Technological evolution in health libraries, and the implications for librarians: The experience of the Virtual Health Sciences Library of the Balearic Islands (Bibliosalut)

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Abstract

The development of information and communication technologies brings with it radical changes in the functioning of health sciences libraries. These changes often imply the appearance of new models of libraries, from face to face to virtual. The need to adapt to new times and new ways of working with users is a constant challenge for information and documentation professional, who, now more than ever needs to be continually updated in the application of information technologies to library services. In this communication we present the experience of the technology evolution in the Virtual Health Sciences Library of the Balearic Islands (Bibliosalut), which was created in 2003, where a small team of enthusiastic and dedicated professionals, work daily with the aim of constant technology improvement and the corresponding improvement of the services given to the users. These librarian skills have brought with them a transformation in the relationship between the library and the users, who are now more independent, with the possibility of autonomy and self-learning. With this presentation we want to paint the new vision of how librarians work in these ever-evolving times.

Key words: Libraries, Medical - Libraries, Digital – Librarians – Informatics – Professional role.

Introduction

The Virtual Health Sciences Library of the Balearic Islands (Bibliosalut) is a project carried out in collaboration with the Regional Ministry of Health and the Health Service of the Balearic Islands (1).

Mission of Bibliosalut

The mission of Bibliosalut is to facilitate the most important scientific information to the public health professionals of the Balearic Islands by using the new information and communication technologies in order to contribute to the improvement of medical care quality, teaching, research and health management.

Institutional context

The territorial organization of Balearic public health system divides the territory into 3 areas (Mallorca, Menorca and Ibiza-Formentera) and 6 sectors: 3 in Mallorca, 1 in Menorca and 1 in Ibiza-Formentera. There is 5 hospitals in Mallorca, 1 in Menorca, 1 in Ibiza and 1 in Formentera, with a total of 56 districts, corresponding health centres (45 in Mallorca, 5 in Menorca, and 6 in Ibiza), serving a population of over one million people, exceeding this amount in the summer months.

Bibliosalut users are potentially all workers in the Public Health System of the Balearic Islands (14,289), but our target group are physicians, nurses and other health professionals (7,184).

Bibliosalut has only 5 librarians, one library assistant and an administrative clerk. The library has one director and each project is coordinated by one or more librarians.

History of Bibliosalut

In 2003 the implementation of the digital library was started, wherein the best databases at national and international level were selected, providing access to the most important biomedical journals. All the medical libraries from the Balearic Islands began to replace paper journals with their electronic format (2).

During the period 2003-2007 Bibliosalut managed electronic journals packets for the Public Health System of the Balearic Islands. Meanwhile, the libraries of the centres began to reduce their subscriptions, which were mostly still in print format (3-5).

After years of study and planning in 2008 Bibliosalut started on the road towards the consolidation of a true digital library, with actions such as the centralized management of subscriptions and document supply service, the organization and presentation of journals through to an A-Z list, a link resolver and procedures (6).

2011 was an important year for Bibliosalut. The most important milestones this year were: new website, remote access, presence on social networks and Ask a Librarian Service (Pregunta a Bibliosalut).

From 2012 to 2014 we continue improving the library with new services: dissemination of biomedical production of the Balearic Islands in the social networks (#PublicaSalutIB), creation of a new section with all the statistics data about resources and services, along with a new Medical English section, different versions of the web of Bibliosalut by subject (primary care, nursing, psychology…), and Infosalut, a new bulletin about institutional and health professionals news.

From the beginning, Bibliosalut has been collaborating with other digital libraries and other health sciences libraries in Spain. Library cooperation is essential to expand the availability of documents and advances in new projects. Any digital library cannot have

all the international scientific production, so it is necessary to open channels of cooperation and assistance to benefit the users of the different libraries and institutions.

Technological evolution

Since the creation of Bibliosalut (2003) there has been a gradual reduction in the print format, it has almost exclusively been changed to the electronic format (100% in 2012). Like any other library, Bibliosalut not only has an organized collection of documents, but also offers a range of services to its users, mostly virtual. The digital format has a clear importance in medical libraries and the services are becoming more and more digitalized.

The services offered by a digital library require unceasing updating and innovative professionals who are always striving to improve their work. In these environments it is an important and essential need to work with multidisciplinary teams: librarians, IT staff, managers, quality technicians, linguistic assessors, physicians, nurses, etc.

Bibliosalut has always promoted a culture of autonomy and self-help (FAQ, manuals, tutorials, web usability...), with the possibility of help and advice for specific information retrieval (Ask a Librarian, Bibliographic Search Service...).

In continuation we will highlight the most important technological advances of Bibliosalut, and their implications for librarians:

Remote access management

In a digital library it is considered essential to have a remote access system that allows the users to work with the resources of the library outside their workplace. This has increased the access to resources and library services and thus its use. In this way we are able to increase the returns of the budget invested in the digital library. Bibliosalut has worked for years to search for a standard and economical remote authentication system that allows access to contracted resources at different levels of access (regional, by centres and professional groups), with a system where the user only has to authenticate once per session (Single Sign-On). Finally we chose OpenAthens LA system, from the British company Eduserv, widely used in other countries. The technical collaboration with the Office of Information Technologies and Communications (OTIC) under the Health Service of the Balearic Islands was fundamental. Authentication implemented system allows users to authenticate to Bibliosalut with the same keys used to access the intranet from the user's centre, without specific keys to the digital library.

We have been working to adapt this system to the specific requirements of the Public Health System of the Balearic Islands. Thanks to this Bibliosalut does not currently have to manage usernames and password changes in the user's database (usernames, passwords, new users, unregistered users, eventual staff, etc.). To allow this system to

work correctly librarians had to learn to customize the URL access to the different resources, journals and articles.

Centralization and automation of the Document Supply Service

The document supply service (DSS) aims to provide the users with the documents that are not available by subscription through the digital library. Bibliosalut was the first Spanish digital library to implement a fully centralized document supply service (2008), serving all professionals in the public health system of the Balearic Islands and democratizing the access to documents. This service was automatized, using the program GTBib-SOD by Kronosdoc (7-8). Bibliosalut works with more than 200 Spanish libraries to perform this service. If the journals are not available in Spain requests are also made to SUBITO, British Library and NILDE. The library also participates in collective catalogues: C17, RCS and in the future catalogue of the national project CNCS. This change made the management of this service easier and systematic for librarians and users. It also meant that the work flow increased a lot, and forced the creation of a work procedure.

Web and content management

These services are integrated into the library website (http://www.bibliosalut.com), which seeks to combine the ease of navigation, broadcasting news of Bibliosalut and give access to the services and resources from any computer connected to Internet (9). This web was created and is maintained by the librarians of Bibliosalut, which in turn increases the daily work of updating software and manage contents.

Digitalizing user's attention service

Since 2011 Bibliosalut has had the service "Ask a librarian" (Pregunta a Bibliosalut), which was also the first digital library of Spain to centralize and digitalize this service. To manage the Ask a Librarian service we chose the web application Hesk, software for helpdesk. This software allows the distribution of work between the librarians; the enquiries are divided into different thematic categories and have predetermined answers, preparing a database with answers to Frequently Asked Questions (FAQ), obtaining statistics, etc. After a detailed study by the librarian team, it was decided to differentiate Ask a Librarian from the Bibliographic Search Service, as these two services were closely related they needed their own entity. The Bibliographic Search Service is also a centralized and autonomous service, which allows users to seek assistance from the librarians for bibliographic searches and retrieval of scientific information, in general. Now, as the document supply service the management of this service is easier and faster.

Dissemination of Bibliosalut

Diffusion is important in any library but in the case of the digital ones, it becomes imperative to have a good and fast communication channel with users (10). The presence of Bibliosalut in the social networks reinforces the corporate image, bringing

their services to all users and opening the possibility of feedback. Bibliosalut features with profiles on various social networks (Twitter, Facebook, Google Plus, Slideshare, Flickr and Delicious), being aware of the new changes that are happening in the social web, where the users are. All library profiles on the social networks are integrated into the Bibliosalut web portal so users can track the activity of the library on these platforms. In addition an RSS feed is also available, where users can subscribe and receive updates that are published on the website. Also we are working on the design of a system to send newsletters about Bibliosalut to disseminate interesting information to the users. With this objective we created the hashtag #PublicaSalutIB. This is a service created to spread the scientific production of researchers in the public health system of the Balearic Islands through the social networks. This new way of dissemination meant that the communication with users was more direct and closer.

Maximizing users training service

Although since 2003 Bibliosalut has had users training plans, in 2009 we organized a centralized users training plan (11). We gave short duration courses (PubMed, RefWorks, Web of Science, CINAHL, critical reading, etc.) and sessions (Introduction to Bibliosalut, Protocol of bibliographic search, etc.) in the centres of Mallorca, Menorca, Ibiza and Formentera. All the courses given by Bibliosalut are accredited by the Continuing Education for the Health Professions Commission. E-learning activities are a midterm objective of Bibliosalut, with the Moodle platform. We also use screencasts or video tutorials, which are currently being designed by Bibliosalut aims to teach its users through images (giving an overview of resources and library services, conducting a bibliographic search, describe the characteristics of an action, spread a particular service, etc.). Therefore this is a new training tool that helps the user to become more autonomous in conducting searches of information, complementing classroom and online training.

The Users Training Service became a continuous learning program for librarians, because we have to be continuously updated. In this sense we know that it is one of the most valuable services for users.

Collect the scientific production of the Public Health System of the Balearic Islands

For years we have been working on the project of institutional repository of the public health system of the Balearic Islands (Docusalut) as a tool where professional's institution can archive their scientific work. It is a complex project, not just at informatics level, but also in relation to structural and organizational issues, copyright, review and validation of content dissemination between authors to self-archive their works, relationships with schools and services involved, etc. To put this service in practice it is necessary not only to have technical resources but mainly with librarians needed to bring the day to day project, both during development and in production. For all these reasons, it is progressing very slowly.

Improvement of the quality of Bibliosalut management

Recently a new section on usage statistics has been integrated into the Bibliosalut portal, after a detailed study of how to manage (12-14), in order to spread the detailed use of the library since 2003. Managing a digital library implies the constant study of the users use, resources and offered services. For this objective is needed, collected from various sources (editors, service management applications, Google Analytics, etc.), and represented in tables and graphical statistics, facilitating analysis for continuous improvement.

In order to organize all the information related with the management of Bibliosalut, we established a work-flow based in the storage of all this information in the cloud, using the Google Drive tools, which facilitates the activity, organization and management of the digital library.

Creating a new health information portal by Bibliosalut

We recently have made a complete redefinition of the Bulletin of Knowledge Management newsletter, called Infosalut (http://www.infosalut.com). We want direct participation of the different institutions and professionals, and transform Infosalut into an excellent channel to disseminate and be updated (15). We will provide the professionals of the Public Health System with a communication channel where they can show and share their achievements: scientific, news, courses, events, etc.

This project will add a new role for the librarians because we will have to manage a new way of access to Public Health System information, connecting users with information.

The change in librarian's roles

In a digital library the information professional needs to have different kind of skills: professional knowledge, generic and personal (16-19).

Professional knowledge

Knowledge of metadata standards, mark-up languages, experience in cataloguing electronic publications, web design and web standards, content management system, etc. Technological development is a very important challenge for librarians. It goes without saying that information technology has changed our jobs. Professional knowledge is absolutely necessary in a digital library, for daily management and the design of new projects and services. Learning and improving our technical skills is critical to our professional development. But the professional knowledge is nothing without generic and personal skills.

Generic skills

The new libraries need more and better trained librarians, with good professional knowledge. But they also require generic skills such as:

- Highly qualified and motivated in dealing with unforeseen problems that may arise in the daily management of the digital library. Both technically, such as logistics. It essential that they can adapt to new times.
- Innovative and setting trends. Users of medical libraries constantly demand the latest. That is why the staff should be prepared to seek answers adapted to these needs by applying the latest trends and innovation in information technology.
- Subjected to a constant updating of their knowledge. Being updated in a medical library is more important than in any other library. Medical science is in constant evolution, which forces us to keep up and go in the same way as our users. If necessary we need to be ahead of them in order to provide the best service.
- Be able to work with librarians and multidisciplinary teamwork. Large projects require innovative training professionals from different disciplines. It is the only way to reach the highest goals. It is also an opportunity to learn that greatly enhances motivation among the library staff.
- Leadership qualities and project management skills. In a digital library there are a lot of different projects and the librarians has to be able to develop them. Thus they need to be able to planning, coordinate and control the evolution of the project.
- Training and public communication skills. Librarians of a digital library have to be good communicators both in written and oral situations to exchange feelings, ideas and information with others in an appropriate manner.
- To improve their knowledge and skills in the use of English. It is necessary to increase the linguistic capabilities of the staff to participate in international forums, keep abreast of everything that is published in our field within the international scientific community, communicate with suppliers in other countries, etc.

Personal skills

The attitudes, values and personal traits are basic necessities in a virtual environmental. A librarian in a digital library should be enthusiastic, flexible, self-motivated, creative, analytical, technical, committed, reflective and adaptable to changes.

These librarian skills have brought with them a transformation in the relationship between the library and the users, who are now more independent, with the possibility of autonomy and self-learning, but these achievements are not just a co-work between librarians and users, we need to have a good relationship with other key players, such as vendors, suppliers and publishers.

Conclusions

After analysing all the changes that the health sciences libraries of the Balearic Islands have undergone in the last eleven years we know that there has been a complete change both in terms of its organization, resources, background, services, but especially in the librarians. We currently have a digital library that centralizes all the bibliographic collection and services.

Thanks to the digital library we can offer more and better services to our users, and in addition the quality of the services has increased. In Bibliosalut we are able to give more services to more users than we could when attending in a face-to-face library. This change means that response times are shorter.

All these changes felt by the medical libraries, as much technological as evolutionary, of the services which have made the librarians need to develop professionally with these changes.

The fact that medical librarians have growth professionally improving their level of health knowledge, professional skills and their great ability to learn and adapt to changing times, is what has made the medical digital libraries a benchmark in innovation today.

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