The evolution of the UOC Library: Future prospects

Resum

La Biblioteca de la Universitat Oberta de Catalunya ofereix els seus serveis de manera virtual des de la seva creació, l'any 1995. Per això, l'aposta per les noves tecnologies del moment ha estat una constant durant aquests anys. A continuació, a través d'una breu menció a l'evolució històrica, es comenten els serveis i recursos oferts de forma pionera a nivell de biblioteques universitàries. S'analitzen els aspectes més destacables pel que fa als serveis, la gestió de la col·lecció, la formació, i la relació amb la Universitat, en el moment actual. Per concloure, es fa una anàlisi dels principals reptes de futur que la Biblioteca espera afrontar en els propers anys, tenint com a referent principal els usuaris i les innovacions tecnològiques que permetin donar resposta a les noves necessitats que vagin sorgint. Tot això, per continuar sent capdavantera en l'àmbit de les biblioteques virtuals.

Paraules clau

Biblioteques universitàries, Universitat Oberta de Catalunya, serveis, usuaris, biblioteques virtuals.

Resumen

La Biblioteca de la Universitat Oberta de Catalunya ofrece sus servicios de manera virtual desde su creación, en el año 1995. Por este motivo, la apuesta por las nuevas tecnologías del momento ha sido una constante durante estos años. A continuación, a través de una breve mención a la evolución histórica, se comentan los servicios y recursos ofrecidos de forma pionera a nivel de bibliotecas universitarias. Se analizan los aspectos más destacables respecto a los servicios, la gestión de la colección, la formación, y la relación con la Universidad, en el momento actual. Para concluir, se hace un análisis de los principales retos de futuro que la Biblioteca espera afrontar en los próximos años, teniendo como referente principal los usuarios y las innovaciones tecnológicas que permitan dar respuesta a las nuevas necesidades que vayan surgiendo. Todo esto, para continuar siendo líder en el ámbito de las bibliotecas virtuales.

Palabras clave

Bibliotecas universitarias, Universitat Oberta de Catalunya, servicios, usuarios, bibliotecas virtuales.

Abstract

The Universitat Oberta de Catalunya (Open University of Catalonia, UOC) Library has offered its services online since it was founded in 1995. As a result, it has always shown a strong commitment to new technologies. This paper offers an overview of the Library's evolution, describing the pioneering ways in which it has offered its services and resources. It moreover includes an analysis of the Library's current situation and key aspects of its services, collection management, training programmes and relationship with the University. By way of conclusion, it outlines the main challenges that the Library will face in the coming years, placing special emphasis on users and technological innovations. Tackling these challenges will allow the Library to meet emerging needs, whilst maintaining its position as a global leader in the world of virtual libraries.

Keywords

1. Introduction

Libraries are one of the main features of the educational model at any academic institution. They provide support for the institution's mission, reinforce life-long learning, promote critical thought and play a key role in the implementation of learning activities for students. At the same time, they serve as a support tool for the university's teaching and research activities. Consequently, universities must ensure that their libraries have the necessary material resources and funding to provide appropriate and quality services and documentary materials to the academic community, as a substandard library can pose a major obstacle to faculty members' work.[1]

Until the mid-90s, the prevailing academic library model was the physical library, whereby the library is associated with a specific physical space where documents are kept for consultation by users. In this model, libraries are containers of knowledge offering local, on-site access to their collections. With the dramatic rise of the Internet and information technology, by the mid-90s this model had begun to shift towards a hybrid model that combined the traditional physical features of the physical library with remote access to digital information resources. The very name 'hybrid library' suggests that such institutions are a happy medium between physical libraries and a third model, namely, the virtual library.

Virtual libraries are libraries that offer both their content and services virtually as opposed to in person, that is, their content and services are accessed remotely by means of

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[1] Sharon Weiner. 'The Contribution of the Library to the Reputation of a University'. *The Journal of Academic Librarianship*, vol. 35, no. 1. (January 2009), p. 3-13.

technology. Virtual libraries were originally created primarily to cater for the virtual communities of e-learning environments. It should be noted that, in this model, the traditional services of physical libraries (e.g., loans, reference services, document retrieval, user training, etc.) are also offered virtually. Indeed, this is what distinguishes virtual libraries from digital ones, understood as collections of electronic documents that do not offer the other services traditionally associated with a physical library.

Over the last decade, the technological advances associated with access to academic e-journals and the full integration of information technology into the day-to-day operations of libraries have led virtual and hybrid libraries to share an increasing number of features. Most hybrid libraries now provide their users with the same type of access to electronic and digital content as virtual libraries. Likewise, they are beginning to offer electronically some of the services that, to date, had only been available in person (e.g., a reference service). Nevertheless, due to inertia and the idiosyncratic nature of each model, both models remain in force and are used depending on the needs of the communities being served and to which they add value.

This paper aims to highlight the idiosyncrasy of the first and, thus far, only virtual library in Catalonia, the UOC Virtual Library, by analysing some of its most salient features and determining what challenges it will face in the coming years.

2. Where we're coming from...

The Universitat Oberta de Catalunya (Open University of Catalonia, UOC) was founded in 1994 by initiative of the Catalan Government with a view to providing an original offer of distance university education in Catalan. From the start, the University has been entirely virtual.[2]

At its founding, the UOC created a library tasked with providing teaching, research and management support to the UOC's virtual community. Thus, from its debut in the 1995-96 academic year, the UOC Library, or BUOC, was the first virtual library in the Catalan university system without a network of physical libraries. The BUOC has always offered its services virtually, operating as a component of the UOC's Virtual Campus. Although it is a virtual service, the services and content it offers do not differ depending on where the user is located, i.e., the same services can be accessed whether the user is at home, at work or using a computer at one of the UOC's Support Centres. Thus, the BUOC was the first university library to implement a single platform from which all of its services and content could be accessed.

By way of offering a brief institutional history, in its first year of life the BUOC began by offering users access to a database containing the bibliographic details of all available

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[2] Isabel Salas i Bertran. 'Per què la UOC es pot concebre com una organització fractal?' [online], 2002. Available at:
<http://www.uoc.edu/web/cat/art/uoc/isalas0902/isalas0902.html>. [Accessed: 13-01-2010].

physical documents and providing its user service via e-mail. Meanwhile, with a view to the next academic year (1996-97), efforts were being made to implement library management software (VTLS) and to adapt the Web platform to enable online loans and the creation of forms that would work as a virtual notice board. From the start, the BUOC also selected and offered digital resources that could be accessed online through static web pages. Beginning in the 1996-97 academic year, the BUOC added subscription electronic documents, along with documents generated by the University and Library themselves. Work likewise began on the digitisation of the tables of contents and abstracts of physical books and the tables of contents of the print journals to which the UOC subscribed. The foundations were thus laid for a digital collection that would continue to grow over the years. In the 1999-2000 academic year, the old static pages with information resources were replaced by a digital resource manager created with Oracle using the Dublin Core standard. The manager was subsequently upgraded to meet the XML and LOM (Learning Object Metadata) standards, too. From 2008 to the present day, subscription digital content, databases, encyclopaedias, dictionaries and e-journals have all been offered and managed using the commercial programmes SFX and Metalib, sold by the company Ex Libris.

One of the other pioneering services that the BUOC has offered from the start has been the *Classroom resources* section. The goal of this feature is to offer students the teaching materials and information resources they need for their classes through a special section in the virtual classroom. The resources are chosen and managed jointly by the Library and the faculty. Thus, users do not need to go to the Library; instead, the Library itself is present in the classroom, providing support for the learning process.

Over the UOC's 16 years of life, it has expanded its academic offer to include official master's programmes, post-graduate programmes, university entrance exam preparation courses for students over the age of 25, a PhD programme in the information society, etc. Today, it is in the process of adapting itself to the new EHEA system. It has also increased its language offer, adding courses in both Spanish and English. Thus, the number of potential Library users has increased exponentially, from approximately 200 at the start (1995-96 academic year) to the 48,000 students enrolled at the University today (52,000 when students taking a single isolated course are also included).[3]

3. What we're doing...

Technology is constantly evolving and with it the available library collection management tools. How users access and consume information is changing, too. To accommodate these changes, the ways and media with which information is displayed likewise must evolve. Libraries thus face the constant challenge of ensuring that their services are always up to meeting their users' needs. In contrast, what has not changed at the BUOC is

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[3]

http://www.uoc.edu/portal/_resources/CA/documents/memories/0708/memoria0708_uoc-sintesi.pdf

its status as a 'different kind of library', stemming from the fact that it is 100% virtual. Consequently, it must adapt all this new technology and information in order to offer it to its users and meet their needs as quickly, easily and conveniently as possible.

As for the features that make the BUOC unique, the first is the remote access it provides to all information. Users must be able to access the Library and its content from any computer and any physical location. The first step is thus always to find the most appropriate technological solution. At present, a variety of solutions on the market would allow users to access the Library's information without the hassle of permissions; however, these solutions are not compatible with the University's access philosophy. This is where the BUOC's second distinctive feature comes into play, as, under University policy, users must be able to access the Virtual Campus and its content using a single login and without having to install any additional software or change the settings on their computers. This is one of the hardest goals to achieve, particularly in light of the added difficulty of having to work with multiple programs and standards.

Briefly, traditional universities have solved these problems in two ways: first, by offering access to resources based on the IP addresses of the terminals at their institution; and, second, by expanding the service beyond the university's physical limits by changing the settings on users' own terminals. However, as already noted, neither option would meet the needs of UOC users, as they are never in a physical environment belonging to the University and as the University's policy is not to require users to install new software or change the settings on their computers.

Another feature that sets the UOC and, thus, the BUOC apart is the trilingual nature of the information provided. Any content or tool provided to users must be offered in three languages: Catalan, Spanish and English. This requires major efforts to translate any commercial tools that the Library might acquire, and, to date, the UOC is both the first and only university to undertake them. To this end, attention should be drawn to the efforts and efficiency of the UOC's Language Service.

Another point affecting the BUOC's relationship/communication with users and how it serves them is the institution's lack of physical libraries: users must be able to make exhaustive use of the Library without having to physically travel to any University centre or site. Consequently, the BUOC must be able both to communicate with users completely virtually and, at the same time, train users to be autonomous self-learners.

The challenge for the Library is thus to achieve and maintain a high profile despite the lack of a physical user-service building, both among internal users (faculty and management staff) and students. It must also set up channels for communication and the dissemination of information. As a result, one of its top priorities is to broaden its relationship with faculty members in order to offer appropriate and practical content to them and their students. One way it is attempting to do this is by creating specific libraries for specific projects or departments at the University, such as the eLearn Center, the Campus for Peace, etc.

Of course, the BUOC is not alone in its efforts to offer enhanced services and electronic resources, as it is a member of several national and international networks and consortia.

In Catalonia, it has been a member of the Consortium of Catalan University Libraries (CBUC) since the organisation's founding in 1996. The CBUC has allowed it to grow in terms of subscriptions to electronic resources and has made it easier for all Catalan universities to work together to offer a joint catalogue and inter-library loan service, as well as to use the same electronic resource management tools. At the Spanish level, the UOC is heavily involved in the Spanish University Library Network (REBIUN) consortium, where it heads up one of the consortium's strategic lines, namely, Line 2, which aims to offer guidance to libraries as they adapt to the European Research Area. Lately, it has also participated in two research projects within this line: 'Digital libraries: Access, content and service' and 'Intellectual property'.[4] With regard to international cooperation, the UOC is a member of the European Association of Distance Teaching Universities (EADTU), and the BUOC participates in this organisation's recently created Task Force on Virtual Libraries. It has also participated in the 'E-Move' project on the mobility of students at distance universities.[5]

...about our services

The BUOC has to adapt or create new satisfactory services for distance users who do not stick to a given schedule or use a single physical location to carry out their activities, including their use of the Library. The challenge, in addition to launching new innovative services, is thus to adapt the most common and basic services a library offers to our specific characteristics, endeavouring to use the latest technology to do so.

The best examples of this might be the BUOC's loan and virtual reference services. The loan service stands out for a number of reasons, including the fact that users process their own loans using the catalogue (i.e., loans are not processed by a librarian); users can pick up the books they have checked out at any of the University's centres throughout Catalonia and at certain centres outside Catalonia or, if they prefer, have them sent to their home address; and the books themselves are not kept at any University building, but rather are stored at a subcontracted off-site warehouse. All of these characteristics turn a seemingly simple loan service into a service full of distinctive features in terms of management and logistics.

The University operates a number of Support Centres throughout Catalonia, which double as book pick-up and drop-off points. Notwithstanding the foregoing, due to the large number of users and the fact that they are spread out throughout the region, the Library has been aware from the start of the need to offer its users the option of having their documents dispatched to their homes. Under the rules governing this service, depending on the student's proximity to a Support Centre, home deliveries may be free of charge. This unique service feature has posed a challenge for the Library from the start, both in terms of the physical logistics of transporting and storing the books and with regard to ensuring that the library management systems that the BUOC has implemented over the years allow for this option. The first management system to be implemented, VTLS, did not enable reservation management or home deliveries. Additional customised software thus

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[4] http://www.rebiun.org/pruebaConfig/planificacion/linea2.html

[5] http://ellsi.wordpress.com/

had to be run simultaneously, and the request had to be forwarded from one system to the other, which bogged down the process as a whole. Today, the BUOC uses the commercial program Millennium, by the company Innovative, to enhance the management of the service by integrating all the processes into a single tool: the user requests a document through the catalogue and the order is sent directly to the warehouse for processing. If there are no available copies, the request is automatically transformed into a reservation. The user can monitor the status of his or her request through the personal section of the BUOC's catalogue, called *My space*.

As noted above, one of the most important features of the UOC Library's loan service is its centralised management. A large share of the available documents is located in a separate, subcontracted warehouse that is not open to the public. That is where requests are received, using the same system as the BUOC itself, and where the distribution of materials is processed, whether they are to be dispatched to a Support Centre, a University site or a user's home. This system allows the BUOC to have just a few copies of each document, but to make as much use of them as possible, as well to outsource the cumbersome task of distribution itself.

The reference service stands out because interactions with users are 100% virtual. One might think that BUOC users would communicate less with the Library service due to this 'distance', but that is not the case: BUOC users are especially open to alternative, remote forms of communication. From the start, the Library and its reference service have offered their student services via e-mail. Over time, additional tools have been added to enable enhanced query management. Users with questions contact the Library's virtual reference service, whether because they need help finding information, because they have a question about how a certain service works or to report a problem or make a suggestion. The virtual reference service centralises all such contacts and takes the necessary actions to resolve each query. If a user requests information about a given topic, the reply includes an explanation of the sources used and specifies the procedure followed to obtain the information being offered. This helps to train users, who are thus introduced to the available tools and encouraged to use them. This notwithstanding, as will be discussed below, the Library is constantly striving to further improve communication with students.

A more recent service stemming from the Library's constant efforts to adapt its services and content to its users' needs is the e-reader query and loan service. A pilot version of this service was launched in the last quarter of 2009. In light of its enthusiastic reception, in December 2009 it was brought online as a permanent service. The Library took advantage of the occasion to upgrade and increase the number of devices available: the 2008 iRex iLiads were replaced with 2009 Amazon Kindle 2s. The e-reader service consists of making a number of these devices available for users to check out on loan. At the same time, a special website was set up, which is also accessible from the Library website, to offer content for these devices. This site offers UOC teaching materials, as well as an assortment of other e-books available online, which users can download to the reader. The goal is to continue fleshing out the service, increasing the number of devices and enlarging the collection of e-books, adding new sources.
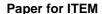
[Figure 1: ebooks.png]

Figure 1: E-book query and loan service.

...about collection management

The BUOC catalogue contains the entire collection of physical bibliographic documents, such as books, monographic studies, DVDs, print journals or the teaching materials for the University's different subjects.

Because users cannot physically access a document to determine whether it meets their needs, the BUOC endeavours to provide as much information as possible regarding it in the catalogue. To this end, major efforts have been made to supplement the standard catalogue content and to offer added value to users. Each record thus includes a table of contents and an abstract, entered by a librarian or using the Syndetic Solutions service, which provides the table of contents, abstract and, in some cases, a sample of each document. The catalogue has also been tweaked to offer other features, such as the ability to view book covers and the pages available in Google Books (providing the document is available in that database, which is owned by Google). Recently, efforts have also been made to make the catalogue more interactive. A range of tools have been added to facilitate user participation in enriching the information provided in the bibliographic records. Likewise, the content of the LibraryThing tool has been integrated into each record, including the tag cloud, comments and other editions of the document. BUOC users can view the comments and tags that LibraryThing users have added to the document and join that community if they wish to add their own. In keeping with both the University's and the BUOC's philosophy, the entire catalogue is available in three languages (Catalan, Spanish and English). In addition to the website interface, the information in the bibliographic records, including the subjects and notes, has been translated in full.

The UOC Library's management of electronic resources has evolved from the use of static html pages to the use of customised digital resource management tools, such as Dinaweb or Dimax, to the use of Metalib and SFX today. For many years, both subscription and free resources were classified in a 'Digital collection'. The purpose of the collection was to offer a selection of electronic resources and websites, which were chosen according to a series of quality criteria and sorted by subject and indexed to enable their retrieval using a search engine. The selection process was critical in the past, above all when it was harder for users to find information, as they were not used to using search engines, and the search engines available had little to do with today's prevailing Google model. Today, the Library does not offer guides to free resources; however, new social tagging and bookmarking tools, such as Delicious, have led the Library to reconsider offering recommendations regarding free online resources in a much more interactive way.

As for subscription electronic resources, they can be accessed through the *Electronic resources* search engine, using the Metalib program. The goal is for users to be able to view all subscription resources with a single interface, despite the technical challenges involved. These stem from the fact that not all information provider products meet the

necessary standards to allow this; moreover, certain obstacles exist to allowing users to access and use the full range of services offered by the system. Separately, access to the collection of digital publications has been fully integrated into the *Electronic resources* search engine and is managed using SFX. This means that all the Library's journals can be accessed from a single point. Prior to this change, finding a specific journal could be quite complicated. In contrast, today users can access the entire collection from the platform, as well as view all available issues, regardless of the database, platform or medium in which they are stored and of whether the subscriber is the UOC or the CBUC.

...about training

Due to its virtual nature, the UOC Library has always made user training one of its top priorities. Because of the physical distance between it and its users, the BUOC has likewise always been firmly committed to offering a virtual reference service and educational training materials containing troubleshooting tips for users for problems finding or retrieving information. The Library also used to carry out face-to-face training actions for students, primarily via on-site meetings and at the UOC's Support Centres. Training actions were likewise carried out internally for faculty members and management staff. However, despite the very positive feedback, these face-to-face actions had little impact, as they only reached a very limited portion of the Library's potential users.

Today, within the framework of the EHEA, in which students are expected to be more autonomous and computer skills are essential, training has become one of the strengths of university libraries. It was in this context that the BUOC drew up its 2009-2012 Training Plan, which underscores the need for active participation in the UOC community's learning and continuous training process. Accordingly, the training needs of different user groups have been identified, and virtual training actions and materials will be offered to help each type of user become self-sufficient with regard to accessing, managing and using information. For the UOC, training users to be self-sufficient is more of a need than a goal, as users must confront the Library's wealth of tools and services on their own.

Over the 2008-2009 academic year, a project was carried out to enhance the design of the training materials. It was decided to use multimedia formats (i.e., formats incorporating audio, video and text). In keeping with this decision, work has begun on offering training materials in new formats, primarily videos made using screencasting techniques. The first experience was conducted with the help files for the *Electronic resources* search engine. They now consist of a series of brief help videos showing what can be done from each of the search engine's screens.

[Figure 2: video.png]

Figure 2. Help video for the *Electronic resources* search engine.

...about our relationship with the University

As noted above, one of the University's goals in adapting to the EHEA is to equip students with the necessary skills and strategies to pursue continuous lifelong learning. University libraries have a key role to play in this endeavour. Accordingly, they have gradually been transformed into learning and resource centres (LRCs). In the case of the BUOC, which operates somewhat differently, it was understood from the start that the best way to facilitate students' learning was for the Library to have its own space in the University's virtual classrooms in which to offer students direct access to the information resources chosen for each subject. The Library must therefore necessarily cooperate with faculty members in order to ensure that the content it provides for each class is useful and appropriate.

Thus, the BUOC participates in the *Materials and resources* section and in the preparation of the *Recommended reading* list for each subject. Both sections are available in the UOC Campus's virtual classrooms. The *Materials and resources* section contains both the subject's teaching materials (i.e., learning material) and a selection of links to additional information sources, electronic documents and other support tools. This latter group primarily consists of electronic documents (articles, chapters, abstracts, etc.), practical activities or exams from previous semesters, specific software for the subject, links to electronic resources and information sources, legal texts, standards and specifications, etc. Of course, in order to offer these documents to users, the applicable copyright permissions must be requested. This task is carried out in conjunction with the people responsible for copyright management at the UOC, and all the documents for which such requests have been processed are kept on file, so that they can be re-used in future. Another point on which collaboration between the Library and UOC faculty is imperative is in the preparation of the *Recommended reading* lists for each subject. These lists are based on the suggestions of the lecturers and are reviewed each semester.

The Library is also aware that, despite its constant efforts to publicise its services and content and be accessible to users, it sometimes requires faculty members to mediate. For example, for law students to become thoroughly acquainted with the BUOC's law database, they must have a real need to do so. Thus, when lecturers require their students to use the database for a given exercise, they offer the Library a way to reach users directly. Consequently, the Library strives to keep lecturers up to date on all the latest developments in terms of new acquisitions and subscriptions, new materials, training courses and other news that might be of interest to them in their research. To this end, it sends out a monthly newsletter, *BiP* (*Butlletí d'Informació per al Professorat*), which acts as a channel for direct communication with lecturers. The newsletter contains information on new features at the BUOC, as well as regular sections with news about the Library in relation to research, teaching, recommendations, events, etc.

The Library also offers several other services prepared in conjunction with UOC faculty members that have been widely embraced by its users. One particularly clear example is its specialised news service. This service consists of regular specialised newsletters that are sent to subscribing users by e-mail.

Another key aspect of the Library-faculty relationship at the UOC is the Library's reports on the use made of its facilities by academic department. Each year, the Library publishes

reports offering information on the use being made of its different services (loans, electronic resources, news services and virtual reference service) broken down by academic department. Lecturers can thus see what services the Library offers and the use that is made of each one for their classes.

Attention should also be drawn to the services offered for specific user profiles. Perhaps the best example is the research library, which offers specific collections and services for the University's research community. The research library monitors researchers' scientific output and the impact thereof, whilst at the same time offering guidance regarding research methods: bibliographic searches, document management tools, style tips for writing papers or doctoral theses, etc.

4. Where we're headed....

One of the main challenges that the BUOC, like most libraries, faces is to provide access to all of its services and tools via a single user login, that is, to allow users to access all of the Library's content entering their username and password only once. Although, at first glance, this seems like an obvious goal, in technical terms it is actually one of hardest to achieve. Libraries use their own proprietary software; however, they also use commercial software, above all to manage specific parts of their collections, and each piece of software has its own login and personal area (i.e., an area where users can customise the interface, save their favourite resources and search results for future sessions, etc.). So far, the BUOC has been able to greatly reduce the number of times that users need to log in; however, it has not yet succeeded in integrating all the programs, with their different standards and settings, into a single login.

The other major challenge on which the BUOC is currently embarked is the overhaul of its website. The new site must meet several objectives: to be accessible, intuitive and user-friendly; to offer quick and easy access to all the Library's tools and services; and, finally, to promote an active user community that allows users to post opinions, make suggestions and resolve questions and encourages communication between students, faculty and the Library itself. The BUOC believes it is crucial for users to be able to use a single login to access all content and information resources, regardless of format or type. Users must be able to find everything they need (whether or not they know what they are looking for in advance) regardless of the type of information or resource, where it is stored or what program is used to manage it. To this end, the BUOC must create a search engine that makes it possible to retrieve all information, irrespective of where it is stored.

As for the goal of offering users quick and easy access to information, the Library places great importance on offering both off-site access to information, that is, offering information from access points other than the Library's website (subject pages, campus home pages, etc.), and access from devices other than browsers (i.e., mobile devices). The Library's efforts to this end began in 2009, and it has already developed a widget that allows users to search the catalogue and the institution's electronic resources from their customisable home page on the UOC's Virtual Campus. It has also implemented the Airpac module of

the Millennium library management system, which enables both catalogue queries and the management of loans and renewals from mobile devices.

The University's virtual nature has both advantages, which must be fully capitalised, and drawbacks, which must be overcome. The drawbacks include communication with users. Indeed, this is one of the most critical issues, as it is one of the main factors affecting the Library's visibility among users. Consequently, the Library must analyse the system used to conduct this communication, the use made of it, user satisfaction, service quality, etc., with a view to improving communication as a whole. Likewise, the technology used must be reviewed and a user-friendly system must be implemented that is useful for end users, but also enables efficient management of queries and replies, so as to enhance the quality of the response. At the same time, new means of communication must be sought, such as synchronous communication, which has been little used to date by the University's services, but which might enable faster responses and a more personal user service. Moreover, in addition to ensuring a more accessible virtual reference service, creating a more participative and active community, along with the appropriate framework to enable and encourage it, would contribute to a more fluid relationship between the Library and its users.

The new website must enable participation in the submission and resolution of user queries, offer channels for posting opinions, rating items, making suggestions, saving resources of interest and subscribing to different RSS feeds (e.g., the RSS on a specific lecturer's activity), and allow users who are not members of the UOC community to access the Library and participate in the tools that create community, etc. In other words, it must foster a community that shares knowledge, thereby adding value to the Library's service. The Library began to work in this vein last year, during the roll-out of the new catalogue, which was customised to include tools that enable exactly this kind of participation: LibraryThing, a tool for sharing catalogues, comments and book reviews; links to social-networking sites such as Delicious, Twitter, Facebook; etc.

[Figure 3: cataleg.png]

Figure 3. Tools providing added value to the bibliographic record.

The advantages of being virtual include the ability to serve a larger number of users who are receptive to working with a variety of communication channels and formats. Indeed, it is vital to bear this aspect in mind when designing user communication and training strategies. Such strategies must allow users to be much more self-sufficient with regard to their activity and the resulting information needs, as well as to acquire and/or deepen their knowledge whenever and as quickly or gradually as they desire. In a word, the Library must constantly redefine and redesign its services to accommodate changing user habits, as this is what users have come to expect. Most recently, efforts are being made to promote e-books. At the same time, the Library is implementing services such as mobile device loans, allocating funds to increase its collection of compatible content, and preparing tools, such as the catalogue, to manage it. To this end, it is worth noting that the Library always strives to evolve alongside the rest of the University, taking advantage of

the UOC's expertise in e-learning. The UOC is a pioneer in research in distance education. Thus, should, for example, the teaching materials for subjects begin to be offered in formats adapted for mobile devices, the Library will do everything it can to supplement this service with additional useful material for students. As for managing communication and dissemination, the Library is studying the best ways to reach users. To this end, it is constantly striving to improve the mechanism for announcing new features and other news to users. By means of a variety of tools and ideas, such as promotional campaigns or the publications of lists of the most viewed resources, it aims to encourage the use of certain new and little-used electronic resources.

Another major challenge is to continue to design and offer services adapted to specific user profiles and needs. To achieve this, it is essential to analyse and monitor both user satisfaction and the use users make of the Library's resources, e.g. to analyse statistical data, the community's opinions, tool usage, etc. This will allow the Library to determine which services can be improved, detect gaps in its collection, improve the tools and terminology used, improve the training it offers and decide what new services to implement.

One way to offer new services is to design services tailored to specific user profiles. An example might be offering researchers the tools and resources they need for their research activity, transforming the Library into a key research support tool, i.e., offering tools for bibliographic management and plagiarism detection, providing information and guidance regarding how to cite and how to sign, offering a style guide, etc. Single user logins, which have already been discussed above, would allow for this type of selective information offer by making it possible to manage users' access to the Library website and its different tools based on their profile. For example, with the website, the service offer, resource selection, additional features (e.g., allowing faculty members to carry out certain actions or procedures), etc., could be filtered. Likewise, with the commercial tools used by the Library, such logins would enable more meticulous management of access to resources and full texts by profile.

In short, the BUOC is tackling its current challenges with a view to offering its users the best and most appropriate services. To this end, it seeks to use the latest technology and tools on the market, but also those that can be best adapted to its needs. Ultimately, the BUOC must function as a strategic tool for the University, whilst at the same time maintaining its leading position in the world of virtual libraries.

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