Library Support for Distance Learning Courses

Literature review

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Definition of the topic

The aim of this work is to present a review of the relevant literature in the field of the library support for distance learning programmes. This will include a brief overview of the history of distance learning and its actual evolution, and an historical introduction on the early experiences on the services that libraries have offered to students based away from the main campus. The review will focus mostly on current trends and ongoing experiences in the field of higher education.

Distance education

A brief overview of the general issues of distance education is necessary, before discussing about library support to distant learners.

Distance education is an umbrella term, which includes several, more specific teaching and learning situations. We can define distance education as the learning process in which there is a quasi-permanent separation of teacher and learner throughout the learning process; it is characterised also by the presence of specific learning materials and student support services and by the use of different communication media (Keegan, 1990). Older literature insist on the difference between teacher-dependent (i.e. face to face) education and teacher-independent (i.e. distance) education: while teacher-independent education is based on the use of didactic and feedback materials on which the student works mostly on his own, in teacher-dependent education the learning process takes place in the interaction of teachers and students during the lesson. The opposition of these concepts is no longer useful: the strong “educational interaction” of face-to-face education is now available even at a distance, through the use of the internet and other technological media.

The history of distance education is usually divided in three periods (Trentin, 1998 and Sumner, 2000), according to the development, production and distribution of communication technologies. Technology has an intimate relationship with distance education, because it mediates the separation between teacher and learner through the use of print, radio, telephone, television, tapes and computers. This relationship, moreover, is taking a heightened importance because of technology’s growing accessibility and ease of use.

First generation: correspondence study

By the end of the 19th century Correspondence schools were established mainly in Great Britain, Australia, USA and South Africa. Basing on a reliable postal service, those institutions mailed printed materials to students, including both didactic and feedback tools. Correspondence study was a very individualised mode of learning, that tends to isolate students from the group learning process, but it was the most convenient way to reach students living in rural areas, far away from schools and colleges.

Second generation: multimedia distance education

New communication technology gave way to the second generation of distance education, that was no longer simply tied to print material and the postal service: it integrated the use of print with broadcast media, cassettes and – to some degree- computers. Different media were experimented: courses were diffused by radio (1922), telephone(1965) and satellite television (1968).
These projects aim to satisfy the new, enlarged demand of secondary education: this was the aim of the model of this kind of institutions: the British Open University, that started in 1971 to deliver courses on BBC channels. 

This new education is not longer called *correspondence course* but *distance education*. 

Like the first generation of distance education, the main objective of the second generation has been the production and distribution of teaching/learning material to the learners. Communication with learners has been marginal, and communication amongst the learners has been more or less non-existent.

### Third generation: computer-mediated distance education

Noble (1989) refers to the Information age of the 21st century as a second industrial revolution, in which the vehicle of the knowledge–based economy is the computer. Distance education traditionally individualised learning experience is continued in the information age by the use of the Internet and the World Wide Web. Modular coursework, self-paced quizzes, CD-ROMs, computer conferencing and chats are the main tools of this experiences. “The past few years have seen some radical improvements in educational technology, and with them distance education is being transformed from a poor cousin of the "real" classroom to a key delivery channel for educational content of all types. Forget correspondence courses! ” (Coffman, 2000)

### The role of technology

We can differentiate between distance education technologies that involve primarily one-way communication (as course units, radio and television), and those that involve primarily two-way communication (as telephone, e-mail, computer conferencing). One-way communication characterises the first two phases of distance education, while the two-way communication appears in this, still ongoing, third phase. Two-way technologies not only allow for interactivity between teachers and learners, but also among distance students themselves (Bates, 1991). Interactivity involves the ability of the learner to respond in some way to the teaching material and to obtain comment or feedback on the response, and this considerably increases learning effectiveness. No amount of one-way technology can achieve such interaction: the distinction between one-way and two-way communication technologies has implications for distance education far beyond the technological. 

We have only recently recognized that learning is a social activity. The basis of social learning is communication, which Nipper (1989) characterises as the degree of “noise” accepted by the institution. The more communication there is with and amongst the learners, the more noise there is in the system. That noise is “the sound of people coming together to learn”. Technologically speaking, noise cannot occur in the first and second generation of distance education. In these generations of distance education, learning is not social, but individualised and considered “the acquisition of the information given by the study material. In comparison, Nipper’s noisy learners are active and creative learners, who are involved in social learning through their interactivity.

### Future trends of development

The market of distant learning is an expanding one. According to faculty and administrators, many are the reasons of this success: the possibility of large enrolment in spite of the shrinking public budget, the desire to provide educational access to students who are unable to attend a traditional
institution; the challenge of providing quality education through a new medium. Clearly, however, one critical component of the expansion of distance education is the perception that it offers the potential for high profit. (Kriger, 2001)

Today the 85% of the universities in United States are offering distant learning programs (CHEA, 1999), but the issue of distance education is of global interest.

The ways to organize Distance Education and reach new student are of different nature. There are mainly:

- traditional universities developing distance education programs. They work on their own, as the State University of New York – SUNY, or together, in consortia, as the National Technical University that comprehends nearly 50 American Universities, or the Australian experience: different universities share distant learning centres and are forming cartels to compete on the global market(Crocker, 1991 and Whyte, 2001). These universities rely on didactical software as Blackboard or Web CT, or collaborate with private institutions and software houses to develop and distribute their courses, as Columbia University and its for-profit Distance education consortium Fathom;

- new, private and totally virtual universities as the University of Phoenix Online, founded in 1976 and Jones International University, fully accredited in 1999 and corporate universities, specialized in business and professional training.

The explosion of this market and the appearance of many new educational experiences, distant from the traditional campus environment, are raising doubts about their educational validity. Much of the distance education is built on corporate ideas of consumer focus, product standardization and cost effectiveness. These concepts are contrary to the traditional model of higher education, which emphasises faculty independence in teaching and research, academic control of the curriculum and academic freedom in classroom. The new trend of distance education are surely innovative, but it is important to avoid an education that is to narrowly focused on the "student as a customer", on individual outcomes more then on social interaction and the development of a complete curriculum. Standardization of courses and teaching methods built around technology can not substitute a reflective search for knowledge through the diverse views of different faculty members. In this revolution of higher education even the academic library is involved in radical changes.
The role of libraries in distance learning

The role of the library in distance learning has its ground on two different arguments. The first is that if distant learners must be given the same services and opportunities as the ones offered to traditional learners, than they must receive also full library support. The second reason is a more general remark on the nature of distance learning: the role of information resources is much more relevant in distance learning than in traditional, face to face education.

As interactivity between students and teachers is slower and more difficult, the learner must rely more on the learning material to answer to his questions. This is particularly true for the first two generations of distance education, but it is still acceptable for the third generation, where, in spite of the facilitated communication between faculty and students, the learning process is still defined as "resource-based". In resource based learning, the process is centered on the learner, there is a clear statement of objectives and the goal is the development of competencies rather than the transfer of information. The provision of a rich, multimedial learning environment can support a variety of strategies (Marcum, 2001). Moreover:

"Resource-based learning means that students will learn from their own use of learning resources, either individually or in a group, rather than from conventional exposition by the teacher."

(Jackson and Parker, 2000)

An instructor with an experience in traditional, face to face education is not prepared for this kind of teaching:

"The role of an educator in distance education is different from that of the classroom educator. The new distance educator, on the other hand, has been characterised as being a manager of resources. Lectures are recorded or selected and distributed, textbooks or workbooks assigned, additional reading pointed to, a chat space managed. These tasks may not be comfortable ones for faculty, and they may not be familiar with the policy, legal and regulatory implications of their choices."

(Wolpert, 1998)

The emphasis on resources, together with the new educational skills required, can point in two different directions. On one side, the development of leaning resources, their structure, design, and delivery methods can be committed to librarians and information specialists, who have experience in the field of information management. Otherwise, the design of learning resources and the creation of a new learning environment is committed to new professional figures, such as tutors, experts of distance learning and technicians, with no links to the library (Didattica Online, 1998).

Following this differentiation, the history of library services for distance learners is two-fold. On one side we have the schools and educational institution that believed (and in some cases still believes) that the didactic pre-packaged material was enough for passing a course: the student needs only the delivered (via mail, e-mail or fax) material and is not expected to read or consult sources beyond the supplied material.(Hardesty, 2000) But this kind of study is limited and confined within a prescriptive framework, it is against any idea of independent study (Stephens and Unwin, 1997).

On the other side there are more advanced educational environments which consider the library as fundamental for the learning activity. These institutions are usually those with a longer history in education, and with a well-established library service. The history of the British Open University, a model for many open learning institutions around the world, is a clear example of both these situations. For 20 years the OU Library served only faculty and researchers. It wasn't big enough to serve all students, and the pre-packaged material seemed to be enough and learners could use other public and academic libraries. In the 90's innovative
teaching methods, the growing number of researchers and the new government policy on education forced OU to re-think its library service. The OU library is opened to all students, and the Open Libr@ry's web site is organized to guide users through electronic resources and other library services, as the document delivery (Bremner, 2000).

In the 80's many different models of library support for distant learners are developed, depending on the dimension of the academic programme on of the available funds, the relationship between administrators and librarians and the geographical distribution of students and campus (Lessin, 1991).

The proliferation of distance learning programs require great efforts of libraries, to follow and assist the increasing number of remote users with suitable resources and services. This mission is facilitated by the evolution of libraries toward a digital environment.

Library support for distant learners share with digital libraries projects the aim of serving equally remote students that never come to the campus as well as those who are based in the campus but prefer to use the library from their home. The issue of library support for distant learners can really benefit from the interest raised by the digital library and the hybrid library, the discussion and the activity around them. (Faulhaber, 1995)

Structure of services:

Generally speaking, there are three main models in which distance leaning support for distance learners are organized (Davis, 2001):

- **the integrated model**: the library service for distant learners is provided with the same units that provide in-house services, as for Canada's Open University at Athabasca. There must be a strategic planning of the needs of the new community of learners; staff, funds and resources has to be redirected to serve them. (Wright Swaine, 1998);

- **the separated model**: services are staffed and often funded separately from in-house library service units/staff. The off-campus library service division maintains strong working relationship both with the library system and with the Distance learning programme administrators. This is the case of the Central Michigan University, where the library service for distant learners is provided by a separate department, staffed and funded independently from the general library.

- **the outsourcing model**: the library service for distant learners is provided by commercial vendors, if the university lacks sufficient personnel or if it aims to provide a faster and cheaper service. *E-Global library*, for example, is the library service born from the experience of the virtual university *Jones International. This* totally virtual library serves both the parent institution and other patrons. It was launched in 2000 and assert to have “a group of 40 librarians on hand 14 hours a day to help with research” and a round-the-clock technical assistance (McGhee, 2000).

Guidelines

The discussion of many librarians and information professionals affiliated to Library Associations has brought to the development of official *Guidelines for distance learning library services* These are not standards, but recommendations for administrators and librarians on criteria to follow when establishing and maintaining a service for distant learners. The guidelines of the ACRL were first published in 1981, and revised in 1990 and 1998, to include innovations and issues arisen from the diffusion of distance learning programs and the evolution of related technology.
The 1998 ACRL guidelines assume the following precepts:

1. “Access to adequate library services and resources is essential for the attainment of superior academic skills in post-secondary education, regardless of where students, faculty, and programs are located. “

2. “Members of the distance learning community are entitled to library services and resources equivalent to those provided for students and faculty in traditional campus settings. Effective and appropriate services for distance learning communities may differ from, but must be equivalent to, those services offered on a traditional campus.”

(ACRL Guidelines, 1998)

The first consequence is that every university is responsible for an adequate library service to all its students, and must therefore supply funding, personnel, spaces and resources.

We will discuss some of the issues surrounding the library service to distant learners following the structure of the ACRL guidelines.

Know the needs of distant learners

"The library administrator should:
- assess both the electronic and traditional library resource needs of the distance learning community,
- assess the existing library support for distance learning
- survey regularly distance learning library users to monitor and assess both the appropriateness of their use of services and resources and the degree to which needs are being met."

(ACRL Guidelines, 1998)

In libraries, as in the wider higher education context, there is a shift of attention from teaching to learning and a user-centered orientation. Related to a focus on users is the need to identify more clearly, and better understand, groupings of library constituents (Cooper, 1998). Librarians tend to focus on disseminating the information that they think their students need, while they should first understand who their students are and what they want (Dew, 2000). To provide the adequate service, librarians really need to know the nature of programs and classes and the location, learning characteristics and expectations of all the potential users of the service.

The first things to consider is the subject and the structure of the study programme: an introductory class in mathematics will have different information needs than a post-graduate course in education; other elements to know when planning a support for distant learners are the structure of the university, the location of campuses, classes and students.

More specific characteristics of the students are also important: their age, their previous study experience, they confidence with technology and library resources, their study methods. Usually distance education students are highly motivated, but while some may already be familiar with the library, many possess limited experience with library research and are unfamiliar with electronic resources.

A well-established research methodology in this field is the user survey. Librarians use survey to assess the initial experience of its users, its research behaviours, and expectations, and the actual use of library services, weather those of the home institution or others. These data are periodically revised, to recognize progress, changes or sore spots of the service.

When analysing the satisfaction of the users, the goal should not be simply to meet expectations but rather to exceed them: library staff must attempt to both manage and redefine customer behaviour and expectations.
On the other hand staff need to be honest with library users in educating/informing them as to what libraries can or cannot provide. This element is especially critical in distance learning environments, where remote users may possess less facilities than in-presence students.

Integration

"the library administrator should:
- participate with administrators, library subject specialists, and teaching faculty in the curriculum development process and in course planning for distance learning to ensure the appropriate library resources and services are available."

(ACRL Guidelines, 1998)

Collaboration on many levels is key to successful provision of library services to distance learners: collaboration among libraries, within libraries among faculty, librarians, and administrators, and collaboration between libraries and publishers (Kirk and Bartelstein, 1999). The guidelines recommends to involve library staff in the detailed analysis of planning, developing distance learning program from the earliest stage. In this way, the library will be able to prepare in advance resources and materials that students will need during their courses; not only basic textbooks but different, alternative library resources and other electronic information. Moreover, librarians must learn to know and collaborate with the faculty (Davidson, 1999). Even if they are hard to reach, the dialogue with them is the key for a successful service: teachers can adjust their expectations to match the reality of the library resources available (up or down); they see the students and can promote the library service among them; they know what students require so that librarians can prepare better for their demands.

Services

The library services offered to the distance learning community should be designed to meet effectively a wide range of user needs, from basic to bibliographic information. To obtain these results a mixture of different services and solutions are necessary. The single library can not build a independent library service with its own funds only. As recommended by the ACRL guidelines, cooperation is a good tool for implementing the quality of library services with lower budget investments. Cooperation can improve both traditional and new library services, as we will explain later on.

ACRL recommendations underlines also the issue of promotion. The distance learning community has to be kept informed about services and facilities available to them through the library. The promotion of the library is really important to both students and library. Students will get to know, have access and learn to use library resources, and consequently complete successfully their assignment, while the library will better fulfil its function and see its usage statistics grow, to better justify the expenses of the services.

A basic issue to consider before discussing the services, is the "communication channel" between the library and its users. Many users cannot access the library physically, while they are getting familiar with internet tools. The library's home page is becoming the main channel of communication between the library and the different categories of its users. But it is really fundamental that all users are able, or are taught to use the Internet resources of the library!
User instruction and information literacy

User instruction is considerably changing because of the transformation of the library itself into a hybrid organism, where the electronic resources of the digital library are more and more integrated with traditional resources. But the digital library must be adapted to allow widespread use; bridging strategies, intended to guide the uninitiated, are necessary. The idea of self-sufficient learners successfully utilising resources electronically is really overoptimistic: mediation and instruction will be required for students to obtain needed skills and appropriate learning behaviours. The impact of the Internet on learning today is rapidly becoming manifest. The broader range of information sources, the open-ended linkages to additional resources, the interactivity, and the multimedia transformation of simple text are establishing new expectations of student interaction and engagement with their subject.

"Competence with computers, with online searching and information literacy skills, and interaction with a network of peers are inescapable components of the literacies of learning. Librarians have demonstrable competencies in these efforts. But our operative vision of "information literacy is too limited. Today visual literacy and media literacy are required. This demands broader skills as well as a new vision." (Marcum, 2001)

Printed user guides can be useful for students for the first, institutional approach to the library; every student should receive a leaflet with introductory information to the library. The library can then make use of new technologies for a deeper presentation, library instructions, subject guides, and other information services. This kind of information courses, that are not scheduled for every student at the same moment, but can be followed and completed just when needed, are much more effective tools. Libraries offers different types of guides, from the simple "introduction to the catalogues" to more complex, multimedia and interactive programs. For example, the Into Info program, developed by few European libraries for the Telematics for Libraries (Fjällbrant, 1999) project of the European Community, is a model course on the selection and use of information. The aim of the course is to teach the principles of scientific communication and the problems of locating and chose most appropriate sources. The program is often updated and linked to the resources and services of the library, it contains texts, exercises and feedback questions, a guide to the Internet and to different phases of research: how to use databases and indexes, start a project, how to collect information and write bibliographies, how to keep up to date.

A model of web-based library resources program can initially be divided into three areas (Barnard, 1991):

- the information resources themselves,
- the means of delivering them to the users and
- some method of interacting with real, live information professional. (Information is a social process and students often need direction in formulating their searches.

1. Information resources

Traditional resources

"The growing amount of digital information available free via the Internet has created, for some, the mistaken impression that all information is available electronically."(Hardesty, 2000)

In reality, electronic access to information resources cannot provide the equivalent of a traditional campus-based library collection. The currently available digital resources have serious limitations in supporting an entire curriculum; relatively few of the millions of journals and books that fill academic libraries have been retrospectively converted into digital formats. At this point, access only to digital databases is hardly equivalent to access to an adequately supported academic library.
Even in the future, the value of printed resources will still remain. E-books are not going to replace printed books; libraries will continue to collect and preserve printed material alongside electronic resources, and access methods will have to address the nature of hybrid collections. A distance learning library service will need a complex planning and policy, that considers resources of both formats and that makes available to its users the best resources no matter the support. While there are great innovations in the delivery of electronic materials, the supply of paper-based resources uses more traditional channels, which we will discuss further on.

Web access to electronic collections:
In recent years, electronic information has been, and will continue to be a major growth area. Many information professionals have come to accept the Web as an important part of the library.

"When librarians talk about their library collections today, they are no longer just talking about items owned and housed in their library buildings, but also about those items which are leased or accessed." (Moyo, 2002)

This evolution has raised new issues of discussion; first of all the issue of ownership versus access. In academic libraries that serve geographically dispersed users, there is a great pressure to provide global access to information resources through relevant technological infrastructures. The paradox is that electronic publishing has the potential to lower costs and increase accessibility to information, but in reality costs are higher, because database aggregators are commercially driven rather than service-driven.

One way in which libraries have addressed the issue of high subscription rates to electronic resources is through joint subscription via library consortia: the discount received can be substantial.

The current trend in libraries is to move beyond just bringing catalogues of collections to the web, but also the content, through digitization projects, subscription to full-text databases, and electronic books. This trend improves accessibility of resources for remote users and moreover, once accessed, electronic information is ready for manipulation, processing and integration with other data; this enhances productivity. Users prefer options that take less effort to get required information, and full-text databases are ideal in that respect.

With the advent of e-books, users will have ready access to book material via the Internet. The fastest growing Internet-based electronic library collection, netLibrary, adds to the collection 500 titles a week. It works like a traditional library, when a library subscribes to netLibrary, its users can "check out" books (in electronic format) for a period of time, after which the books are automatically discharged and returned to the collection. The purchase of netLibrary by OCLS gives a lot of promise for new services and an enhanced access policy.

Free web content
Although libraries had little to do with it, the sheer amount of information available online has increased several-million-fold with the development of the Web. Libraries have tried to organize electronic content the same way that they organize printed materials: by cataloguing and classifying it. Making the Web part of a library collection of resources promotes the idea that the Internet is just another source of information, and it should offer some sort of validation of the information contents of that page. But since the integration of external resources in the library catalogue can be inflexible and with poor interoperability, the latest trend is to build library web portals with gateways to various resources organized by discipline, subject or target group. "A Web portal or gateway is now the standard interface to aggregate a library's resources and services through a single access and management point" (Ketchell, 2000)
2. The means of delivering

Each kind of information needs a different mean of delivery. Paper-based materials can be delivered directly from the main library, with a courier service or by fax, if the size is suitable. Distance learning students can request items via telephone, fax or e-mail and their loan period can be longer than the one for "local" loans, considering the time taken for delivery. The delivery of this service is the situation in which seeking and cultivating cooperation with branch libraries and other libraries can give good results. When courier services are too expensive or slow, users can access to collections and loan materials in more reachable locations; in this case written statements of collaboration or mutual cooperation are necessary. This can a good possibility when other options are not suitable, but distance learning students are often admitted to other institution as external users, with limited right and services (Snyder and Fox, 1997).

The "delivery" of electronic resources to patrons located away from the library presents other problems. The necessary pre-requisite for every user is the access to a workstation connected to the Internet: this is obvious for those taking courses via the Internet, but not so common for traditional remote students. The main issue that affects how libraries facilitate access to their electronic resources is that of licensing and authentication. When the library buys a license for accessing a fulltext database it has to define its user population: this is easy for traditional users, that comes to the library, but in the case of consortial and cooperative agreements, "defining user population for the purpose of licensing electronic resources is a challenge" (Moyo, 2002). The licence must admit also distance learning students and, when possible, students and staff that want to get connected from their home or other workstations. Libraries have then to ensure that only authorized users have access to restricted electronic resources. This is generally done with the use of user access accounts or through the filtering of IP addresses. The main disadvantage of IP addresses is that users can access only the authorized workstations. This problem has recently been solved by the use of proxy servers: they require user ID and passworld, but permits access from any computer.

3. Interaction with patrons

On-line reference assistance is a service in which the newest technologies are experimented. Up to now, libraries have structured their virtual reference service around e-mail and live chat tools, but none of them are very well-adapted to the purpose. E-mail reference services suffer from a number of problems, the most obvious of which is that e-mail does not offer the instantaneous response that our patrons have come to expect from the Web. Also, it is difficult to conduct any effective reference interview using e-mail: if a question needs clarification, it may take three or four exchanges over several days just to figure out what the patron really wants, and this might be too long a wait for a busy user. Finally, e-mail reference places most of the work – exercise of answering the question on the librarian, while librarians usually work with the student to help him find the answer instead of doing all of the work for him.

On the other side, live, interactive chat solves some of the problems of e-mail: it's live, so you can talk with the patron directly, and conduct a reference interview. However, it also has some limitations when it is adapted for reference use. First, you can talk directly with the patron and tell him to go to a specific address on the Web to find information, but you can't actually go through a database search. Interactive technologies are designed to mimic the classroom environment online and are not well-adapted for one-on-one reference use. Most courseware programs have only a limited ability to
share content online; the software does not allow to guide a person through a database search, or escort him around the Web, as you might want to do in a reference session. More recently, libraries have begun experimenting with Web-based contact center software, and this appears to offer a great deal more, because they have been designed expressly for answering questions and providing live, interactive customer service; in fact, this software is based on the call center model. These programs feature a wide variety of interactive tools that allow the librarian to push Web pages to customers, escort them through catalogues or databases, collaboratively fill out forms or search screens, and share other content online. And most include built-in knowledgebases that allow to capture answers and reuse them and an extensive customer profiling. This new tool needs some improvement; the software still has problems with many proprietary databases, and there are some sites on the Web that do not accept co-browsing for both the patron and the librarian. But we have to say more about this service: the statistics from the first libraries that are experimenting these tools are rather disappointing; on the other hand, the commercial counterparts of libraries, as information and internet services handle thousands of questions per hour, confirming the idea that people really need reference assistance on the Web. (Coffman, 2000) For this model to work in libraries, patrons would just need to know we are there to provide it. So how libraries publicize and market these services will also be key factors in their success.

Another great innovation in the interaction between the library and its user is the MyLibrary program. Many Library web sites attempt to become knowledge portals for their users, but it is difficult to organize resources into categories that are intuitive for every patron, especially when users include undergraduate students, graduate students, staff and faculty, all of whom are studying hundreds of different subjects. A "Library Gateway" attempts to be a structured web conduit, but MyLibrary gives the user a way to create their own user interfaces, ones which make special sense to them.

"Library users who are Web users, a growing group, expect customization, interactivity, and customer support. Approaches that are library-focused instead of user-focused will be increasingly irrelevant."

(Cohen et al. 2000)

MyLibrary was conceived as a vehicle for increased interaction with library users in an otherwise depersonalized digital environment. Internet users have demanded a personal face to the World Wide Web, and in response to this need, the Cornell University Library implemented a service called "MyLibrary", which is now available in several libraries.

MyLibrary is an "umbrella" service for two services: MyLinks and MyUpdates. MyLinks is a tool for collecting and organizing resources for private use by a patron. These resources may or may not be "official" library resources. It is a kind of "traveling set of bookmarks"available from every workstation through the library website. The MyLibrary model accepts the reality that people are finding information on the Internet and provides a way to integrate these "other" resources with the Library resources that have been evaluated and selected by librarians.

MyUpdates helps scholars stay informed of new resources provided by the library. The traditional accession lists, organized by subject, can only serve a small number of patrons. By contrast, MyUpdates periodically queries the on-line catalogue to determine which resources are new. If the new resources match the pre-identified needs of a patron, the system notifies the patron. Patrons no longer need to search the on-line catalogue regularly to be aware of new resources; the program searches the on-line catalogue for patrons and e-mails the results to them automatically.

Traditionally, if librarians know of student or faculty research interests, they attempt to keep those researchers informed of potentially useful sources. Due to the size of an academic population, it is not possible to know everyone’s research topics. MyLibrary automates this function.

Future enhancements will expand the interactive characteristics of MyLibrary in several directions.
The new librarian

In this phase of profound change from the campus-based model, librarians, as well as faculty, are learning to adapt to the new environment.

All the changes and transformation previously mentioned, involve an evolution in the role and skills of the librarian responsible for the service for distant learners. The basic principles of the profession haven’t changed, the debate is about the changes brought by communication media, that has created new expectations in the users and has put greater emphasis on particular parts of their job. (Giangrande, 1998) The traditional activities and roles have to be reconsidered under many aspects. First of all, the skills required to information professionals has augmented: the knowledge of the issues of traditional library science are not enough. Librarians must be able to plan and manage new services, to survey and know their users, to catalogue paper and electronic resources, to apply cataloguing rules and Dublin Core, but also the html language. They must have at least a basic comprehension of the technology applied in their library, if they are assisted by technicians that master the technological part for the library. Moreover, if we consider the licensing of databases, librarians have to understand the legal and technical issues involved, to respect them themself and to make them clear for the users.

Librarians need to talk to and work together with new stakeholders of libraries and higher education: not only publishers and their own faculty, but also service providers, technical staff, the cooperating libraries.

As we said before, the library doesn't want to be considered only as a support of learning activities, but as a center of information and resources, where librarians can guide the user through old and new resources, to transform him in an independent users. To reach this objective, librarian must become a teacher. They must earn all the skills mentioned above, and then learn how to teach them, to communicate them to their users. All the library staff need to be continuously trained on the general issues of their profession and in their specific field of work.

"An environment of constant change and development makes it difficult for all staff to keep their knowledge and skills up to date. In order to support resource based learning effectively staff need training in a number of areas. These include:

- General awareness raising about resource based learning
- Information on the implications of the implementation of resource based learning for Information Services staff
- IT skills, up-dated regularly
- Training in the use and evaluation of electronic resources
- Training in those skills required for the production of learning materials and creation of electronic resources.
- Training in the management of change in order to respond to new roles, new responsibilities and, in some cases, new locations.
- Communication skills in order to work effectively with individuals, groups and Committees
- Skills in teamworking and team management
- Training for Subject Librarians in teaching and learning methods and skills to improve user education
- Instruction for Subject Librarians on the Internet and evaluation of resources located there"

(Jackson and Parker, 2000)
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Critical account

This literature review on library support for distance learning has been written on two different occasions. The first part was developed more than one year ago, in the context of my final project for the Degree at the University of Parma; it has lately been revised and adjourned for this assignement.

The first research

Search strategies
The first literature review formed the basis on which the whole research project was built. The result was a project of library service for the distant students of the University, born after the overview of different experiences of library support for distance learning programs and a survey of the points of view of students, librarians and faculty projects. On that occasion, the first phase of the research had a very large scope with some smaller ramifications to follow: first I had to learn all the general context of distance learning, and then focus on the Italian experience. Successively, I searched for materials on the main issues of library support for distance learners, its past and present. I also collected and read materials about social research methods such as questionnaires, focus groups and interviews to support my own research. All this literature research permitted me to understand the global situation and apply this knowledge to the situation at my University.

My research was built around 4 different headings, all related to the wide semantic field of “Distance learning”. The aim was to place my project right at the conjunction of these 4 issues (▲).

These headings are just the "titles" of the main fields of this study. Each of them can generate many different key words and search terms. For example, distance learning is also defined as open, flexible learning and distance education, while the Italian language uses even more synonyms, since there is no specific term that is generally accepted to define it. “Research methods” is an umbrella term for many kinds of methods; in a literature search, more specific terms, such as “focus group” or “questionnaire” can give better results. Even "library support" can be defined and described in other words: I have found articles relevant to my research, which discussed resources without citing libraries at all.
The resources

This search strategy was built in different stages. When I started the research, I had only a vague idea of what I wanted to focus on. The topic became more and more clear and precise while "exploring" the field.

My first readings were general monographs on distance learning. I scanned the librarianship and education-related shelves of the library I worked in and searched the catalogue of other academical universities of Milan. These were a good starting point, but, since the issue of distance learning is in a moment of rapid evolution, the books I found in the library gave me a knowledge of the educational theories of distance learning, but they were not updated to the latest trends and real experiences in the field.

Being a distance learner, I really appreciated the possibilities given by Internet and its resources. The library of my home university was difficult to reach, and I found most of the material I needed through the net. The search through Internet sites and databases had to be much more accurate and selective: the terms “distance learning” and “libraries” gave hundreds of results, and I had to make a strict selection. In particular, Internet sites on distance learning are really numerous: there are not only universities and other institutions promoting their courses at a distance, but also many on-line magazines that discuss distance learning, and sites that aim to introduce and present the issues of distance learning, its history and advantages (but only a few discuss its disadvantages). It is really easy to get lost following the link that points from one site to another, forgetting to evaluate the credibility and the authority of each site; I took as starting points the sites of some authoritative distance learning and educational association of the European community and United States and the sites of the main universities that offer distance learning courses.

I also took advantage of accessing some important databases from the library where I work. It is specialized in engineering, but the subscription are made in a consortium of many different libraries and they usually cover many fields, as for the British Library Inside Service and the full text journal of Elsevier and Academic publishers. The first keywords I used were “distance learning” and “library”; the research results were narrow enough to obtain not more than 80-90 records; I chose 20 of them, those that were both relevant to my search and available in a reasonable time period: in fact some were available on-line and others with interlibrary loan, the only items I couldn’t easily retrieve were the papers of the American Off-campus conferences.

Some "weak points" of my research became evident when I started planning and structuring the literature review in its written form. I noticed that there were questions which the literature could not answer: in particular, I tried to understand how the library support for distance learner was planned and started at their real beginning. The articles I found on this issue where not specific, so I referred directly to some of the libraries with a longer experience in the field, as the Open University and South-Africa Open Learning; they sent me detailed material about their beginnings. A lot of help came then from the discussion list devoted to Distance learning library services, the OFF CAMPUS list, to which I subscribed at the beginning of the research. I asked all the librarians if any of them had done any survey to their remote students, at the beginning of the service or to assess its quality. I received some answers, with the questionnaires and the results: they all were really helpfull in structuring my own questionnaire.
The second research

The aim of the research
I decided to reconsider and refresh my literature review for the new assignment, one year later. Having already investigated the history and the beginnings of Distance Learning and its library support, my objective was to update my information and discover and include the latest trends of the evolution. Moreover, the focus of the new research was slightly different from the first one. I wanted to focus on the real situation of Library services for distance learning: how they are organized, what services are available, what problems are discussed.
I started this research with the same keywords of the previous, but again, when I started to organize and write down the results, I noticed that I was missing a relevant part of the ongoing discussion: I had search with too narrow a focus, and I was missing the general discussion on digital libraries and remote users that didn't talk directly about distance learning, but that share with it a large field of activity. Distance learning and digital libraries are two sides of a single coin (Faulhaber 1995) and you cannot get a complete view of the situation of libraries for distance learning without considering that issue. This is true for the general discussion on aims and problems, but also in the more practical context of services and technical tools; for example, the "digital reference service" that was born to reach for users that prefer to use the library from their homes, and not specifically for students attending distance learning classes.

How to update the information
I had never stopped reading and keeping informed about distance learning and libraries, I was still subscribed to the discussion list, so I was quite aware of the most important issues of current discussion, but I had to recall all the relevant information I needed for to new review.
I started reading again my previous work and some of the literature I had used then. I took great advantage of abstracts, notes and keywords I had put on all the literature I had scanned one year earlier. I re-organized that material, trying to summarize and reduce the part related to the history of distance learning and to research methods, which was a relevant part of the previous work, and to give more evidence to latest evolutions. I retrieved all the relevant journals I had used, scanning the latest issues that I had missed. I went back to all the Internet sites I had visited through my bookmarks; many of them had not changed very much, while some had interesting "news": for example, the useful web-bibliography on library support for distance learning, edited by Sandy Slade, had a lot of new links.
I must say, I found a lot of new resources for distance learning in Italy: there are many universities that are starting on-line courses and programs; curiously, many librarians are interested in the general issues of distance learning and there are web-bibliographies and a discussion-list devoted to it. I gave them just an overview, without focusing on them, because the aim of my literature review was the international situation.
Unlike last year, I had a new, useful possibility for my search. Attending the Master in Information Studies at the University of Newcastle, I could access the databases and services of the library. This library has a wide collection of library-related full-text journals. I scanned indexes and made cross-searches through databases and journals, retrieving a good number of articles.
Problems and weak points

I think that the results of this literature review depend much on the resources that were available to me as a distance student. I have used few monographs and I have relied much on electronic resources. I found some of them free on the Internet, while some were reachable from the University where I work or through Northumbria University. This means that I have accessed mainly recent and current resources, and this is suitable, since the research field is considered in the present time. But most of the resources I have used come from United States and Great Britain. I believe these are, together with Australia and South Africa, the nations with the most advanced experiences in distance learning, but I must admit that it was very difficult to find resources on the experiences of other nations.

Moreover, I found it very hard to build a critical view of the some issues I discussed. For the general topics, the discussion is wide and well documented, as for the necessity of a library service for distant learners. Other issues, the most new and experimental ones, can only be cited in their first presentation, since there are yet no numbers, statistics or debate around them. I believe that this presentation can be enough for a literature review of such a wide subject, but a deeper analysis and knowledge of these particular issues will help understand better these arguments.