



**Figure 15** – Evaluation of Library Services (June and November 2009)

Despite the good score given to library services in general (**Figure15**), we could evaluate and identify some priorities as develop our website and blog, improve the Loan Service and the ILL Service. On the other hand, some electronic resources are less used than what we would like. Thus, we need to make some efforts to encourage and help the user with our online services (website, blog and all databases and e-books).

This evaluation allows us preparing a report with the main orientations to improve the library services. These orientations are related to:

- Communication between Library and User
- Increase the available services
- Promotion of services and products
- Dissemination of information
- Creating nice spaces to study and leisure

## Conclusions

Applying balanced scorecard methodology was essential to get a deeply and structured knowledge about Library services and, also, finding our strengths, weaknesses, opportunities and threats. Identifying our strategic vectors and objectives allow us to develop an actions set that should help us to achieve our goals. The information literacy project was one of those activities. In this project we developed training sessions and materials that should help the FFUL community in their research procedures and teaching them to use the available electronic resources. Simultaneously, library staff felt that it would be important to improve the library's image and the contact with customer and launched the new website and blog. Performed some enhanced actions, library decided to launch the evaluation questionnaires to help us monitoring and guiding our procedures.

We believe that all the efforts done to find the best way to get our goals and the activities that were made during the last years helped to improve library services and faculty-library partnership. However, we also believe this project it's not over. Science evolves rapidly and the daily information needs on health matters are large and require rapid access to the resources. So, librarians have to keep in mind that they should create and develop mechanisms that answer positively to these issues.

## Acknowledgements

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