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## Papers from San Juan

Stephen Parker

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The emphasis in this issue is on papers presented at the World Library and Information Conference in San Juan, Puerto Rico, in August 2011. These are edited versions of papers which were either selected by members of the Editorial Committee as their personal choices, or recommended for publication by Section Committees and subsequently evaluated and ranked highly by the Editorial Committee. In addition, we have one other paper, from Portugal, which was not presented in San Juan.

The first of the San Juan papers is a detailed review of 'The state of e-legal deposit in France: looking back at five years of putting new legislation into practice and envisioning the future', by Peter Stirling, Gildas Illien, Pascal Sanz and Sophie Sepetjan, all from the Bibliothèque nationale de France (BnF) in Paris. Their paper describes the legal situation in France regarding the legal deposit of digital material, and shows how it has been implemented in practice at the BnF, with a focus on web archiving, but also dealing with other aspects of digital legal deposit and possible future developments and challenges.

The next paper also deals with the topic of digital preservation. In 'Out of the classroom and into the laboratory: teaching digital curation virtually and experientially', Ross Harvey and Jeannette A. Bastian, both from Simmons College in the USA, discusses the relationship between a digital curriculum laboratory, the successful delivery of a digital curation curriculum and its wider international implications. The authors illustrate their theme with reference to the digital curation courses offered in the LIS School at Simmons College, at the heart of which is the Digital Curriculum Laboratory, a virtual archives and a preservation laboratory that illustrate an innovative virtual and experiential approach to teaching digital curation.

We continue with the theme of professional development with a paper by Catharina Isberg of the Swedish University of Agricultural Sciences. Her paper, 'Professional development, values and strategy – the means for building strong libraries for the future!' notes that, in a library and information sector that is undergoing massive change, professional development must respond

to changes in customer expectations, behaviour and technological development. The paper describes how the Swedish University of Agricultural Sciences University Library has worked with all staff members on professional development, strategy and values, including staff empowerment and leadership, to produce excellent results.

Leadership is also the subject of the next paper, by Mary Wilkins Jordan, another contributor from Simmons College. In 'Developing leadership competencies in librarians', the author reports the results of a Delphi study that sought to refine a set of competencies for library directors, based on the opinions of current public library directors. The development of library leaders is too important to be left to chance, and a research-based set of competencies should help in the development of training opportunities for librarians who wish to be successful as directors.

The next paper also deals with an aspect of professional education, but in the field of engineering. In his paper, 'Information literacy and engineering design: developing an integrated conceptual model', Michael Fosmire of Purdue University Libraries in the USA notes that engineering education is moving increasingly towards active learning increasingly based on engineering design projects. These projects provide opportunities for engineering librarians to work with students throughout their educational careers; but this means that librarians need to translate their own knowledge of information literacy into the language of engineering educators. This paper attempts to create such a bridge, focusing on the information resources and processes needed by engineers engaged in the design process and bringing together the literature of both the engineering education and library science communities.

Another kind of literacy with which information professionals need to be concerned is the subject of the next paper, 'Environmental literacy and the emerging roles of information professionals in developing economies', by Oluremi A. Abiolu and Oluchi O. Okere of the Federal University of Technology, Akure, in Nigeria. The authors note that new roles for

information professionals are evolving beyond the mere provision of information; they need to apply creativity and innovation to help overcome issues like low literacy levels, poor infrastructures, political apathy towards environmental information. By repositioning themselves in terms of their roles in their communities, information professionals can act as change agents, educators, electronic experts and partners to other change agents.

Sustainability is the theme of the next paper also. In 'The second hand library building: sustainable thinking through recycling old buildings into new libraries', Petra Hauke of Humboldt-Universität zu Berlin and Klaus Ulrich Werner of the Freie Universität Berlin point out that old buildings of various kinds are being recycled into libraries all over the world. Such transformations bring challenges and opportunities to introduce sustainable thinking into library planning. The recycling of old buildings means reducing the ecological footprint of library buildings in a cost-effective and efficient way. The planning of such adaptive reuses is very different from planning a library in a totally new building, and the authors present some case studies of best practices in this respect from Germany and other countries in Europe.

The last two papers in this issue take us into a different world; that of library and information services for children. In their paper, 'The Gov Doc Kids Group and free government information', Tom Adamich, Martha Childers, Katy Davis, John H. Faria and Antoinette W. Satterfield, from various institutions in the USA, describe the work of the Gov Doc Kids Group, which was formed in the United States to promote the use of government information by children, from kindergarten through high school. The paper

shows how the group utilizes the web to promote government information to children and how a Government Documents Children's Collection was created at the El Paso Public Library in Texas. Although the examples discussed are centred on the United States, these ideas could flourish in almost any country.

The final paper is the only one not presented in San Juan last year. 'Learning to read before you walk: Portuguese libraries for babies and toddlers', by Ana Margarida Ramos of the University of Aveiro, presents examples of public libraries specially designed for babies and toddlers in Portugal. The *bebetecas*, as they are known in Portuguese, highlight the role of the library in the dissemination of children's books and in creating dynamic reading habits at an early age. This strengthens family ties and promotes healthier and more balanced child development. The library becomes a privileged space where books can act as the backdrop for interaction between young children, their families and care givers.

This issue concludes with a report by IFLA Journal Editorial Committee member Sanjay Bihani on the Internet Librarian International 2011 conference in London and the usual News section. However, in view of the fact that the IFLA website now includes a comprehensive Calendar of Events which includes links to detailed information on organizers' websites, it has been decided to discontinue from now on the more limited International Calendar previously published in IFLA Journal.

In keeping with IFLA's language policy, we are pleased to be able to include in this issue, for the first time, translations of the article abstracts into Arabic and Chinese. We thank the appropriate IFLA Language Centres for their cooperation in this initiative.



# The state of e-legal deposit in France: Looking back at five years of putting new legislation into practice and envisioning the future

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**Peter Stirling, Gildas Illien, Pascal Sanz and Sophie Sepetjan**

Bibliothèque nationale de France

## Abstract

The article describes the legal situation in France regarding the legal deposit of digital material, and shows how it has been implemented in practice at the Bibliothèque nationale de France (BnF). The focus is on web archiving, where the BnF has experience going back almost 10 years, but other aspects of digital legal deposit are discussed, with possible future developments and challenges. Throughout comparisons are made with the situations in other countries.

## Keywords

digital legal deposit, Bibliothèque nationale de France

## Introduction

The legal deposit of online electronic publications is a relatively recent development, but it is one which takes its place in a long-established tradition of legal deposit legislation in France. This article will demonstrate that digital legal deposit is a natural continuation and evolution of the existing legal situation, while at the same time creating new challenges and demanding the re-examination of some received ideas regarding legal deposit. It seeks to present the legal situation in France and the way in which it is put into practice; while the responsibility for legal deposit is divided between several institutions, this article will concentrate particularly on the Bibliothèque nationale de France (BnF).

The article starts with a brief summary of the history of legal deposit legislation in France, which establishes the aims and spirit of legal deposit legislation. The specific laws and regulations governing legal deposit, and notably legal deposit of electronic publications, are then outlined. The main part of the article then discusses the specific aspects of law and practice in four areas: the acquisition, conservation and description of documents and the means of access to them. For each section the legal possibilities and restrictions are put in the context of actual practice; comparisons are made with the situation in other

countries, and there is a discussion of open questions and future challenges. The conclusion sums up the current situation and suggests ways in which it may develop.

## The history and background of digital legal deposit in France

Legal deposit in France was created in 1537 by King Francis 1st, in what is known as the 'Ordonnance de Montpellier'. This text obliged printers and booksellers to deposit a copy of every printed book published or made available in France to the Royal Library, which was later to become the National Library. Over the centuries, several legal texts have been put in place to regulate legal deposit, and the legislation has evolved to cover different publication types and forms, hence adjusting to all major technological and social changes. This is particularly true during the 20th and 21st century, when the development of many media innovations created many new forms of

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publication, which have gradually been included in the scope of legal deposit legislation. The most recent addition, following the 2006 law on Authors' Rights and Related Rights in the Information Society, is electronic publications and the Internet.

## BOX I

### History of legal deposit in France

Material	Date
Printed material	1537
Prints, maps and plans	1648
Sheet music	1793
Photographs and sound recordings	1925
Posters	1941
Videos and multimedia documents	1975
Cinema	1977
Multimedia, software and databases	1992
Internet	2006

The idea that the aim of legal deposit is to safeguard the cultural heritage of the country is present from the beginnings; the wording of the 1537 'Ordonnance de Montpellier' shows that the idea of safeguarding books from being lost to posterity is already central. It is true that other aims have been suggested, more or less officially, for legal deposit, such as state control over publications, and protection of copyright. In the former case, legal deposit is sometimes considered as being primarily a matter of state control over what is published: this is not entirely accurate, particularly since in the early years of legal deposit there were already censorship laws in place which assured the state control of publications more effectively than legal deposit. Over time however, the perceived purpose of legal deposit has shifted, with aspects of state control mixed with those of cultural heritage, while the status of a work held under legal deposit has also been used to safeguard copyright, during the period 1793–1925. Since 1925 legal deposit in France no longer plays this role, and today the Code de la propriété intellectuelle (the French Copyright Act), following the Convention of Berne, specifies that copyright is inherent in published works<sup>1</sup>. However in other countries, notably the United States, legal deposit remains tightly linked with copyright legislation<sup>2</sup>.

The heritage basis of legal deposit was affirmed in a revision of the relevant law in 1992, in which the clauses relating to legal deposit were added to the 'Code du Patrimoine', the collection of French legislation relating to cultural heritage<sup>3</sup>. The cultural role of legal deposit is also taken up in the decree defining

the foundation of the new Bibliothèque nationale de France, dating from 1994. Here the first two missions of the library are defined as:

- 1) To collect, catalogue, conserve and enrich, in all areas of knowledge, the national heritage for which it has responsibility, in particular the heritage of the French language and French civilisation;
- 2) To ensure access by the greatest possible number to the collections, with the exception of secrets protected by law, under conditions respecting the legislation on intellectual property and compatible with the conservation of the collections.<sup>4</sup>

It is further made clear in the text that legal deposit is one of the means by which these missions may be fulfilled. As founding missions of the library, these clauses illustrate the spirit of legal deposit, which applies equally to electronic publications as to all other material: legal deposit must collect all material published in France regardless of content, language or value, must preserve it without limit of time, and must make it available to the public, but in conditions which respect intellectual property and which do not pose a risk to the conservation of the material.

The relevant articles of the Code du Patrimoine, along with several other texts, control the manner in which material is collected, conserved and made available. The precise way in which this legislative framework may be applied to electronic publications is detailed in the next section.

### The legislation governing digital legal deposit in France today

#### *Code du Patrimoine, incorporating Legal Deposit Law (1992) and DADVSI (2006)*

The principal text governing legal deposit in France is the Code du Patrimoine; in the discussion of various aspects of legal deposit in the course of this article, reference will be made regularly to the different articles of Title III, dedicated to legal deposit. In French law, a Code is a compilation of different laws and regulations in a specific area, and the articles on legal deposit and their integration into the Code du Patrimoine come mainly from the Legal Deposit Law, passed in 1992. Digital legal deposit, however, was created with the 2006 law on Authors' Rights and Related Rights in the Information Society (in French, 'Droits d'auteur et droits voisins dans la société de l'information', known as DADVSI)<sup>5</sup>. This law is a transposition of the 2011 European Union Copyright Directive (2001/29/CE)<sup>6</sup>. It introduces the possibility

of electronic legal deposit as an exception to copyright for the National Library. Because of its origins (a European directive), this Act has similarities with other pieces of legislation to be found in other European countries, such as Finland or Denmark for instance. As a result, the legal situation described here is not unique to France and may be regarded as fairly representative of other national legislations applicable in Europe, although differences are to be observed from one country to the other.

In the article defining the list of publication subject to legal deposit, the DADVSI introduced the following sentence:

Also subject to legal deposit are signs, signals, writings, images, sounds or messages of any kind communicated to the public by electronic means.<sup>7</sup>

The definition of electronic publications is phrased in deliberately general terms, to avoid limiting the legislation to specific technologies which may soon become obsolete. The legislation therefore permits, and indeed requires, the legal deposit of everything published on the Internet, while excluding private correspondence (emails, intranets, the private areas of social networks...). This may range from websites in a general sense, to video and sound recordings, or any form of e-publications (e-journals, e-books, blogs...) provided by electronic, 'immaterial' means. Publications on a physical medium such as a CD-ROM are already covered in the same article of the Code du Patrimoine, having been included in legal deposit in the 1992 law.

Other articles cover the responsibility of producers, notably regarding the provision of technical information necessary for the collection and conservation of material and the practicalities of the collection<sup>8</sup>, and the conditions of access<sup>9</sup>, points which are discussed in greater detail below. The law also specifies that the exact details regarding its actual enforcement will be fixed in a decree (or 'décret'; which is the usual process for the practical implementation of legislation in France). It is important to note that, at time of writing, this decree is still in process of validation and is yet to be published; the implementation of digital legal deposit as it is presented here, although put into practice by BnF for several years, must therefore be considered as still experimental. Certain developments and details regarding its implementation will only be confirmed or clarified once the decree is published. References are sometimes made in this article to the most recent drafts of the decree, but these cannot be considered as definitive and the possibilities discussed in relation to the decree remain hypothetical.

### *Decree on legal deposit (1993, modified 2006)*

There is another text that is relevant to digital legal deposit. The decree that implemented the legal deposit law of 1992 was modified in 2006 to allow the BnF to propose to publishers that they provide, in place of a physical document, a digital file identical to it, with the manner of the deposit to be agreed between the BnF and the publisher<sup>10</sup>. As discussed in more detail in the section on 'Means of acquisition of electronic materials by legal deposit, Questions of scale and completeness', below, this has so far only been used in the case of very large publicity posters, which are unwieldy and difficult to manage and to consult in their physical format, and are now deposited as PDF files; there have also been e-deposit experiments conducted with one of the major French regional newspapers, *Ouest France*. However the possibility of digital substitution may provide many more other options to be explored in the future; yet it is important to note that this disposition requires that the digital version be exactly identical as to the one distributed in printed form and that it only allows for a replacement of the deposit of a physical document. This option could not for instance be used to collect both the electronic and paper versions of a novel: it does require that a radical choice be made by the Library, to abandon the printed version.

### *Decree founding the BnF (1994)*

As already noted, the decree creating the new Bibliothèque nationale de France<sup>11</sup> places the role of legal deposit as central to the missions of the library. In fact, the main legislative base for this mission is still the 1992 legal deposit law, as integrated into the Code du Patrimoine, and the related 1993 decree, as described in the two previous sections. However this other decree establishing the new BnF highlights and reinforces the status of legal deposit collections as part of the national heritage, which has implications especially for questions of long term conservation.

### *Code général de la propriété des personnes publiques, Code de la propriété intellectuelle and Loi relative à l'informatique, aux fichiers et aux libertés*

While not directly concerned with legal deposit, three other pieces of legislation are important to mention for the practical application and implementation of legal deposit. The Code general de la propriété des personnes publiques (Code of public property)<sup>12</sup>, the Code de la propriété intellectuelle (Intellectual Property Code)<sup>13</sup> are both wide-ranging collections of legislation, and as we will see later in this discussion, the

collection, preservation and consultation of material under digital legal deposit is framed by several provisions in these two codes. Finally, another law, the 1978 Loi relative à l'informatique, aux fichiers et aux libertés (Law on information technology, files and freedoms)<sup>14</sup>, has a strong bearing on the provisions for access to and usage of digital legal deposit collections as it imposes strict restrictions as to the protection of personal data that may be included in such collections.

### Summary of the legal possibilities for digital legal deposit

These legal texts therefore leave three possible mechanisms for the collection of electronic material under legal deposit:

Under the Code du Patrimoine, modified by the DADVSI law of 2006:

- automatic collection of material via the Internet (by means of harvesting),
- deposit of digital files by the publisher (by means of 'e-deposit').

Under the decree of 1993, modified in 2006:

- deposit of strictly identical digital files as a replacement for paper deposit.

Both for economic and heritage reasons, BnF has so far prioritised the automatic collection of Internet material, and this article examines in particular this aspect of digital legal deposit. However the full range of possibilities will be discussed as offering other approaches to be explored in the future.

The following sections discuss, in order, the four aims of legal deposit as defined by the Code du Patrimoine: the collection of material, its preservation, the creation of national bibliographies and the consultation of the collections. In each case, the legal restraints and possibilities are discussed in relation with the practical measures already in place, and those which may be imagined for the future.

### Means of acquisition of electronic materials by legal deposit

The legal deposit of electronic publications, while it is in the tradition of earlier forms of legal deposit, creates challenges specific to the nature of the material. As shown in the previous section, the legal texts governing legal deposit allow for a wide range of electronic materials to be included; however the nature of such electronic materials means that two guiding principles underlying the French approach to legal deposit – the idea of publications *being made*

*available on the French territory*, and the *exhaustive nature* of legal deposit – must be reinterpreted.

### Scope of material subject to digital legal deposit in France

According to the Code du Patrimoine, everything that is published on the Internet in France is subject to legal deposit. This raises the question of how to define the 'French Internet'; by definition all information accessible on the web is available in France, and therefore a definition based on that applied to printed books, where imported material is collected, would rapidly become unworkable. The definition which should be given in the forthcoming decree, and which is already applied in practice by the BnF, is based on the idea of a link to the French territory. Three criteria are used to judge if a publication is in the national scope of electronic legal deposit:

- if it is made available on the French national web Top Level Domain (TLD), fr, or any other domain name registered within a domain name registry based in France (for instance domains with the .com extension which are registered in France);
- if the producer of the website (or other document) is a person resident in France, or a company based in France;
- if the website is produced in France (this latter criterion being subject to wider interpretations than the former, it also allows for some flexibility).

It is important to note that, in current practices and given both the scale at which BnF operates and the limitation of the resources available, such conditions are not systematically checked by the Library before harvesting websites. This general definition of the national scope is however taken into account to define the general policy and technical settings of web collections, as the main entry point to national, bulk, domain crawls are currently seeds or addresses of websites registered under the .fr extension. The listed conditions may also be opposed, during or after harvesting, on the basis of individual claims by producers for instance (see 'Questions of scale and completeness', below).

As discussed below, this represents a significant number of domain names, and a huge volume of data. The question may be asked, however, if a national division of the Internet has much sense, as hyperlinks do not respect national borders, and the Internet is by its very nature international. It remains the case that national legal deposit legislation is a powerful means of ensuring large-scale preservation of the Internet, by allowing legal means of copying and preserving

content, mobilising the resources of national libraries and archives and placing Internet archiving in the context of the preservation of cultural heritage. The division by countries does however pose the question of international collaboration and interoperability between collections, discussed below (see ‘Open questions/challenges’ below).

### *The institutions responsible for digital legal deposit*

The Code du Patrimoine distributes the responsibility for legal deposit between three cultural institutions: the Bibliothèque nationale de France, the Institut national de l’audiovisuel (INA, the French national broadcasting archive) and the Centre national du cinéma et de l’image animée (CNC, in charge of preserving motion pictures)<sup>15</sup>. Regarding specifically digital legal deposit, the forthcoming decree should define the division of responsibility between the BnF and INA. In the meantime, an *ad hoc* division has been agreed between the two institutions, following the logic of the continuity of their respective mandates and collections: INA collects Internet publications relating to television and radio broadcasting in France, and the BnF collects all other material. This division should be fixed more precisely in the forthcoming decree. In this article, the focus on the practical aspects of the collect of Internet materials is based on the experience at the BnF; INA has a different approach based on much more frequent crawls of a smaller number of sites, with a strong, complementary focus on stream media<sup>16</sup>.

While the legal responsibility for the collection and its display lies with the BnF and INA, other institutions and organisations may be involved in the process, particularly where there is a selection of material to be collected. The BnF has already put in place experimental cooperation with the 25 French regional libraries charged with receiving legal deposit from printers (known as Bibliothèques du dépôt légal imprimeur, or BDLI); these libraries have been involved in selecting sites from their respective regions to be archived during national or regional election campaigns<sup>17</sup>. Researchers and specialists from a variety of organisations (universities, associations . . .) have also been involved in selecting sites for other thematic or event-based projects and datasets such as web activism, online literature or sustainable development and the green web. Such possibilities should be further explored, although there are implications in terms of providing access to the collections, which are discussed below.

There are in France other initiatives in the area of web archiving, outwith the context of legal deposit

legislation. Some researchers and universities are actively engaged in research and development projects regarding the web, and this may involve archiving web material. Most active is the Internet Memory Foundation (previously known as the European Archive Foundation), a not-for-profit foundation that aims to preserve the Internet<sup>18</sup> and, more recently, the Medialab at Sciences Po<sup>19</sup> in the social sciences area. However, only INA and BnF can benefit from the specific dispositions attached to the legal deposit legislation, in particular the possibility to harvest websites without asking permission to the publishers.

While in France, which has a well-known tradition of administrative and cultural centralism, the question of the distribution of tasks between heritage institutions is mainly discussed in relation to the respective mandates of the BnF and INA, which are both located in Paris, other countries have to clarify the distribution of tasks from a different perspective. A frequent situation involves questioning the division between the National Library and the National Archives (this is the case in the UK, for instance). Another one, in the case of federal administrations, requires envisioning more largely distributed and cooperative organisation schemes, such as networks of regional, specialised libraries (as in the case of Switzerland or Germany). Regardless of specific legislations, other forms of networks may develop as in the case of the United States. There, under the umbrella of the National Digital Infrastructure Preservation Program (NDIIPP)<sup>20</sup> led by the Library of Congress, one finds a variety of institutions actively engaged in web archiving such as the non-for-profit foundation Internet Archive, the California Digital Library or the University of North Texas.

### *Questions of scale and completeness*

Legal deposit, as defined in French law and by its tradition, has previously aimed at an ideal of exhaustiveness: the resulting collections should contain everything published or imported in France, within the criteria defined above. However the extension of legal deposit to digital material means that this ideal must be questioned. The definition of electronic material in the Code du Patrimoine is, as we have seen, formulated so as to be independent of any precise *format* (e-book, web . . .), rather it places the emphasis on *content* that is communicated by electronic means. This widens the field of legal deposit to include everything published on the web that meets the criteria described above, regarding territoriality and the public nature of any communication. This creates a

difficulty, as the very nature of the web seems opposed to any idea of an exhaustive collection.

On one level, this problem comes from the sheer amount of information available online. In April 2011, the number of domain names registered in .fr was around two million, and to this must be added sites within the remit of French legal deposit registered with other TLDs, notably .com, .org and .net; AFNIC, the body in charge of administering the .fr TLD, estimates that this represents only a third of the 'French Internet', using a definition very similar to that applied by the laws on legal deposit<sup>21</sup>. While the national domain crawl performed by the BnF in 2010 showed that a large proportion of these domain names had little or no content, some large sites contain many millions of individual files.

## BOX 2

Distribution of domains in terms of number of URLs collected by domain, BnF Domain Crawl 2010.

Number of URLs collected	Number of domains
=<10	976,948
11–100	580,362
101–1000	320,620
1001–10000	85,471
10001–50000	23,630
50001–100000	352
>=100001	230

Rather than consisting of individual, separate publications, the web is an information space with shifting boundaries, where it is difficult to define distinct and stable 'items' or 'units' comparable to a book or an issue of a periodical. A website may contain multiple pages, images, video or audio files, documents in the form of PDF or Word documents, applications . . . In addition, the nature of the web lies in the use of links within and between sites, so that much of the information takes its meaning and significance from its place within a complex network of interconnecting links. To add to this complexity, there is a constant flow of information, as sites are updated with a frequency that varies between and within sites. All of this means that to be truly exhaustive, it would be necessary to collect everything all the time; the technology of web crawling and the storage space involved mean that this is simply impossible. The collections created would also be huge and unmanageable, both for librarians and end users.

Faced with this impossibility, the only response is to abandon the ideal of exhaustiveness and accept that the legal deposit of the web will collect only a part of

what is available. As regards the updating of online material, the forthcoming decree should recognise this problem, in specifying that sites should be collected 'at least once a year'. However even then, the mass of material means that an exhaustive collection even once a year remains infeasible. There are then two approaches that can be used: *selection* and *sampling*. The former option involves a prior selection of sites to be collected, usually on the basis of a judgement of the quality or the scientific or aesthetic value of the site; it could thus be decided that sites publishing scientific research, government or official publications or literary or artistic works are of greater worth and should therefore be the focus of the collection. This approach is in many ways similar to the acquisition of books chosen by a librarian, with a logic of selecting items that will enrich the research collections. The alternative approach, sampling, is closer to the idea of legal deposit: sites are collected without a prior judgement being made of their 'value' or of their potential interest to current or future researchers. Rather the aim is to preserve a representative sample of the national born digital output, which should capture as far as is possible the 'character' of the national web at a given time.

Each approach has its limitations: selection requires the definition of criteria, and an investment of time by curators, researchers and others, with the possibility that the sites selected today will not be those considered most important by users in the future. Sampling on the other hand means that important sites may be collected only partially or not at all, while it may be argued that much of what is collected will be of no interest to researchers as the content might be seen as junk (spam, domain squatting sites . . .) or of low value (personal blogs, advertisement, commercial sites . . .).

At the BnF the decision has been taken to combine both approaches and to adopt a 'mixed model' for web archiving that combines selection and large-scale sampling. The detail of this approach is described in the next section.

### *How online material is collected*

To respect the obligations of legal deposit while accepting the realities of the Web, the BnF has thus put in place since 2006 this 'mixed model' of web archiving that combines two types of collect: broad or domain crawls, and focused or selective crawls. The former consists of an annual crawl of all the domain names registered in the TLD .fr; this list is provided annually under an agreement with AFNIC. In the future the BnF hopes to be able to include sites registered in other TLDs such as .org, .net and .com

also registered in France, which are within the scope of legal deposit and may represent around two-thirds of sites registered in France (see ‘Questions of scale and completeness’ above). This will require additional agreements directly with the registrars<sup>22</sup>. There is therefore no judgement regarding the quality or value of what is collected; in the tradition of legal deposit everything which falls in the criteria described above is subject to be collected. This annual collect uses technical settings meaning that only a limited amount of data is collected for each domain: in 2010 this was set at 10,000 URLs (or files) per domain. While this is sufficient to collect the majority of sites in their entirety, large sites and platforms are only partially collected. The idea of this approach is to provide a kind of ‘snapshot’ of the French Web, which while limited both in depth and in temporal coverage, respects the obligation under legal deposit to collect the French web at least once a year (see ‘Questions of scale and completeness’ above). This allows the collection of a representative sample of French Internet production.

The other, complementary approach, focused crawls, involves collecting sites which are selected by subject librarians at the BnF, and occasionally by other partners (such as regional legal deposit libraries and researchers). While this still falls within the legislative framework of legal deposit, the approach may be considered as similar to the acquisition of books and other resources serving the purposes of a research library: librarians choose sites based on the value and interest of the material, as part of the resources held by the BnF in a given area; the criteria for selecting sites should then be linked to the overall acquisition policy of the collection and acquisition departments of the Library. Sites are selected which may not be collected, or not satisfactorily, in the broad crawl: this may include sites in other TLDs than .fr, and sites or parts of sites that may not be collected because of the size of the domain (large institutional sites, individual blogs . . .). The focused crawls also permit sites to be collected more frequently than once a year. As of 2011, the BnF has put in place a system of permanent crawling, where sites may be collected annually, bi-annually, monthly, weekly or even daily. This allows, for example, a daily collection of a selection of news sites, to show what stories are on the homepage on a given day, and improves the quality of collection of sites that are updated frequently, or those that do not maintain archives. Depending on the frequency of crawling the depth of collection and the number of files collected per site varies.

Finally, the BnF has put in place an experimental procedure whereby website producers may propose

their own site to be collected. This is currently done by means of a message on the pages of the BnF website devoted to digital legal deposit, which gives an email address where nominations of websites may be made. Depending on the results of this experiment, this approach may be developed once the decree is published. (The role of website producers in automatic collection and deposit of files is discussed in the next section).

Web archiving at the BnF relies on two main pieces of software developed as open-source products in partnership with other institutions: the crawler robot Heritrix<sup>23</sup>, which collects the files which constitute the archives, and NetarchiveSuite<sup>24</sup>, which allows the planning, programming and monitoring of crawls. It is important to note that such crawls, which involve making copies of the files that make up websites, are only possible because the Code du Patrimoine, as modified under the DADVSI Act, creates an exception from intellectual property legislation. Article L132-4 specifies that copying copyrighted material is authorised “when such reproduction is necessary for the collection, preservation or consultation” of the material<sup>25</sup>. As it is impossible to collect Internet material without making a copy it was necessary to introduce this possibility, and the DADVSI law was specifically intended to deal with such problems arising from incompatibilities between new technologies and the existing legislation in various areas. (Other aspects of this article are discussed under ‘Conditions of access to material obtained under electronic legal deposit’, ‘Authors’ rights and intellectual property’, below.)<sup>26</sup>

### *Obligations of producers and publishers*

This article also means there is no need to seek permissions from website producers and copyright holders; such a system of permission-based web archiving exists in many other countries (such as the United Kingdom<sup>27</sup> and the United States<sup>28</sup>), but this makes large-scale domain crawling impossible, as identifying and contacting the owners of millions of domains would be unfeasible. The non-profit foundation Internet Archive, which lacks a legislative support for its world wide archiving task which started as early as 1996, takes an ‘opt-out’ approach, by which material is removed from access on their archive if a website producer or copyright holder complains<sup>29</sup>. Once again, this exception from intellectual property rights only applies within the strict legal conditions governing legal deposit in general, and particularly the controls placed on access to archived material, as discussed below under ‘Conditions of access to material obtained under electronic legal deposit’.

Another provision introduced into the Code du Patrimoine results from the change, regarding digital legal deposit, in the relationship between the producer/publisher and the depository institution: unlike in traditional legal deposit, it is the BnF that collects websites, rather than receiving deposits from the publishers. However the law makes it clear that producers have a responsibility to facilitate the collection of their material if required:

[The depository institutions] may proceed themselves with this collection using automated procedures, or may determine the modalities in agreement with [the producers]. The use of a code or a restriction on access by these persons cannot create an obstacle to the collection.<sup>30</sup>

The decree may specify further that producers are obliged to provide all passwords or other means necessary to access documents; this may apply not only to sections of websites protected by passwords, but also to files such as audiovisual contents, priced journals or e-books that may be protected by digital rights management (DRM) technology. DRM may limit both the collection of a site but also its long term preservation and the decree should specify therefore that publishers must provide all necessary information and means of access in both cases (see below under ‘Conservation of material obtained under electronic legal deposit’). As regards passwords, it is important to note that the basic definition of electronic material subject to digital legal deposit (quoted under ‘Code du Patrimoine ...’ above) specifies that it must be “communicated to the public”, and therefore excludes any material on the Internet which may be considered as private correspondence. Thus, where passwords are put in place to protect private material – notably in the case of private areas of social networks – these areas are outwith the scope of legal deposit. However published material for which a fee is charged, and therefore which is accessible by password (or other means such as IP recognition), is likely to come into the scope of digital legal deposit as it is in print legal deposit. Publishers will therefore be obliged to provide all necessary help to ensure their collection by the Library.

This introduces the idea of how to proceed with the digital legal deposit of material such as the ‘deep web’, databases and e-books, which remain open questions and are discussed in the next section.

### *Open questions/challenges*

Unlike other institutions, such as the Royal Library of The Nederland, who started early with e-deposit

based on agreements with publishers and begun its web archiving program only several years later, the BnF has so far concentrated its resources in digital legal deposit on web archiving, principally for economic and practical reasons: large amounts of publicly available online material that would otherwise have been lost for ever have been collected using automatic web harvesting. As early as 2004 (when BnF launched its first experimental domain crawl, in partnership with the Internet Archive), the Library felt it was urgent to start collecting at scale as the web changes extremely fast and lots of data of heritage value disappears everyday. However some material has remained difficult or impossible to collect by these means, either because the material is not online, or because technical or commercial barriers limit access. The legislation, as noted above, applies to all published electronic material and obliges producers to cooperate if necessary, which opens the way to other approaches such as deposit of files by producers.

This approach has not yet been implemented at the BnF, partly because the obligations of the producers and the BnF need to be defined more precisely in the decree, and it is therefore preferable to wait for this legal backing. However preparatory work is being done regarding the procedures, both technical and organisational, that will have to be put in place. One area where deposit of files has been experimented is newspapers, which pose specific problems in terms of storage and conservation. Between 2005 and 2009, experiments were conducted with *Ouest France*, a regional newspaper title with a significant distribution in the western part of the country, to organise the e-deposit of the many (currently: 47) local editions of this newspaper, so that the library would only collect and conserve one main edition of reference in printed form, hence saving a lot of manipulations both to the BnF and the publisher, along with significant storage space in the stacks. This experience had to be interrupted for lack of proper resources and because it appeared impossible, in the current state of the art, to expand this workflow to other newspaper titles. It is probable that this will be approached rather by collecting the online versions available on the Web, though this in itself poses other technical and legal issues, discussed below.

Some of these problems can be addressed using web archiving, but there are many issues to be dealt with. There are today many kinds of material that are difficult to collect: rich media (videos, streaming, Flash, JavaScript ...), deep web (databases ...), subscription and password-protected contents ... Some of the problems are largely technical in nature, and the

BnF hopes to benefit from, and contribute to, international efforts to develop tools and skills to improve the collection of rich media, for example. Others are however a combination of technical barriers and legal or organisational questions. In the case of password-protected resources or those requiring IP authentication, the Heritrix robot is able to bypass login pages when programmed with the access details; it is of course necessary to contact the producers to obtain these details. As explained above, the Code du Patrimoine, supported by the forthcoming decree, obliges producers to cooperate with the BnF and to provide all necessary information for materials falling into the scope of legal deposit, whether they are free of charge or payment-based. As this is a new legal obligation, it is yet to be seen how easy it will be to encourage producers and publishers to collaborate with the BnF in this area; also it will require a lot of work and resources from the Library to maintain and follow-up contacts with publishers while the Library is confronted with severe budget cuts. In certain cases, it will also be necessary to combine this further technical developments, for instance in a case where the password gives access to a Flash-based reader that prevents Heritrix from collecting the content. This work will only start seriously once the decree is published, and will imply much organisational change to deal with this new manner of collecting material. However it should allow the BnF to collect much material, and notably e-books, online journals and other valuable electronic resources that are not currently collected.

For some publications however, it is likely that only deposit of files by publishers will allow the BnF to respect its obligations under legal deposit. For the moment, apart from the experiments regarding the press, the only systematic digital legal deposit performed by publishers concerns large format posters, which, as noted above, are collected in digital form instead of in paper format, under the 1993 decree (modified in 2006) controlling legal deposit. However with the increasing interest and commercial viability of e-books, it remains an open question how best to manage the collection of these publications. Within the structure of the BnF this question is being asked both by the teams responsible for digital legal deposit and the legal deposit of printed books, as well as subject librarians seeking to acquire e-books in their subject areas. The workflow put in place to collect such publications will also have an impact on other areas, including the cataloguing and the preservation of these works. The BnF is therefore examining the options to best respond to this challenge.

A related question regards what may be termed digital gifts or donations. In France, legal deposit was always complemented with acquisitions or gifts, the addition of these different means of collecting contributing to build the heritage and research collection at large. It is an interesting question to see whether similar combinations can be envisaged as to born digital resources: we know of digital acquisitions of course (priced electronic resources), but we can think of digital gifts or ‘manuscripts’ as well (authors, artists . . .). How will these collections legally and technically interact with the digital legal deposit? Again these questions will need to be discussed in the context of a global solution for electronic publications beyond that already existing via web archiving.

Finally, an avenue for further exploration in the collection of digital material is that of international collaboration. Many initiatives are already in place, particularly in the context of the International Internet Preservation Consortium (IIPC)<sup>31</sup>. As previously noted, these can concern new technologies to improve the quality of web harvesting; already, both Heritrix and NetarchiveSuite (initially developed by one institution, Internet Archive and NetArchive.dk, respectively), or other popular software such as the Web Curator Tool (jointly maintained by the British Library and the National Library of New Zealand), are open-source tools which are developed by the international community. More recently, discussion has turned to how international cooperation may play a role in the selection and collection of material, and to some extent address the limitations of a ‘national’ division of the Internet, mentioned above. Thus in the case of events of an international interest each institution could collect web material from its own country. Experiments around this idea have already taken place: IIPC projects relating to the 2009 European Elections and the 2010 Winter Olympics, with a view to collecting the forthcoming 2012 Summer Olympics; and also ad hoc collections responding to urgent situations: the earthquakes in Haïti in 2010 and Japan in 2011, or the political events in North Africa known as *Jasmin Revolution* in 2011. Internet Archive performed crawls based on propositions from different institutions<sup>32</sup>, and some institutions (such as the BnF) additionally performed their own crawls. Future work should help to put in place procedures and best practice for such federated collections, however questions remain over interoperability and how to make collections in different countries ‘talk to’ each other, given the legal restrictions on access that exist in many countries’ legislations. The access aspects of international cooperation are thus discussed below, in section V.

## Conservation of material obtained under electronic legal deposit

### *The legal obligation to preserve heritage collections*

As discussed at the start of this article, the aim of legal deposit is to create a permanent record of the cultural output of France. The idea of conservation is therefore at the heart of legal deposit: the collections created by legal deposit must be preserved without restriction of time. This responsibility, implied by the decree creating the BnF and the Code du Patrimoine, ultimately draws its legal force from the Code général de la propriété des personnes publiques<sup>33</sup>. Article L2112-1 of this code specifies that one copy of each document collected under legal deposit (those listed in article L131-2 of the Code du Patrimoine) must be considered as part of the ‘Domaine public mobilier’, or items belonging to the public domain, and therefore “inaliénable et imprescriptible”<sup>34</sup>. This fundamental obligation places a special importance on the role of preservation techniques, where, as with the collection of material, the nature of electronic legal deposit poses both technical and legal challenges different from those previously encountered with other media.

### *Technical approaches to digital preservation: making copies for conservation*

From the technical point of view, systems are being put in place at the BnF to ensure the long-term preservation of digital legal deposit collections. Similar systems are currently being built in a growing number of national libraries, such as the Library of Congress, the national libraries of New Zealand and Australia. A major difference in the preservation of digital material is the need to be able to make copies, either identical copies, or modified copies to allow for changes in format, etc.; indeed, digital preservation is impossible without the ability to copy from one support to another. The DADVSI law of 2006 created an exception to intellectual property laws, now in the Code du Patrimoine as Article L132-4<sup>35</sup>, which allows for the copying of copyrighted material where this is necessary for the collection, as discussed above, but also for the preservation of material.

Currently, the web material collected (in the form of ARC or WARC files<sup>36</sup>) is stored in the first instance on the servers used for access to the collections. A security copy is also made, with checks and backups in place to prevent the deterioration of the files or the storage media, such as checksums, periodic copies and replacement of hard disks/tapes. This security copy for bit-stream conservation is a first step in preservation, however for long-term preservation

the BnF will integrate its web archives into the centralised digital preservation system known as SPAR (Scalable Preservation and Archiving Repository)<sup>37</sup>. This repository complies with the principles of the Open Archival Information System (OAIS) model<sup>38</sup>. In addition to checks on the integrity of the data, SPAR will allow an analysis of the formats used, which in turn will permit long-term preservation strategies to combat format obsolescence, based on migration and emulation<sup>39</sup>. The article of the Code du Patrimoine already cited allows this type of manipulation of the data necessary to conserve legal deposit collections. As noted above, the forthcoming decree should also reiterate the obligation for producers to provide all technical details necessary for the conservation of legal deposit material; this will apply notably in the case of digital rights management (DRM) technology which could limit the reproduction or modification of files as envisaged in SPAR.

### *Requests for destruction or modification of material, from an individual or the publisher*

The BnF also has to consider the possibility that individuals may request that information held in the web archives be modified or destroyed. This is particularly in view of the 1978 Law on Information Technology and Freedoms, which allows individuals to correct or delete information regarding them published on a website, or held by a third party<sup>40</sup>. Requests may also be received from the author or publisher of material seeking to remove or modify material. However, the legal obligation to preserve legal deposit collections, as described in section (a) above, overrides any other rights or requests to destroy material, and the same protection should be applied to digital collections as to books and other physical collections, which cannot be destroyed or modified. This legal safeguard is vital for preserving the integrity of heritage collections, and at the heart of legal deposit.

This is an area that should be clarified in the forthcoming decree. The body responsible for issues of privacy and data protection in France is the Commission Nationale de l’Informatique et des Libertés, or CNIL (National Commission for Information Technology and Freedoms). It has recently published a recommendation regarding the decree which recognises that the right to modify or delete material shall not apply to legal deposit collections. It is therefore envisaged that such requests will be dealt with by limiting or removing public access to the material in question, rather than destroying it; the issues relating to this possibility are discussed in section VI below. Finally, it should be noted that a court decision might result in an order

to destroy or remove material held in the web archives; as with printed material, the BnF would be obliged to respect such a judgement, but such cases are extremely rare.

### *Open questions/challenges for the future*

A major challenge for the future, already envisaged with the creation of SPAR, is the risk management of web archive collections. While the long-term preservation strategies outlined above are possible, any intervention in the collections has costs associated in terms of both human and machine time spent analysing and processing collections and increased storage space. It may not therefore be possible to apply the highest quality preservation strategies to all material in the archives – instead a system of risk management may be put in place, in which certain formats, which for instance may be considered as presenting a particular risk of obsolescence, could be given higher quality treatment than others. This may be compared with the approach used for paper collections, where works whose physical medium is considered fragile are given a different treatment and, for instance, stored in special stacks or communicated to the public under special conditions. The overriding legal obligation to preserve digital legal deposit collections does not change but, as with the movement from exhaustiveness to sampling, given the amount of data collected under legal deposit, a pragmatic approach might need to be taken in order to manage limited preservation resources in a sustainable way.

## **Description of legal deposit collections and national bibliography – what obligations exist for cataloguing material obtained under digital legal deposit?**

### *The legal requirement of description*

The nature of electronic material, and particularly the Web, also requires a new approach to the obligation to create a national bibliography of the French national production, which is given in the Code du Patrimoine as one of the aims of legal deposit<sup>41</sup>. This obligation is put into place by the publication of the French National Bibliography by the BnF<sup>42</sup>, and catalogues made available by INA and the CNC. While electronic publications which respect the form of existing publications, such as e-books and online journals could in theory continue to be treated in the same way, the nature of information published on the Web means that web archives require a different treatment.

As described above, the Web is different not only in the scale of the information that it produces, but

in the nature and granularity of it: rather than being individual, separate publications the Web can be seen as a constant flow of interlinked data. Applying a traditional bibliography approach is therefore impossible at large scale, due to both the difficulty of identifying ‘items’ to be catalogued (websites, domains, hosts, directories of websites, pages, files . . . ) and the sheer amount of material (the 2010 French domain crawl covered 1.6 million domains, and collected some 800 million files).

The forthcoming decree, in recognition of this difference, should allow for automatic indexing to take the place of traditional bibliography as the means of ensuring access to the collections. This is in line with the measures already put in place by the BnF, which has chosen not to catalogue manually the material collected by Web harvesting, but has instead put in place indexing. This approach is based on the idea that the Web archives should follow the same logic as the live Web, where sites are interconnected rather than viewed as separate, stable units. Other institutions have however taken different approaches, especially when their web archiving program is by law or policy restricted to rather selective datasets; for example the British Library and the Library of Congress both catalogue individual sites. This is in part possible due to the fact that they do not currently perform large-scale crawls; it is doubtful whether this approach could be applied to a domain crawl; see ‘Means of acquisition of electronic materials by legal deposit’, ‘Obligations of producers and publishers’, above, notes 24 and 25.

### *The technical means currently in place*

An experimental interface allowing access to the BnF web archive collections has been available since 2008. This is based on the open-source Wayback Machine, originally developed by Internet Archive<sup>43</sup>. However for the moment there is no comprehensive full-text indexing of the web archives; experimental full-text indexing has been applied to around 10% of the collection, but due to prioritisation of resources on the collection of material, it has not been possible to devote development time to the creation of full-text indexing. This will be a major project in the near future, as to fully exploit the nature of the web archives a functional ‘search engine’, with the addition of the temporal element, is vital. Several institutions, such as INA, the British Library or the National and University of Iceland have been more successful in implementing full text search engines for their web archives. Although they still have to deal with ranking and relevancy issues, they demonstrated that such a

project is perfectly doable but requires a fair amount of computing resources.

At the BnF, the principal means of access currently is therefore a search by URL, similar in principle to the search functions made available on the Internet Archive's website [www.archive.org](http://www.archive.org). This level of indexing means that the entire collection contained in the web archive is therefore available for access, as required by the legislation. However there are clear limitations to this means of access: it is necessary to know the URL of the site you are looking for, and there is no continuity in the archives for a site that changes its URL over time. For example, the political party currently in government in France, the UMP, has changed its website from <http://www.u-m-p.org/> to <http://www.lemouvementpopulaire.fr/> and the shift from one version to the next isn't explicit while browsing the web archive. It is also impossible to perform thematic searches in the archives, let alone to perform more sophisticated data mining analysis (see section VI (e) below). It also means that, at least for the moment, the Web archives are not accessible via the BnF catalogue, but only using their own dedicated interface, secluded from other Library federated search applications. Other institutions, such as the British Library or the National Library of Singapore have done a very interesting job in better integrating their web archive to the rest of their digital collections and it is obviously another key area to investigate in the future, also in order to demonstrate and enhance the value of the web archives to end users.

### *Open questions/challenges for the future*

These limitations can be seen to restrict the access to the archives, and even if the legal framework allows indexing (including URL indexing) as a replacement for the obligation to produce a national bibliography, it is clear that to respond to the spirit of this obligation, and to allow researchers to analyse the online cultural production in France, it will be necessary to implement new technological solutions matching the researchers' expectations and emerging data and link mining practises on the life web.

Again, the question of how to put in place international cooperation is relevant. Where collections have been created in the context of an international cooperation, as described above, even where an online access is impossible for legal reasons, as in France, it may be possible to put in place systems allowing users to search across multiple countries' collections, to at least see what material is held in different institutions. This is the subject of discussion within the IIPC consortium; technically, from the point of view

of the BnF, the developments opening up the web archives to searching from the catalogue could be a step towards this.

Finally, the nature of electronic resources, and particularly web archives, opens possibilities of creating other means of access, beyond 'description' of resources as traditionally practised. A first step in this direction will be the implementation of full-text indexing, however other tools could be put in place allowing much more detailed processing of electronic material by means such as data mining. In Europe, LAWA (Longitudinal Analytics of Web Archive Data)<sup>44</sup> project, supported by the European Commission, is exploring interesting use cases and prototypes to move further in this area. The implementation of such tools which require the manipulation of large datasets in specific software environments is yet largely linked with the legal situation regarding access to these resources, and these questions are therefore discussed more fully at the end of the next section.

## **Conditions of access to material obtained under electronic legal deposit**

### *Providing access vs. protection of the collections*

In general terms, there are three models for access to web archives: a dark archive, where material is collected but not made accessible (or at least not until an embargo period has passed); a white or 'open' archive, which is entirely open to the public (via the Internet); and a 'grey' archive, which provides controlled access under certain conditions. Currently some institutions, such as the National Library of Norway, are obliged to have dark archives, which is usually due to copyright and especially data protection laws in force in their country; in these countries the conditions of any access to archived web material have yet to be agreed. Other countries have put in place open archives, often made possible by the fact that their collection system is permission-based, and the request to make material publicly available is included in the permission request; this is for instance the case in the United Kingdom<sup>45</sup>. As noted above, Internet Archive<sup>46</sup> also maintains an open archive, but with a take-down policy in the case of complaints. The National and University of Iceland is, to our knowledge, the only public heritage institution who chose to take a similar approach.

The French legislation allows for material collected under digital legal deposit to be made available only in a grey archive, with strict restrictions on its access. This creates tension between the obvious need to provide access to the archives, which otherwise would serve no purpose, and the legal restrictions.

One of the missions of the BnF, given in the founding decree cited above, is:

To ensure access by the greatest possible number to the collections, with the exception of secrets protected by law, under conditions respecting the legislation on intellectual property and compatible with the conservation of the collections.<sup>47</sup>

This shows well the tension between the needs of access and those of conservation, and the need to respect intellectual property rights along with personal data protection. However unlike with paper and other physical media, the use of electronic resources does not pose a risk of damaging them, since, as described above (section IV (b)), the law allows for copies to be made specifically for conservation purposes, and the system being put into place at the BnF will ultimately separate the copies used for access and preservation. It is therefore especially the aspect of intellectual property rights that comes into play. The Code du Patrimoine<sup>48</sup> specifies that electronic material collected under legal deposit may be consulted “on site by duly accredited researchers . . . on individual workstations the usage of which is exclusively reserved to these researchers”. The decree should maintain this limitation, although it may allow access to be provided by a limited number of other libraries sharing with BnF legal deposit responsibility. In such case, access from these regional libraries would still involve to maintain the requirement of individual workstations and accreditation for researchers. These possibilities are discussed further below.

Access to the web archives is provided in the research reading rooms of the different sites of the BnF. These reading rooms are reserved for researchers who have a demonstrable need to use these collections; this limitation is in place to protect the physical legal deposit collections, mainly for the needs of preservation discussed above. In the case of web archives, there are other reasons that justify this form of access.

### *Authors' rights and intellectual property*

It is important to note once again that the 2006 law that created digital legal deposit, and added these articles to the Code du Patrimoine, was intended to deal specifically with questions of authors' rights and intellectual property, in the face of the changing landscape of the ‘information society’. This accounts for the situation, which may appear paradoxical, that the BnF currently collects material which is freely available on the web, and then only provides access to it under these strict conditions. On a simple level, this

prevents a kind of ‘competition’ between the archived versions of a site and the live website: if the archives were available directly on the Internet, and indexed by search engines, an out-of-date version of a website could theoretically be placed higher than the current version. Even without this, authors and publishers of websites will prefer people to use the ‘live’ site, as it allows them to track usage, generate income from publicity, and so on. Moreover, if the BnF starts to collect sites requiring payment, this controlled access will become even more important, as of course the Library cannot provide online and freely resources for which the publishers charge a subscription.

### *Right to privacy, data protection and sensitive material*

Another practical reason for access limitations comes from the questions of privacy and data protection, discussed above. The 1978 Law on Information Technology and Freedoms allows individuals to correct or delete information regarding them published on a website; this is overseen by the CNIL. The existence of digital legal deposit means that older versions of the website, containing the erroneous or otherwise unwanted information, may still be available in the archives of the BnF. As described above, the CNIL has recently acknowledged in a recommendation that the BnF cannot be required to modify or destroy such material under the 1978 law, however the BnF may decide to put in place additional restrictions on access in such cases.

Other similar cases arise from material found to be defamatory by a court, or material that is illegal. Finally, some material in the archives that may be legal but potentially offensive, for instance pornography, may require special controls on access. (In the final case it should be noted that access to the research library, where the archives are available, it already limited to people aged 18 or over.)

### *Practical implications for the BnF*

In these cases, the access limitations imposed by the law provide a first response, as potentially sensitive material is protected de facto from access by the general public, and may only be consulted in the context of research or other justified use. The CNIL, in its recommendation on the proposed decree, has found that the measures in place at the BnF requiring researchers to undergo a process of accreditation are satisfactory. However as this may not be sufficient to deal with all sensitive situations that arise other solutions may be imagined.

The system proposed by the BnF, which is yet to be implemented, is to put into place a system of ‘restricted access’, by which some material may be held back from the archives as accessible in the research library, and either put in an inaccessible ‘dark archive’, or be accessible only on special demand and with additional justification required. A similar system already exists for printed and other material, and the same principles are likely to be used in the case of web archives. Thus, the BnF is obliged to restrict access where a court judgement specifically demands it; it is also obliged under the Code du Patrimoine to restrict access to material defined as “secrets protected by the law”<sup>49</sup>, which includes material such as military secrets. Additionally, in very rare cases sensitive or illegal material (such as pornography or publications inciting racial hatred) is not accessible by a simple demand but only via a separate procedure. This may also be applied in the case of a book which has been found in a court judgement to be defamatory, and which is therefore removed from circulation; the copy which has entered the BnF under legal deposit cannot be destroyed as this is prohibited by the status of legal deposit collections, as discussed above, but the system of controlled access protects, in this case, the person who has been defamed, from a widespread dissemination of the material. In all these cases the application of such restricted access is judged on a case-by-case basis with the aim to take into account people’s rights and demands regarding their privacy while respecting the heritage mission of the Library.

The Wayback Machine permits the creation of such a system, which is already functional in other institutions, such as Library and Archive Canada, but has yet to be implemented at the BnF. Furthermore, it remains to be decided on what basis such a reserve would be put into place; apart from cases where there is a legal obligation, described above, it will be necessary for the BnF to put into place a system whereby each demand may be judged on its merits. Equally, the question of whether the restrictions are put in place permanently or for a defined period, and the time period before material may be returned to normal access, would also have to be decided case by case, with perhaps a regular re-evaluation of items to judge whether restricted access is still justified.

Another question in the area of consultation regards the reproduction of material in the archives. Again this is controlled by law on intellectual property, just as with other legal deposit collections, and all reproduction is thus strictly limited – the potential problems with electronic resources being that much greater as it is much easier to make identical copies. Currently, copies are limited to printouts of the

screen; screenshots are not permitted, much less the copying of files (images, PDF or other documents, HTML code...). The Code du Patrimoine only permits copying insofar as this is necessary for the collection, conservation and consultation of the material; it therefore allows the copying of files between the storage servers and the clients used for consultation (as with the collect, the idea of ‘copying’ becomes problematic since all use of online electronic resources involves copying of files, even if only temporarily), but does not permit more permanent copies. The forthcoming decree should also give more precision in this area, however it is likely to add that access can only be provided using “interfaces for access, search and treatment provided by the BnF, INA and other organisations”. This restriction on the treatment of the data in the archives is important, and introduces one of the challenges regarding possible uses by researchers.

#### *Open questions/challenges for the future*

Currently there is a double restriction on access to the archives which limits their use: the legal restriction requiring controlled access, and a technical restriction arising from the lack of full-text searching and other tools for accessing and handling the archives, as discussed above. Currently, access is limited to the research reading rooms at the different sites of the BnF. To improve the service offered to end users, the forthcoming decree might allow controlled access in a limited number of regional libraries (the BDLI), already involved in the selection of sites, as described above. There is one BDLI in each region in France, and the publication of the decree, signalling that digital legal deposit is now firmly part of the French legal landscape, will allow the means of access already in place to advance beyond the experimental stage, and would therefore allow the BnF to promote this new service more widely as well. To profit fully from such an opening, new tools and new ways of using the archives will be necessary; however the creation of further tools can only be imagined in the context of the limits imposed by the legislation. Possible use cases have already been suggested, which allow us to imagine at least three areas for possible development: more profound use by researchers, requests for copies of sites by the producers themselves, and requests for copies for use in legal cases.

For researchers, the limit on even using screenshots restricts the ways in which they can use the archives in their work. It may be possible to imagine exceptions for academic use of small parts of an archived site, however it is difficult to see how this may be

accommodated within the legislation, which seems to rule out any copying or use of digital legal deposit material outwith the BnF or the other approved institutions.

A more serious question lies in the analysis of the archives themselves by researchers. As noted above, the decree specifies that all access to the archives of the BnF must be via interfaces provided by the library. Researchers working with the web, and therefore with web archives, have need of tools that will not only allow them to search the archives (as the full-text indexing will allow them to do), but of data-mining techniques allowing more creative use of the collections. This could include tools to chart the use of certain terms, trends or names over time and across different websites or link analysis of the connections between sites over time . . . Different research centres are already working with such tools, however the legal restrictions prevent them making copies of the data held by the BnF to be processed by such tools, or to install software themselves at the BnF to analyse the archives. The BnF must therefore envisage ways to make such tools available to researchers, and in particular to allow approved software to be installed. Doubtless partnerships with universities and research centres will be invaluable in this area, and the BnF has just launched a collaborative project with Medialab at Sciences Po to explore such questions<sup>50</sup>.

Another case that has already been encountered, and which will no doubt become more common as the web archives become better known and as more material disappears from the live web, is that of a website producer or author who seeks to recover material which is no longer online and of which they have not kept a copy. This may be a website producer whose site was hosted by a third party which ceases to exist, an individual who wishes to keep a copy of a blog they kept in the past and which has disappeared from the platform online, or a journalist who has written material for an online source that is no longer available. Strictly speaking, the legislation stops any copying of material collected under digital legal deposit except for collection, preservation and on-site consultation (in article L132-4 cited above). However as noted above this is primarily to protect the holders of the intellectual property rights. In this case, where it is the rights-holder who requests the material it should be possible to make an exception. The exact means by which a demand may be made are still to be defined, for example who is permitted to make a request (the descendants of someone who wrote a blog a hundred years earlier?). In particular, it will be necessary in each case to prove the right of the person to the material requested, as it would only be

possible to provide copies in cases where the demand comes from an individual who holds the rights to all of the material in question; for example the rights to music hosted in a blog may belong to someone else. It is also important to note that the technical procedures for exporting all the files relating to a website, or a part of a website, captured at a specific time are not yet in place. SPAR should help with this, but it will be necessary to implement other technical measures. Comparisons may be made with the reproduction of paper and other material, which is possible for a fee, but only for out-of-copyright works.

Finally, the BnF has already had several demands for copies of web archives in connection with legal cases, to prove the presence of material online at a given date; this may be relevant in cases of intellectual property, or disputes regarding the conditions of sale in web commerce. The BnF, with its status as a national institution, should be able to play a role as a trusted third party for such material, and the means of collection in place, which associate metadata to each file collected, mean that the presence online of a file can be proved at the exact date and time it was collected. However this presents various problems, and in particular the exact conditions under which an exception to the ban on copying legal deposit material may be made are yet to be established; it will be necessary to examine the question in depth to judge what conditions may be considered sufficient to justify an exception to legal deposit law. If such an exception were found to be possible, the BnF would also need to put in place the technical means necessary to produce an 'authenticated' copy of the files in question, with the date of collect and the provenance clearly marked. This use of the web archives is yet to be properly tested in a court of law; however if a precedent is established, it may be imagined that this kind of request will become ever more common in the future. This final example does however provide a further demonstration of the interest in maintaining the ideal of a wide-ranging legal deposit of the French web, as embodied by the broad crawl at the BnF; it is impossible to predict which sites, including apparently uninteresting commercial sites, may become important or 'needed' years later. It is therefore necessary to collect as widely as possible, as the value of the digital legal deposit collections will only become apparent in the future.

## Conclusion

Digital legal deposit in France is only a few years old, but already it has established itself as part of the core missions of the BnF. Beginning with the first

experiments in 2002, the BnF has put in place a system of web archiving involving technical solutions, both hardware and software, but also organisational elements, as this mission requires the expertise of digital curators, IT specialists, subject librarians and legal experts, as well as the strong support of the top management. Today the BnF has a robust, flexible and effective workflow for web archiving, which ensures that material published on the French web finds its place in the heritage collections created under legal deposit.

As the various sections of this article have demonstrated, at each part of the chain of digital legal deposit (collection, conservation, description and access) there remain many questions and challenges for the future. These combine both legal questions, and the technical and organisational solutions that need to be put in place to fully respond to the obligations of digital legal deposit. In the short term, the publication of the decree will be an important step: it will establish clearly the legal basis of digital legal deposit, and will allow the BnF to proceed with important projects, such as improving the collection of payment-based publications and possibly widening access to researchers by exploring the possibilities of access in regional libraries.

These two projects, and others outlined above such as collection of rich media, the collection of e-books and other material not collectable using web archiving, full-text indexing, access from the catalogue, federated searching, differentiated preservation strategies, and the creation of data mining and other tools to fully exploit the archives – all of these will require significant technical work and resources to be put into place, and the BnF will have to choose its priorities in the coming years.

One important factor as digital legal deposit matures will be the view that researchers and others have of these collections. Many possible uses can be imagined and have already started to occur, but the legal situation in many of these cases is yet to be firmly established. However the role that the web archives and digital legal deposit collections may have will determine to a large extent the priorities: where there is a clear need for new tools, usage or services, resources will have to be dedicated in those areas.

As a founder of the IIPC consortium in 2003 and a long standing member of its steering committee, the BnF has long been active in the international community in relation to these and many other questions. International cooperation, both technical and organisational, will continue to be central to the development of its digital legal deposit. International

collection building, expert discussion, benchmarking, standardisation along with exchanges of skills, staff and best practises have been invaluable assets and created unique opportunities to achieve BnF's web archiving program in the past ten years. As archiving the web is, by nature, a world wide task, international cooperation will remain central for the exploration of the solutions to the many challenges that remain ahead of us.

## Notes

1. *Code de la propriété intellectuelle*, article L111-1. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006278868&cidTexte=LEGITEXT000006069414&dateTexte=20110520> (consulted 20 May 2011)
2. *Copyright Law of the United States of America and Related Laws Contained in Title 17 of the United States Code*; Chapter 4: Copyright Notice, Deposit, and Registration; Article 407. Deposit of copies or phonorecords for Library of Congress. <http://www.copyright.gov/title17/92chap4.html#407> (consulted 20 May 2011)
3. *Code du patrimoine*, article L131-1. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006845515&cidTexte=LEGITEXT000006074236&dateTexte=20110520> (consulted 20 May 2011)
4. *Décret n°94-3 du 3 janvier 1994 portant création de la Bibliothèque nationale de France*, article 2. <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000006082797&dateTexte=20110520> (consulted 20 May 2011)
5. *Loi n°2006-961 du 1 août 2006 relative au droit d'auteur et aux droits voisins dans la société de l'information*. <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000006054152&dateTexte=20110520> (consulted 20 May 2011)
6. *Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society*. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001L0029:EN:NOT>
7. *Code du patrimoine*, article L131-2. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000020905828&cidTexte=LEGITEXT000006074236&dateTexte=20110520> (consulted 20 May 2011)
8. *Ibid*, article L132-2-1. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006845522&cidTexte=LEGITEXT000006074236&dateTexte=20110520> (consulted 20 May 2011)
9. *Ibid*, article L132-4. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006845526&cidTexte=LEGITEXT000006074236&dateTexte=20110520> (consulted 20 May 2011)
10. *Décret n°93-1429 du 31 décembre 1993 relatif au*

- dépôt légal, article 9. <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000006082758&dateTexte=20110520> (consulted 20 May 2011)
11. *Décret n°94-3 du 3 janvier 1994 portant création de la Bibliothèque nationale de France*. <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000006082797&dateTexte=20110520> (consulted 20 May 2011)
  12. *Code général de la propriété des personnes publiques*, article L2112-1. <http://www.legifrance.gouv.fr/affichCode.do?cidTexte=LEGITEXT000006070299&dateTexte=20110520> (consulted 20 May 2011)
  13. *Code de la propriété intellectuelle*. <http://www.legifrance.gouv.fr/affichCode.do?cidTexte=LEGITEXT000006069414&dateTexte=20110520> (consulted 20 May 2011)
  14. *Loi n°78-17 du 6 janvier 1978 relative à l'informatique, aux fichiers et aux libertés*. <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000006068624&dateTexte=20110520> (consulted 20 May 2011)
  15. *Code du patrimoine*, article L132-3. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000020967935&cidTexte=LEGITEXT000006074236&dateTexte=20110520> (consulted 20 May 2011)
  16. For further details see the INA website (in French): <http://www.ina-entreprise.com/entreprise/activites/depot-legal-radio-tele/depot-legal-web.html> (consulted 20 May 2011)
  17. Huchet, Bernard ; Illien, Gildas ; Oury, Clément. Le temps des moissons. Le dépôt légal du Web : vers la construction d'un patrimoine cooperative. In : *Revue de l'Association des Bibliothécaires de France*, 2010, n° 52, pp. 28–31.
  18. Internet Memory Foundation. <http://internetmemory.org/en/> (consulted 20 May 2011)
  19. Sciences Po, Médialab. <http://www.medialab.sciences-po.fr/index.php?page=home> (consulted 20 May 2011)
  20. NDIIPP website: <http://www.digitalpreservation.gov/> (consulted 20 May 2011)
  21. AFNIC. *French Domain Name Industry Report 2010*, pp. 20–22. <http://www.afnic.fr/data/actu/public/2010/afnic-french-domain-name-report-2010.pdf> (consulted 20 May 2011)
  22. For more information on the role of registrars, see AFNIC. Other domain name registries. [http://www.afnic.fr/doc/autres-nic\\_en](http://www.afnic.fr/doc/autres-nic_en) (consulted 30 May 2011)
  23. Internet Archive. *Heritrix*. <http://crawler.archive.org/> (consulted 20 May 2011)
  24. Netarchive.dk. *NetarchiveSuite*. <http://netarchive.dk/suite/Welcome> (consulted 20 May 2011)
  25. *Code du patrimoine*, article L132-4. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006845526&cidTexte=LEGITEXT000006074236&dateTexte=20110520> (consulted 20 May 2011)
  26. For more information on web archiving at the BnF, see Bleicher, Ariel. A memory of webs past. In: *IEEE Spectrum*, Mars 2011. <http://spectrum.ieee.org/telecom/internet/a-memory-of-webs-past/0> (consulted 30 May 2011)
  27. See UK Web Archive. *Legislative status*. [http://www.webarchive.org.uk/ukwa/info/about#legislative\\_status](http://www.webarchive.org.uk/ukwa/info/about#legislative_status) (consulted 30 May 2011); Department for Culture, Media and Sport. Legal Deposit. [http://www.culture.gov.uk/what\\_we\\_do/libraries/3409.aspx](http://www.culture.gov.uk/what_we_do/libraries/3409.aspx) (consulted 30 May 2011)
  28. Library of Congress. *Web archiving*. <http://www.loc.gov/webarchiving/index.html> (consulted 30 May 2011)
  29. Internet Archive. *Terms of use*. <http://www.archive.org/about/terms.php> (consulted 20 May 2011)
  30. *Code du patrimoine*, article L132-2-1. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006845522&cidTexte=LEGITEXT000006074236&dateTexte=20110520> (consulted 20 May 2011)
  31. International Internet Preservation Consortium. <http://www.netpreserve.org/about/index.php> (consulted 20 May 2011)
  32. Internet Archive Global Events. <http://www.archive-it.org/public/partner.html?id=89> (consulted 20 May 2011)
  33. *Code général de la propriété des personnes publiques*, article L2112-1. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006361198&cidTexte=LEGITEXT000006070299&dateTexte=20110520> (consulted 20 May 2011)
  34. *Ibid*, article L3111-1. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006361404&cidTexte=LEGITEXT000006070299&dateTexte=20110520> (consulted 20 May 2011)
  35. *Code du patrimoine*, article L132-4. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006845526&cidTexte=LEGITEXT000006074236&dateTexte=20110520> (consulted 20 May 2011)
  36. Internet Archive. *Arc File Format*. <http://www.archive.org/web/researcher/ArcFileFormat.php> (consulted 20 May 2011)
  37. BnF. *Preservation of digital material: the SPAR project*. [http://www.bnf.fr/en/professionals/preservation\\_spar/s.preservation\\_SPAR\\_presentation.html](http://www.bnf.fr/en/professionals/preservation_spar/s.preservation_SPAR_presentation.html) (consulted 20 May 2011)
  38. ISO. *Open archival information system: Reference model (ISO 14721:2003)*. [http://www.iso.org/iso/iso\\_catalogue/catalogue\\_tc/catalogue\\_detail.htm?csnumber=24683](http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=24683) (consulted 30 May 2011)
  39. Bermes, Emmanuelle; Fauduet, Louise; Peyrard, Sébastien. A data first approach to digital preservation: the SPAR project. In: *World Library and Information Congress: 76th IFLA General Conference and Assembly (IFLA 76)*, 10–15 August 2010, Gothenburg, Sweden. <http://www.ifla.org/files/hq/papers/ifla76/157-bermes-en.pdf> (consulted 20 May 2011)
  40. *Loi n°78-17 du 6 janvier 1978 relative à l'informatique, aux fichiers et aux libertés*.

- tique, aux fichiers et aux libertés. <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000006068624&dateTexte=20110520> (consulted 20 May 2011)
41. *Code du patrimoine*, article L131-1, (b). <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006845515&cidTexte=LEGITEXT000006074236&dateTexte=20110520> (consulted 20 May 2011)
  42. BnF. *French National Bibliography Online*. [http://www.bnf.fr/en/professionals/bibliographic\\_products\\_and\\_services/a.french\\_national\\_bibliography\\_online.html](http://www.bnf.fr/en/professionals/bibliographic_products_and_services/a.french_national_bibliography_online.html) (consulted 20 May 2011)
  43. Internet Archive. *Wayback*. <http://archive-access.sourcforge.net/projects/wayback/> (consulted 20 May 2011)
  44. LAWA website : <http://internetmemory.org/fr/index.php/projects/lawa1> (consulted 20 May 2011)
  45. UK Web Archive. <http://www.webarchive.org.uk/uk/wa/> (consulted 30 May 2011)
  46. Internet Archive. <http://www.archive.org/web/web.php> (consulted 30 May 2011)
  47. *Décret n°94-3 du 3 janvier 1994 portant création de la Bibliothèque nationale de France*, article 2. <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000006082797&dateTexte=20110520> (consulted 20 May 2011)
  48. *Code du patrimoine*, article L132-4. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006845526&cidTexte=LEGITEXT000006074236&dateTexte=20110520> (consulted 20 May 2011)
  49. *Code du Patrimoine*, article L131-1. <http://www.legifrance.gouv.fr/affichCodeArticle.do?idArticle=LEGIARTI000006845515&cidTexte=LEGITEXT000006074236&dateTexte=20110530> (consulted 30 May 2011)
  50. Sciences Po, Médialab. <http://www.medialab.sciences-po.fr/index.php?page=home> (consulted 20 May 2011)
- <http://www.legifrance.gouv.fr/affichCodeArticle.do?cidTexte=LEGITEXT000006069414&dateTexte=20110520> (in French). (consulted 20 May 2011).
- Code général de la propriété des personnes publiques. [Code of public property.] <http://www.legifrance.gouv.fr/affichCode.do?cidTexte=LEGITEXT000006070299&dateTexte=20110520> (consulted 20 May 2011)
- Loi n°78-17 du 6 janvier 1978 relative à l'informatique, aux fichiers et aux libertés. [Law on information technology, files and freedoms.] <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000006068624&dateTexte=20110520> (consulted 20 May 2011)
- Décret n°94-3 du 3 janvier 1994 portant création de la Bibliothèque nationale de France. [Decree creating the Bibliothèque nationale de France.] <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000006082797&dateTexte=20110520> (consulted 20 May 2011)
- Décret n°93-1429 du 31 décembre 1993 relatif au dépôt légal. [Decree regarding legal deposit.] <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000006082758&dateTexte=20110520> (consulted 20 May 2011)

## Selected legal texts in other countries

### United States

Copyright Law of the United States of America and Related Laws Contained in Title 17 of the United States Code; Chapter 4: Copyright Notice, Deposit, and Registration. <http://www.copyright.gov/title17/92chap4.html> (consulted 20 May 2011)

### United Kingdom

Legal Deposit Libraries Act 2003. <http://www.legislation.gov.uk/ukpga/2003/28/contents> (consulted 30 May 2011)

### Institutions responsible for legal deposit in France

BnF: [http://www.bnf.fr/en/professionals/digital\\_legal\\_deposit/a.digital\\_legal\\_deposit\\_web\\_archiving.html](http://www.bnf.fr/en/professionals/digital_legal_deposit/a.digital_legal_deposit_web_archiving.html) (consulted 20 May 2011)

INA: <http://www.ina-entreprise.com/entreprise/activites/depot-legal-radio-tele/depot-legal-web.html> (consulted 20 May 2011)

### Other non-legal deposit institutions in France

Internet Memory Foundation. <http://internetmemory.org/en/> (consulted 20 May 2011)

Sciences Po, Médialab. <http://www.medialab.sciences-po.fr/index.php?page=home> (consulted 20 May 2011)

### Other sources

AFNIC. *French Domain Name Industry Report 2010*. <http://www.afnic.fr/data/actu/public/2010/afnic-french-domain-name-report-2010.pdf> (consulted 20 May 2011)

Bermes, Emmanuelle, Fauduet, Louise and Peyrard Sébastien. A data first approach to digital preservation: the SPAR project. In: *World Library and Information Congress: 76th IFLA General Conference and Assembly*

## Bibliography

### Legal texts governing digital legal deposit in France (in French)

- Code du patrimoine [Cultural heritage code]: title 3, legal deposit. <http://www.legifrance.gouv.fr/affichCode.do?idArticle=LEGIARTI000006845515&idSectionTA=LEGISCTA000006159934&cidTexte=LEGITEXT000006074236&dateTexte=20110517> (consulted 17 May 2011)
- Loi n°2006-961 du 1 août 2006 relative au droit d'auteur et aux droits voisins dans la société de l'information. [Law on Authors' Rights and Related Rights in the Information Society.] <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000006054152&dateTexte=20110520> (consulted 20 May 2011)
- Code de la propriété intellectuelle. [Intellectual Property Code.] <http://www.legifrance.gouv.fr/affichCode.do?>

- (IFLA 76), 10–15 August 2010, Gothenburg, Sweden. <http://www.ifla.org/files/hq/papers/ifla76/157-bermes-en.pdf> (consulted 20 May 2011)
- Bleicher, Ariel. A memory of webs past. In: *IEEE Spectrum*, Mars 2011. <http://spectrum.ieee.org/telecom/internet/a-memory-of-webs-past/0> (consulted 30 May 2011)
- BnF. *Preservation of digital material: the SPAR project*. [http://www.bnf.fr/en/professionals/preservation\\_spar/s.preservation\\_SPAR\\_presentation.html](http://www.bnf.fr/en/professionals/preservation_spar/s.preservation_SPAR_presentation.html) (consulted 20 May 2011)
- Department for Culture, Media and Sport. *Legal deposit*. [http://www.culture.gov.uk/what\\_we\\_do/libraries/3409.aspx](http://www.culture.gov.uk/what_we_do/libraries/3409.aspx) (consulted 30 May 2011)
- Huchet, Bernard, Illien, Gildas and Oury, Clément. Le temps des moissons. Le dépôt légal du Web : vers la construction d'un patrimoine cooperative. In: *Revue de l'Association des Bibliothécaires de France*, 2010, n° 52, pp. 28–31.
- International Internet Preservation Consortium. <http://www.netpreserve.org/about/index.php> (consulted 20 May 2011)
- Internet Archive. <http://www.archive.org/> (consulted 20 May 2011)
- Internet Archive. *Arc File Format*. <http://www.archive.org/web/researcher/ArcFileFormat.php> (consulted 20 May 2011)
- Internet Archive. *Heritrix*. <http://crawler.archive.org/> (consulted 20 May 2011)
- ISO. *Open archival information system: Reference model (ISO 14721:2003)*. [http://www.iso.org/iso/iso\\_catalogue/catalogue\\_tc/catalogue\\_detail.htm?csnumber=24683](http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=24683) (consulted 30 May 2011)
- Library of Congress. *Web archiving*. <http://www.loc.gov/webarchiving/index.html> (consulted 30 May 2011)
- Netarchive.dk. *NetarchiveSuite*. <http://netarchive.dk/suite/Welcome> (consulted 20 May 2011)
- UK Web Archive. <http://www.webarchive.org.uk/ukwa/> (consulted 30 May 2011)
- UK Web Archive. *Legislative status*. [http://www.webarchive.org.uk/ukwa/info/about#legislative\\_status](http://www.webarchive.org.uk/ukwa/info/about#legislative_status) (consulted 30 May 2011)
- Paper presented at the World Library and Information Congress: 77th IFLA General Conference and Assembly, 13–18 August 2011, San Juan, Puerto Rico, in session 193 – e-Legal deposit: from legislation to implementation; from ingest to access – Bibliography Section with IFLA-CDNL Alliance for Digital Strategies Programme (ICADS), Information Technology, National Libraries and Knowledge Management.*

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# Out of the classroom and into the laboratory: Teaching digital curation virtually and experientially

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## Abstract

As graduate LIS/IS education seeks to respond to intensifying virtual information and preservation environments, it becomes increasingly clear that innovative teaching tools and methods are required. These teaching tools must complement and enhance state-of-the-art curriculum offerings in subjects such as digital curation. The digital curation courses offered in the LIS School at Simmons College, Boston illustrate an innovative virtual and experiential approach. At the heart of these courses is the Digital Curriculum Laboratory, a virtual archives and preservation laboratory. This paper discusses and demonstrates the relationship between a digital curriculum laboratory, the successful delivery of a digital curation curriculum and its wider international implications.

## Keywords

digital curation curriculum, digital curriculum laboratory, education and training

## Introduction

This paper discusses and demonstrates the relationship between a digital curriculum laboratory and the successful delivery of a digital curation curriculum. The first section focuses broadly on pedagogical challenges in a virtual environment, particularly from a cultural heritage informatics perspective; the second describes the Digital Curriculum Laboratory (DCL) currently being developed at the Graduate School of Library and Information Science at Simmons College, Boston; and the third notes both the online and face-to-face digital curation courses in the Simmons program and offers examples of how the DCL is integrated into the digital curation courses through problem-solving scenarios. The final section of the paper deals with the national and international implications of sharing the DCL with the global information community.

## Pedagogical challenges in a virtual environment

Educating students to work in digital curation requires students to acquire a broad vision of LIS/IS institutions that looks beyond the silos of traditional information practice towards the convergence of a wide variety of data in both virtual and physical forms. Cultural

heritage informatics, a relatively new discipline arising from this convergence, which emphasizes collecting, managing, supporting, reconciling and merging digital data across a broad spectrum of libraries, archives and museums, offers an overarching context supported by digital curation.

Cultural heritage informatics is the general context that the Simmons College digital curation curriculum is focused within and this discussion is offered within that context. Teaching and learning in cultural heritage informatics presents some pedagogic opportunities that challenge the traditional LIS/IS curriculum, which has tended to treat libraries, archives and museums and their distinguishing theories as discrete and separate information and cultural entities. While the attributes of flexibility, forward thinking and critical evaluation are as crucial to understanding rapidly evolving information environments as they ever were, important additions to a set of learning skills are required. Among these are the ability to function

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comfortably in both digital and physical mediums, to move seamlessly and efficiently between both mediums, to recognize and respect the core differences between information disciplines as well as between the information content itself, and to negotiate the ways in which digital environments can overcome information silos to create a universe of access across institutionalized boundaries.

Cultural heritage informatics workers (including digital curators) must learn to appreciate and balance users' needs for immediate, seamless access to information with an understanding of the context in which information resides. Balancing these user needs with respect for the core theories that ground the various aspects of the heritage the materials come from requires a deep understanding of different disciplines as well as of the digital options for convergence and display of the materials of that heritage. The fundamental principles of cultural heritage convergence should relate to maintaining the balance, so that the very different, but equally relevant, missions of libraries, archives and museums are not lost or subsumed in the desire to bring cultural materials and other information together. Access should not trump core values, but equally, core values should not obfuscate access.

From a practical standpoint, students of cultural heritage informatics (who include digital curators) must learn to respect both the physical and the digital, to manage, value and preserve a wide variety of formats, to identify connections, to evaluate and select systems that suit the needs of their institution best, to appreciate and create relationships among materials, and to imagine and implement the merging of contexts and the provision of access. As the real-world environment for cultural heritage institutions requires ever-expanding competencies, preparing students to enter this environment means helping them to acquire an increasingly complex set of tools.

For educators, the widening gap between physical and digital practice often creates dissonance in the classroom where students are learning virtual skills in physical environments. The fundamental assumption, therefore, of a digital curriculum laboratory is that students need to learn about and experiment with digital tools and materials in digital environments.

A more subtle theoretical assumption is that the added value offered by the digital environment and the convergence of information disciplines not only applies to the ability to access materials but also affects other parameters significantly. Context, presentation and relationships are only some of the factors that potentially expand the way we think about, connect and see materials. While, on the one hand, technology offers a set of tools and competencies that facilitate the institutions' abilities

to display materials and the users' options to access them, it also brings new dimensions to the interpretation of the materials themselves. For example, the choice of a content management system becomes a crucial decision in determining presentation and access because different systems display and interpret the same information in different ways; although the image data and the metadata may be the same, the user will see different versions of images, depending on which system an institution has chosen. (This is the basis of the Trust Scenario on the Simmons Digital Curriculum Laboratory (<http://calliope.simmons.edu/dcl/lab/scenarios/trust>.) The digital environment, by its very nature, contains interpretive elements that need to be considered as part of the convergence process.

### **Need for innovative teaching tools and methods**

As graduate LIS/IS education seeks to respond to rapidly intensifying virtual information and preservation environments, it becomes increasingly clear that innovative teaching tools and methods are required. These new teaching tools must complement and enhance state-of-the-art curriculum offerings in cultural heritage informatics. As well as offering virtual environments for students to experiment in, these tools must be flexible enough to respond to rapid developments in practice and standards.

The Archives and Preservation concentration at Simmons College, Boston is changing its curriculum in response to the new information environments and their requirements, especially the need to offer opportunities for students to experiment. To support this new curriculum a virtual digital curriculum laboratory was envisioned. Its rationale is to offer experiential learning based on a problem-solving approach. Such laboratories already exist in archives and preservation programs in the US and elsewhere, including at the University of Michigan's School of Information, the University of Arizona's School of Information Resources and Library Science, and the Department of Information Technology and Media at Mid Sweden University.

The digital curation courses offered in the Graduate School of Library and Information Science (GSLIS) at Simmons College illustrate an innovative virtual and experiential approach. At the heart of these courses is the Digital Curriculum Laboratory (DCL) (<http://gslis.simmons.edu/dcl/lab>), a virtual archives and preservation laboratory developed with grant funding. This organized, open, non-proprietary digital space provides integrated access to digital content, content management tools, standards, curriculum-based scenarios, and a workspace for learning modules tied to class

outcomes. The DCL offers its users hands-on experience with digital curation processes and procedures in virtual environments.

### The Simmons Digital Curation Curriculum and the DCL

The website of the Graduate School of Library and Information Sciences describes a Preservation Management track (<http://www.simmons.edu/gslis/academics/programs/preservation.php>), noting that it 'combines hands-on practical experiences with the theoretical underpinnings of preservation and conservation'. Recently this track has been expanded to become a Preservation and Digital Stewardship track, which describes a clearly articulated sequence of courses that allows students to specialize in digital curation. This new track has been developed because there is an increasing need for professionals who have the ability to plan, manage and implement practices that ensure the long-term integrity and use of digital resources. This includes information professionals who are charged with digital collections, as well as those working within data-intensive jobs that have curation requirements (for example, scientists, analysts, public officials).

Students in the Preservation and Digital Stewardship track study three courses that provide an overview of the field, both digital and analog, then concentrate on either digital stewardship courses or analog preservation courses. Of course, mixing and matching courses is fully acceptable. To complete the Preservation and Digital Preservation track students study, in addition to the course required of all students in the Simmons LIS masters, three courses strongly recommended for the track (Introduction to Archival Methods and Services, Preservation Management, Digital Stewardship) and at least three courses selected from the list specified for each specialization. The list of courses students can study in the Digital Stewardship specialization includes courses of more general applicability (Database Management, Web Development and Information Architecture, Digital Libraries, XML (eXtensible Markup Language), Metadata), as well as several specifically about digital curation (Archiving & Preserving Digital Materials, Digital Project Management, an independent study on a digital stewardship project, and an internship in digital stewardship). Several of the digital stewardship and digital curation courses use the Digital Curriculum Laboratory.

The formal description of Simmons College's Digital Curriculum Laboratory (DCL) (Figure 1) is:

A web-based space providing integrated access to content, tools, curriculum-based scenarios and workspaces. It can be used to experiment with a range of archival and preservation procedures for digital records, following a continuum from record creation through arrangement, description and delivery (<http://calliope.simmons.edu/dcl/lab>).

The features to emphasize are that it is **web-based**, that it provides **integrated access**, and is available for **experiment** in the context of archives and preservation. The larger space in which the DCL is located is a Cultural Heritage Informatics (CHI) initiative, which is developing new curriculum based on the concept of convergence of practice in a digital world. The CHI web site explains that

Cultural heritage informatics is the study of and the creation of added cultural value by the linking of disparate digital data sets, stored either locally or remotely according to accepted standards of description, arrangement, and metadata for archives, records management, museums or cultural materials. Cultural heritage informatics appraises data and data sets for enduring value in the context of archives or cultural heritage. Cultural heritage informatics explores the creation of new relationships and new knowledge by bringing digital data sets representing social and cultural activity together in novel ways (<http://calliope.simmons.edu/dcl/culturalheritage>).

The DCL has been developing since 2008, when several Simmons faculty recognized the need to provide hands-on experience with digital records and archiving. They received a small Simmons internal grant (Curriculum Technology Support Grant awarded by the Pottruck Technology Resource Center of Simmons College: US\$2,500) to carry out initial scoping of the laboratory. This led to successful grants from the IMLS (Grant Number 113 2435 20 400129 (US\$455,000) – includes funding for the DCL) and NHPRC (Project Name: Archives and Preservation Digital Curriculum Lab (US\$138,000) – specifically to build the DCL).

The DCL can be envisaged as two complementary parts. Sitting in the DCL virtual space are:

- Scenarios: the problem statement that drives the choice of the other components of the DCL.
- Applications: called on as required to address the problem.
- Exercises: intended to equip DCL users with appropriate skills.
- Content: used as required by the scenario.

Sitting outside the DCL, but required for its use, are:

**Digital Curriculum Lab**

Simmons College's Digital Curriculum Laboratory is a web-based space providing integrated access to content, tools, curriculum-based scenarios and workspaces. It can be used to experiment with a range of archival and preservation procedures for digital records, following a continuum from record creation through arrangement, description and delivery.

**EXTERNAL**

**DCL**

**Scenario**

APPLICATIONS

EXERCISES

CONTENT

Repositories (exemplars)

OTHER APPS

CLIENT

STANDARDS

AUTHENTICATED GROUPWARE

LMS

**Enter the lab:**

Username: \*

Password: \*

Log in

Request new password

**Lab:**

Applications

Content

Standards

Scenarios

Preservation Scenario 1

Preservation Scenario 2

Help

**Project:**

About

Contact

Partners

Project Team

Publications & Presentations

**Figure 1.**

- Applications.
- Standards.
- Learning Management System(s).
- Groupware.

The DCL does not provide everything that is needed to address each scenario. The computers used to access the DCL through the web need to have some applications loaded and also need to provide access to web-based standards, an LMS (Learning Management System, such as Blackboard or Moodle) and groupware (for example, Google Docs) as required by the scenario. Each scenario or exercise in the DCL specifies what is required. For example, one preservation scenario requires Microsoft Word and Open Office to be available on the client PC, and, when used in the

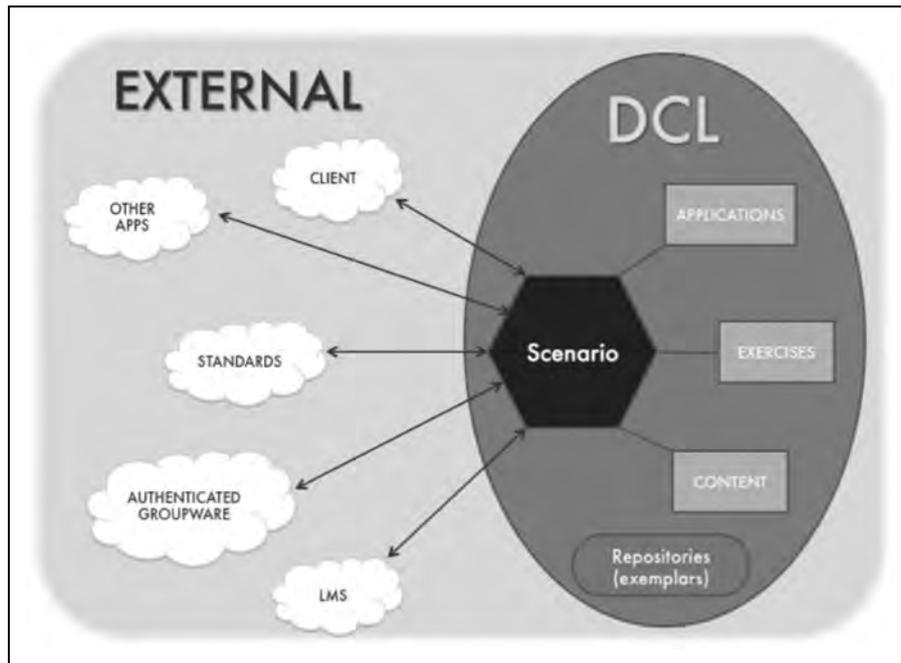
Simmons context, also requires access to the LMS (WebCT/Vista); the scenario itself and the content needed to test the scenario are available from the DCL.

The 'cloud' model of the DCL illustrates these two parts and indicates the current thinking of the team developing the DCL. This model will continue to evolve as the DCL expands (Figure 2).

### Digital curation courses at Simmons

Two of the courses offered at Simmons are next noted in order to illustrate the use of the DCL in teaching digital curation.

LIS 444 Archiving and Preserving Digital Media has been available face-to-face for some years and from 2011 is also offered as a fully online course. It



**Figure 2.** Cloud model of DCL (source: <http://calliope.simmons.edu/dcl/lab>).

examines the challenges and issues of archiving and preserving digital media and notes the practices that have been developed (and are still evolving) to archive and preserve digital materials. Students become familiar with relevant skills by working on a range of practical exercises and on developing a digital archive.

LIS 531W Digital Stewardship was offered face-to-face for the first time in 2011 as part of a new curriculum in Cultural Heritage Informatics. Its focus is more general than the focus of LIS 444, concentrating on broader policy issues and the implications for practice in cultural heritage organizations. It is particularly concerned with the long-term sustainability of digital repositories, libraries and archives. This course is not currently offered online, but will be redeveloped to be available in this mode in summer 2012. Inevitably there is some overlap between these two courses. The intention is that LIS 531W Digital Stewardship becomes a more general overview course and LIS 444 Archiving and Preserving Digital Media is redeveloped as a course that focuses on the IT aspects of digital curation. Both courses will provide students with practical skills, although these will be considerably more advanced in LIS 444.

### Using the DCL

The DCL is currently used in both LIS 444 and LIS 531W to provide access to scenarios, exercises and standards. The example of the online version of LIS 444 best illustrates how the DCL is used in a virtual learning environment. The DCL provides links to

exercises, scenarios, applications and content used in the LIS 444 classes. When students log in to the DCL using login details specific to this course, they see the view of the DCL shown in Figure 3.

This page provides access to the scenarios and exercises students use in the LIS 444 course. The exercises and scenarios are intrinsic to the course: as indicated earlier, the scenarios provide the problem statement that drives the choice of other contents of the DCL; applications are called on as required to address the problem, as is relevant content; and exercises equip DCL users with appropriate skills that are needed to address the problems posed by the scenarios.

Nine preservation-related exercises are available on the DCL to students in LIS 444.<sup>1</sup> They aim to provide some understanding of common digital preservation techniques and tools.

The exercises are:

1. Migrating and verifying files.
2. Encapsulation.
3. Assessing Robustness of File Formats.
4. Emulators.
5. Building a Web Archive.
6. Digital Preservation Tools and Services.
7. Preserving Digital Personal Files.
8. Making a Video about Digital Preservation.
9. Policies for Digital Preservation.

Each exercise is laid out in a standard format: a brief description of the aim and requirements; a

Figure 3. (Source: <http://calliope.simmons.edu/dcl/lab/portal/access> – a login is required).

Figure 4.

list of computing and content requirements for the exercise; a scenario if relevant to the exercise; and the tasks required of the student. There may

be links to external websites, for example, where software can be downloaded or where further information is available. The intention is that

**Exercise 2: Encapsulation**

This exercise requires you to install the Xena application and use it to create Xena information packages.

**Computing Requirements**

To complete this exercise you need:

- A computer connected to the Internet (either Mac or Windows OS)
- Open Office software installed
- Administrator rights for the computer so you can install Xena software and other software that Xena requires

**Your Tasks**

1. Read carefully the documentation about Xena so that you understand what it aims to do. Start with the FAQs (<http://xena.sourceforge.net/faq.php>) and then check out the Xena wiki ([http://sourceforge.net/apps/mediawiki/xena/index.php?title=Main\\_Page](http://sourceforge.net/apps/mediawiki/xena/index.php?title=Main_Page)). Be sure to look carefully at the sections "Installing Xena and "Configuring Xena"
2. Make sure you know what outputs you expect Xena to produce
3. Download and install the Xena digital preservation software and relevant plug-ins (<http://xena.sourceforge.net/>). (A reminder: you may also need to install Open Office (<http://www.openoffice.org/>) which is required for Xena to work)
4. Select five files that Xena can handle (the file types that Xena accepts are identified in the documentation). The files should be of different file types. Process these files using Xena
5. Submit the Xena files you have created (or provide a link to them where they can be accessed) and a brief report on how Xena is useful for digital preservation purposes.

**Figure 5.**

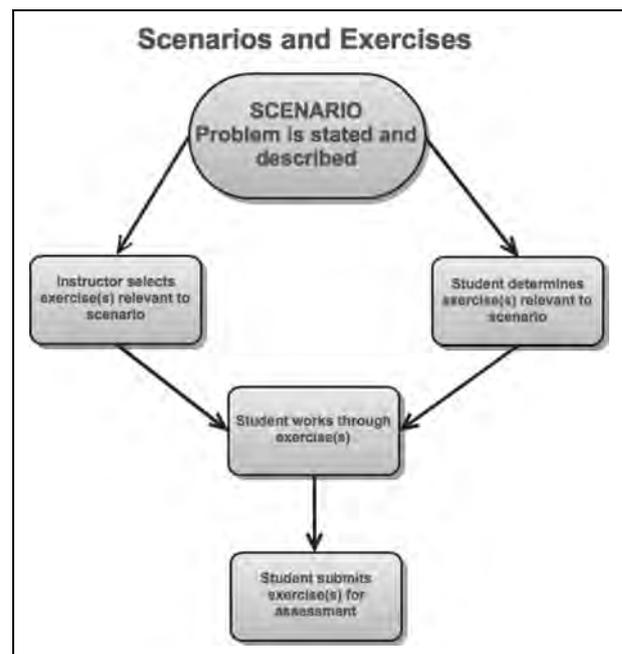
students can use the lab with a minimum of instruction (preferably none) beyond that provided in the exercise. Exercise 2 illustrates this standard layout (Figure 5).

The exercises can be used as stand-alone exercises or can be linked with a scenario. One of the scenarios used is as follows:

You are in charge of the preservation program of a university library. A former faculty member of the university has offered his papers to the university library, and this offer has been accepted. The donation includes a number of three-and-a quarter inch diskettes and Zip disks containing digital files that need to be preserved so that they are usable in the future. The files are all word-processed files, files created using simple database software, and files created by Microsoft Word. They date from the mid 1980s to about 2005.

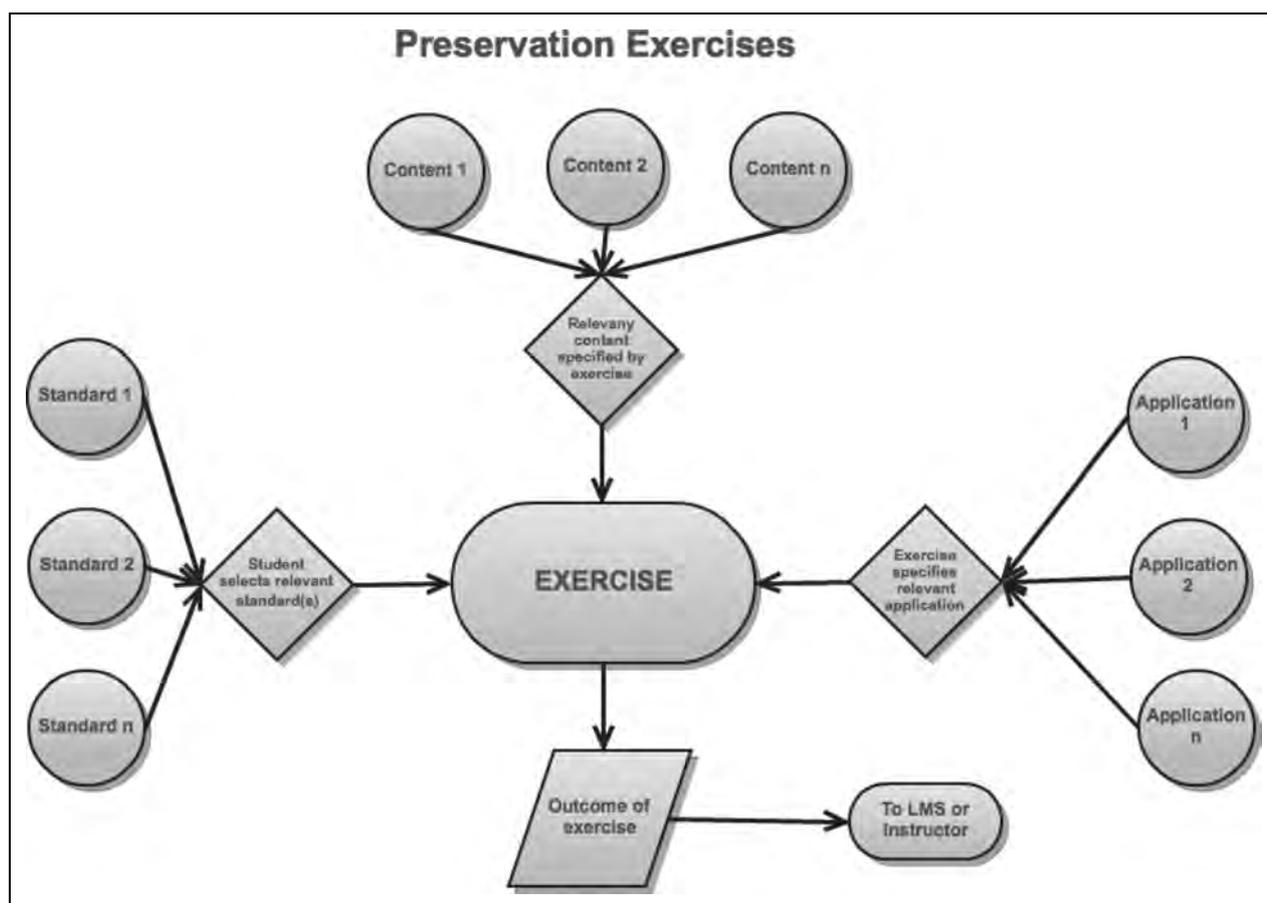
Several exercises are relevant to this scenario. Exercise 7 provides skills in identifying old file formats, exercise 3 in determining which file formats are preferred for long-term preservation, exercise 1 in running checksum software and observing the consequences of migrating files, and exercise 2 in using Xena software to develop information packages.

The way in which these preservation exercises are used is illustrated in Figure 6. Instructors can advise students which exercises are relevant to a scenario, or alternatively students can experiment.



**Figure 6.**

Each exercise calls on other materials that may be located in the DCL or elsewhere, as indicated in Figure 7. These materials can be content (files that the student applies the exercise to), standards relevant to the exercise or specified content, and software applications needed for the exercise. The outcome of the exercise can be in the form of a written report and/or files, or another product as specified by the exercise.



**Figure 7.**

LIS 444 students are also required to participate, for assessment, in the development and maintenance of a class digital archive, which uses the DCL, based on the theme 'your time at Simmons College'. This was started in 2010 and has resulted in an archive populated with some content. Students are asked to consider the characteristics of a digital archive in general 'big picture' terms, to select files to contribute to the archive (four or five on the theme 'your time at Simmons College') and to identify the actions required before the files can be added to the archive (such as adding metadata, checksums, virus checking). The DCL is used for the next actions. Students identify a suitable software application for long-term digital preservation in which to store the files selected and the metadata they have added, selecting the application from the open source applications currently installed in the DCL (Alfresco, Collective Access, DSpace, ePrints, Fedora, Greenstone 3, Omeka). The DCL's Preservation Scenario 2 (<http://caliope.simmons.edu/dcl/lab/scenarios/preservation2>) provides a focus for this. The students are then advised that they will be storing their files in an ePrints repository, of which an instance is mounted on the DCL, and they then upload their files and metadata to ePrints (Figure 8).

As the final part of this assignment students are asked to determine what else needs to be in place to ensure that this ePrints archive is sustainable over the next 20 years. Future classes will be involved in additional activities, such as adding files and metadata created by students in earlier classes but not yet uploaded to the archive, developing policies for this archive, editing the existing metadata to confirm to the policies, improving the existing metadata, and determining how to make the ePrints archive function as a long-term preservation tool.

The DCL is still being developed for digital curation teaching. Additional practical exercises have been developed by a doctoral student, Patricia Condon, and will be added to the DCL in the near future.

### **Conclusion: International Implications**

As a pilot project in international cooperation, the DCL is being developed in conjunction with the Department of Information Technology and Media at Mid Sweden University in Härnösand, Sweden and University College, London. The partnership is still in its early stages but already offers potentially useful and exciting outcomes. The general and

The screenshot shows the LIS444 Class Archive website. At the top, there is a navigation bar with links: Home, About, Browse by Year, Browse by Subject, Browse by Division, and Browse by Author. Below this is a search bar and a login status: "Logged in as: Unnamed user with email: bennettm@simmons.edu". The main content area is titled "Items where Year is 2010". It features an "Export as" dropdown menu set to "ASCII Citation" and an "Export" button. There are also links for "RSS 2.0", "RSS 1.0", and "Atom". Below the export options, there is a "Group by:" dropdown menu set to "Creators", with other options being "Item Type" and "No Grouping". A "Jump to:" section contains a list of letters: D, G, I, J, K, L, M, S, W. The "Number of items:" is listed as 35. The list of items is organized by letter, with the following entries visible:

- D**
  - DeClue, J (2010) *Bibliography*. Other. DeClue Julietta. (Submitted)
- G**
  - Griffin, Erin (2010) *Deed of Gift*. [Teaching Resource] (Unpublished)
- I**
  - Ingrao, Katherine (2010) *Codzilla Ride*. [Image] (Unpublished)
  - Ingrao, Katherine (2010) *Reference for Seniors Presentation*. Microsoft Office Suite. (Unpublished)
  - Ingrao, Katherine (2010) *Touring D.C. During ALA 2010*. [Image] (Unpublished)
- J**
  - Jorgensen, Anne (2010) *Boston Public Garden*. [Image] (Unpublished)

**Figure 8.** (Source: <http://lisprints.gslis.simmons.edu/>).

universal applicability of digital curation education suggests the easy and fruitful interchange of courses. Group projects with students from all three countries working together in the DCL environment will not only give students exposure to other ways of thinking and working but will also prepare students to work in the international arena that is increasingly central to digital curation practice. Our reason for using only open source software is to be able to offer the DCL for use in LIS/IS education in its widest possible context, since we feel that the tools it contains are generally applicable in any digital environment.

From the cultural heritage informatics standpoint, our partnership offers creative opportunities for teachers and for students, not only in teaching and learning about different culture heritages, but also in direct interaction with differences and similarities across institutional and global environments. In the convergence across national borders, we see digital curation as offering trans-national opportunities for the sort of cultural understanding and recognition that educators are only beginning to recognize and to teach.

### Note

1. Since this was written, eight more exercises have been added to the DCL. They can be accessed from a list or by

clicking on the relevant part of the OAIS Reference Model or the DCC Curation Lifecycle Model.

### Sources

- Anderson K, Bastian J, Harvey R, Samuelson G. Plum T (forthcoming) Teaching to trust: how a virtual archives curriculum laboratory creates a global education community. *Archival Science*.
- Bastian J, Cloonan M, Harvey R (2011) From teacher to learner to user: developing a digital stewardship pedagogy. *Library Trends* 59(4): 607–622.
- Bastian J, Harvey R, Mahard M, Plum T (2010) Building a Virtual Archives and Preservation Curriculum Laboratory at Simmons College: a case study in collaborative construction. *JELIS: Journal of Education for Library & Information Science* 51(4): 241–250.
- Paper presented at the World Library and Information Congress: 77th IFLA General Conference and Assembly, 13–18 August 2011, San Juan, Puerto Rico, in session 217 – Education for digital curation – Education and Training Section with Preservation and Conservation, Information Technology; co-sponsored by ICA Section for Archival Education and Training.*

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# Professional development, values and strategy – the means for building strong libraries for the future!

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## Abstract

The library and information sector is undergoing massive change. In a changing world we must create environments that promote strong development to ensure a viable future and a library that provides benefits to all our customers. Professional development is an essential component of this environment. It must be in line with the organization's strategy and values. Changes in customer expectations, behavior and technological development make it even more important to form the library's identity and prioritize our activities. Values, strategy and professional development go hand in hand with the development process. Staff participation in the development process produces a climate that is creative and a means of ensuring success in the future. At the Swedish University of Agricultural Sciences University Library we have worked with professional development, strategy and values as well as the concepts of staff empowerment and leadership. This effort has included all staff members and the results have been excellent.

## Keywords

professional development, organizational values, organizational strategy

The changes in the world around us, the transforming libraries as well as the shifting values, attitudes and behaviors, all have an impact on the way we do business.

In everyday life, we are moving increasingly in the direction of an environment characterized by high levels of disagreement and uncertainty about how the world around us will look in the future. In this context, it is essential to have an open dialogue with our customers as well as to involve all our staff to take an active part in the process of change and development.

The changing context implies a need for new attitudes, approaches and behaviors at work, as well as communications skills. We also need to focus on finding solutions and recognizing the possibilities instead of dwelling on problems. In my opinion, library work in the past has sometimes been overly rule-based, the time has come to reevaluate our rules and guidelines and improve our ability to adapt to the needs of the specific situations.

This demands improved and developed leadership both in relation to others as well as in relation to oneself. Leadership and empowerment are important concepts that we must apply if we intend to form a more

holistic view of the work we do, and obtain a better understanding of our own roles and skills, as well as those of our colleagues'.

But how do we accomplish this in our daily work? My view is that we need to focus more on strengthening our organizational values, develop and clarify our strategy and integrated in this improve our skills management and continuous professional development.

The strategy work should build on a clear process that involves all of our staff. At the Swedish University of Agricultural Sciences' (SLU) University Library we have conducted a development effort involving 50 staff members, and with good results. This work has proceeded in a series of steps that have included establishment of our organizational values and strategy, and developing the staff skills and promoting empowerment.

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In 2008 we started this process by establishing organizational values. To do so we used a web-based survey with just three questions, answered by all of our staff. In each question the respondent was asked to pick 10 words from a list of around 100 words connected to different values. The first question asked respondents to choose values that were closest to their own personal values, the second question asked respondents to select values which were closest to what they perceived were the organization's existing values, and the third question asked respondents to identify the values they believed the organization would require to live up to its mission. The result were then transferred into our organizational values and discussed within the organization.

A year later, in 2009, we took the next step – to develop a new library strategy. Once again we involved everyone in this process. This time we chose a process method called LOTS (Logical Thinking System). By answering process questions you go through the different steps – analysis, vision, values, purpose, focus, objectives, activities, organization, cooperation and relationship, skills, resources, and finally reporting. An important part of this effort is also to prioritize our work and the things we wish we had time to do. We cannot possibly do everything we would like to, since all of our good ideas usually exceed our resources.

Included in this strategy process was skills management. Our personnel are among our most important resources. When examining library strategy and future operations, staff skills must coordinate with what is needed to fulfill the organization's objectives. Competence can be defined as the ability and willingness of an individual to perform a specific task by applying knowledge and skills. These skills can be of different kinds – personal, communicative, strategic as well as professional technical skills. All of these are needed to perform the job.

When developing a strategy it is essential to map the skills we require with those that are available. The gap between these two must be filled by professional development or by recruiting new personnel. To determine your needs, you must first begin with analysis. Once you know your needs you can move on to specify the job profile. At the SLU library we use a skills model that includes a list of different skills with definitions to help us analyze what skills are needed for a specific job. Different people can interpret words in many different ways. Having a list of skills with definitions ensures that we all share the same vocabulary, which is important when working

together on a joint skills management or recruitment project. After recruiting someone the continuous professional development begins.

Continuous professional development is something we must strive to work on constantly. Through performance reviews, follow-up-dialogues, salary negotiations, introduction and closing conversations we can continuously identify our needs and make plans for how to proceed. It is important to realize that continuous professional development is something we build in our daily work, in communicating with others, by having a mentor or a coach, by surfing the Internet, as well as when attending courses, conferences, workshops and so on – the list can be long.

Continuous professional development is something we have always done in our work – what we were yesterday has made us what we are today. What we do today will have an impact on what we become tomorrow. One thing that is certain is that change will always be a part of our working life. The key to manage an environment characterized by high levels of disagreement and uncertainty about the future is increased involvement and participation, as well as to focus on *what* (we do) as well as *how* (we do it)!

Through establishing strategies, values and promoting professional development, we will form the future of the Library and Information Sector.

## Note

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# Developing leadership competencies in librarians

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## Abstract

What makes a good director? How does a librarian know she has the competencies needed to be an effective manager-leader? How does the library board or community know what to look for in a director? What should the library profession look for in their rising managers? There are not clear answers to these questions right now. But development of a set of research-based competencies will give answers to these questions, and will give a foundation for other research-based ideas to be developed to assist manager-leaders in the library. The research objective for this study is to refine a set of competencies, identified from the literature, through the opinions of current public library directors. The development of manager/leaders in the library world is too important to be left to chance. Using a research-based set of competencies as a foundation should help in the development of training opportunities for librarians who wish to be successful in their positions as directors.

## Keywords

leadership competencies, public libraries, library directors, library managers, library leaders, leadership training

## Introduction

The speed of change in society seems to be constantly increasing all around us, and public libraries need to keep pace with those changes to serve their communities as effectively as possible. New technologies, new services, and new demands all combine to make the job of a library more complicated than it was a generation ago, or even 5 or 10 years ago. To continue to not only keep pace with the speed of these changes in service, but to get out ahead of them and ensure the value of public libraries is not overlooked in a community, that library needs to have a good director helping them to meet these challenges. Public libraries in too many communities are in danger of losing staff, resources, hours, or of closing entirely. Without capable directors, they will be unable to overcome the current problems and to sustain a library for the future.

But, what makes a good director? How does a librarian know she has the competencies needed to be an effective manager-leader? How does the library board or community know what to look for in a director? What should the library profession look for in their rising managers? There are not clear answers to these questions right now. But development of a set of research-based competencies will give answers to

these questions, and will give a foundation for other research-based ideas to be developed to assist manager-leaders in the library. The research objective for this study is to refine a set of competencies, identified from the literature, through the opinions of current public library directors. The development of manager/leaders in the library world is too important to be left to chance. Using a research-based set of competencies as a foundation should help in the development of training opportunities for librarians who wish to be successful in their positions as directors.

## Looking at the literature

Just what can be considered a competency differs from author to author. The language used in Dole, Hurych, and Liebsts's definition seems to be very common in discussions defining competencies: "... competencies are skills and knowledge that can be learned and can be measured" (2005: 125). This

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definition would exclude a number of ideas referred to as competencies in the literature, but gives clarity to the process of competency development: if something cannot be learned it is not helpful, and if it cannot be measured it cannot be evaluated and is likewise not helpful to the process of training. Another definition is "the combination of knowledge, skills, and abilities which are relevant to a particular job position and which, when acquired, allow a person to perform a task or function at a high level of proficiency" (Osa 2003: 37). Again, the idea of improving these attributes plays a key role in defining what is a competency and what is not. "Competencies can include both personal and professional aspects – personal competencies may include skills, attitudes and values that underlie our work . . . professional competencies address the ways we apply our knowledge to our work" (van Wert 2004: 10). So while there may be some differences in the specifics, the idea that competencies encompass more than an easily defined skill is important to a full understanding of ideas necessary for a good set of competencies.

This is specifically different from traits as discussed in older leadership literature. A trait would be something that is inherent in an individual; it is either present or not – it is not something that can be improved with training. In some of the literature, looking at any type of personal skill or personal trait is confused together, and the entire idea of looking at competencies is discarded as foolishness (Suwanarat 1994: 20). Older literature looking at leadership traits often measured things like height, gender, weight, health, or personal appearance, things which were believed to be important for leaders. These may or may not be relevant for manager-leaders, but do not provide useful information as competencies, because there can be no training and no improvement or it may not be applicable to our understanding of a good leader. It is not possible to train someone to be taller, for example.

Not all authors make the fine distinction between competencies, traits, and the ideas they believe important to leadership success; this lack of precision in vocabulary hinders the search for competencies. For the purposes of this research study, competencies will be understood to be knowledge, skills, and abilities; but will also expand to include less tangibly measurable attainments important for a manager/leader in public libraries. Improvement may exist on a sliding scale and may not ever achieve perfection in an individual, but the possibility of awareness of and progress toward the idea will be sufficient for a concept to be included in this study and called a competency.

While it may be difficult to create one standard list that will detail the competencies required to become a successful director, that does not mean the profession can ignore the need to struggle toward this ideal. "Librarians have listed, debated, revised, and negotiated lists of competencies for 125 years, since the beginnings of formal education for librarianship" (Helmick and Swigger 2006: 62). Looking through some of the lists created by practitioners and researchers will help to discover if any consensus exists in those most frequently mentioned.

There is tension between LIS academics and practitioners in several areas, but one consistent issue is competencies – their development and use (Lester and Van Fleet 2008: 60). This study is designed to provide a bridge between research and the literature of the profession, and those actually working as directors. Looking at the opinions of both the literature and current public library directors should help to make the final set of competencies useful and acceptable to both groups. Gathering input from different sources on any decision-making process is always helpful to ensure the best outcome. In this study a final set of competencies was refined to give the best answers to the LIS community on competencies necessary for public library directors.

## Method

This work began with a previous study done by the researcher, using content analysis with a group of coders to identify those most frequently mentioned in the literature as important for library leaders and managers. (See Appendix A for this complete list of competencies and their definitions.) To further refine these ideas into a usable set, a Delphi method was used to bring in the opinion of experts on the subject. Delphi methodology is based on the idea of structured interviews or surveys, and uses the opinions of experts (as defined by the researcher) to gather information. Delphi studies ask experts to share their ideas in an open-ended discussion to discover information (Brill, Bishop and Walker 2006: 120). Through repeated rounds of thought, giving participants the opportunity to see material contributed by others, each of the experts is able to bring their ideas and experience to the issue at hand. The method is also helpful for focusing in on the most significant aspects of a research topic, and can be used to address a wide variety of issues.

In this method there are two or more opportunities (rounds) for the participants to share their opinions on the topic of the research, giving each the possibility of building on his/her answers in the second (and/or

later) rounds, and taking into account the responses from their fellow participants/experts. "In a sense, the Delphi method is a controlled debate . . . More often than not, expert groups move toward consensus . . ." (Gordon 1994: 3). Even if consensus does not develop around the research topic, other ideas arising during disagreement or polarized opinions from members of the expert group which could be valuable to the researcher.

Selection of the participants is important in obtaining good results. Since the group is deliberately not representative of a population, identifying people who are knowledgeable about the issue is the key to ending up with the best results. Many Delphi studies use 15 to 35 people (Gordon 1994: 6), but some use larger numbers. In a group that is too large, it may be more difficult to reach agreement without a focused topic to guide the discussion. Answers provided by the participants are anonymous, which should facilitate providing their responses, including those which may be controversial or go against the group consensus. Anonymity can provide for not only more honest answers, but also a wider potential selection of responses. Participants should not feel as though they had to go along with the group's responses, but should be free to contribute their own ideas, regardless of agreement with the group.

In a Delphi study, the participants should be experts in the area under consideration. In this case, the subject is competencies for public library directors; so successful public library directors would be the best group to discuss the topic. In the public library field, there is no standard measurement for excellence in library directors; nor is there any official rating agency for directors. However, there is a yearly rating of all public libraries across the country, published each year in the *American Libraries* journal: The Hennen's Annual Public Library Ratings (<http://www.haplr-index.com/index.html>). This index uses Institute of Museum and Library Services (IMLS) data to rank libraries on 15 criteria, primarily on circulation, staffing, materials, reference service, and funding levels. The index is widely known in the public library field, and has rated libraries for more than 10 years.

The top ten libraries are identified in ten different population categories, to ensure libraries from across the country can be recognized and to avoid overemphasizing libraries with large populations and large budgets. The best directors presumably lead this set of 100 best libraries. While it is impossible to definitely identify the most successful directors in the country, it is reasonable to assume that if this group is not the best 100 public library directors in

the country, they are likely still at the top of their profession. There are other ways to measure success as a director, but the HAPLR index of libraries is an objective, identifiable group of directors. While not a perfect identification system, this is the best strategy for identifying successful public library directors to serve as experts in identifying competencies for the purposes of this study.

These 100 directors were invited to participate in this research study. The geographic and population size diversity should also help to make the study stronger by utilizing data from directors of reasonably diverse libraries. However, these directors were not selected as representative of all directors; they were specifically being selected as being successful.

Anonymity was preserved in the individual answers and individual participants, as required by a Delphi. The total population of 100 potential participants was known, but those who chose to participate (or not) will not be identified at any time during or after the study. In a Delphi, the individual responses are not as important as the consensus of the group, so identification of any specific individual is not necessary.

#### *Study instrument and data collection*

*Round One.* The entire study was done online, to encourage both anonymity and participation from these busy directors who are spread across the country. In the initial round of the Delphi, demographic information was collected about the participants, and the initial set of competencies was identified. Then they established their initial ideas about the most important competencies for public library directors for the next decade. The definition of competency used in this study was on the online form: knowledge, skills, and abilities, but also less tangibly measurable attainments important for a director in public libraries. They were given the set of competencies identified in the content analysis research done for this study, along with definitions established for each to ensure clarity among participants about each idea. They were asked to identify (with a checkmark) those competencies most important to the profession for the next decade, according to their own professional opinions. There was an emphasis on choosing only the most important competencies. Several participants commented all were useful, but that they did restrict themselves to selecting only the most important as requested. They were then given the option to suggest any other competencies they believe will be important which may be missing in the list from the literature. No justification of their individual choices was

**Table 1.** How many years have you worked as a librarian?

Answer options	Response (%)	Response frequency
Less than 1 year	0.0	0
1–3 years	0.0	0
4–7 years	0.0	0
8–15 years	16.1	5
16–20 years	6.5	2
21–25 years	22.6	7
26–30 years	12.9	4
More than 30 years	41.9	13

**Table 2.** How many years have you been a public library director? (total years, not just at this library)

Answer options	Response (%)	Response frequency
Less than 1 year	0.0	0
1–3 years	12.9	4
4–7 years	12.9	4
8–15 years	38.7	12
16–20 years	13.9	4
21–25 years	9.7	3
26–30 years	3.2	1
More than 30 years	9.7	3

required, but they were provided with space to elaborate on the process, to share their reasoning, or just to share more information on each competency.

Thirty-one directors responded to this round of the Delphi. Twenty-six (83.9 percent) of them were female; five were male (16.1 percent). Two other demographic questions were asked: years worked as a librarian, and years spent as a director (see Tables 1 and 2).

Eighteen of the initial 34 competencies were selected as important in this round, and moved on to Round Two. This was defined by a selection of the competency by 60 percent or more of the participants. The most-selected competencies, those identified as important by 80 percent of the participants or more, were:

- Vision 93.5 percent
- Communication skills 87.1 percent
- Customer service 87.1 percent
- Credibility 83.9 percent
- Interpersonal skills 80.6 percent
- Creativity 80.6 percent

The least selected competencies, those selected by fewer than 40 percent of the participants, were:

- Employee centered 38.7 percent
- Previous experience 35.5 percent
- Intelligence 35.5 percent
- Emotional intelligence 32.5 percent
- Ambition 22.6 percent

In addition to the 18 competencies selected from the initial group to move to the next round, the expert directors added five additional competencies (listed here, with the definitions of each):

- **Political understanding:** government relations, Board relations, working with City departments, understanding organizational structure
- **Maturity:** calm and in control, emotional intelligence, thinking of others first
- **Library knowledge:** knowledge of patrons and collections, understanding trends, intellectual freedom issues
- **Accounting/budgeting:** writing and passing budgets, grant writing and administering
- **Advocacy skills:** being visible in the community and library, active in community organizations, building relationships with decision makers

*Round Two.* In Round Two of the study, the list of 18 competencies identified by more than 60 percent of the participants was sent out to the participants from Round One, along with the five competencies suggested by participants in Round One. This time each competency had a Likert scale, allowing the participants to rate each from 1 to 7. (1 is defined as “not at all important,” 2 as “rarely important,” 3 as “not too important,” 4 as “neutral,” 5 as “pretty important,” 6 as “quite important,” and 7 as “absolutely necessary.”) Participants were asked to rate each individual competency on the scale, and encouraged to think about the most important needs of the profession over the next decade. This comment was inserted as a way to again encourage them to think carefully about their ideas, and not to automatically rate all competencies as equally important. They were also given the opportunity to again comment freely on their choices, the list as a whole, or other ideas they may wish to share about the process and about competencies for public library directors. The group added no additional competencies to the list under consideration, as the focus was to hone the existing list. Twenty-three people responded to this round.

When these answers were returned, the mean and standard deviation of each competency’s Likert score across all participants was calculated. The competency set for the third round of the Delphi was drawn

**Table 3.** Competency scores, Round Two

Competency	Mean	Standard deviation
Integrity	6.91	0.029242
Accountability	6.86	0.35125
Customer Service	6.77	0.42893
Credibility	6.73	0.55048

**Table 4.** Competencies eliminated after Round Two

Competency	Mean	Standard deviation
Diplomacy	5.91	0.84387
Sense of humor	5.36	1.0486
Library knowledge/value	5.82	0.90692
Accounting/budgeting	5.64	0.90214

from this data analysis. The focus of this study is to identify the most important competencies; therefore, the group eliminated any low-scoring competencies from further consideration. To ensure only the competencies most important to this group were carried forward to the next round, any competency with a mean score below 6.0 was removed. Standard deviations for each competency rating will be discussed in the analysis of the study, below.

The highest rated means for the competencies in this study (on the 7-point scale), with their standard deviations, are shown in Table 3.

These items also had the lowest standard deviations of this round, indicating a high degree of consensus on the importance of each of them.

Four of the 23 competencies (see Table 4) were eliminated after this round, because the expert participants rated them lower than an average of 6.0 on the Likert scale.

These competencies had some of the highest standard deviations of the round, indicating there was not a lot of consensus here. Two of them, library knowledge/value and accounting/budgeting, had just been added in on the first round by participants – who presumably felt strongly about them continuing while others did not recognize their value.

**Round Three.** In Round Three, this further-refined set of competencies was sent out to participants from Round Two, with the same instructions as that round: rate each competency on the Likert scale according to the participant's opinion of its importance to the profession over the next decade. All 23 participants returned answers in this round. The same data analysis process of these answers was used here as in

Round Two. Based on other Delphi work with similar populations, it was anticipated at this point that all the competencies would be rated at a mean of 6.0 or higher; and that proved to be the case, so the data collection was finished.

All 19 of the competencies given to the expert participants in this round were rated with an average of 6.0 or higher, indicating they were “quite important” to “absolutely necessary” for public library directors in the view of this Delphi group. The lowest average was 6.00: enthusiasm, risk taking, resource management, and creativity. The highest average score was 6.57 for integrity and customer service. Two other competencies were rated 6.52: accountability and credibility. See Table 5 for the final set of competencies, their mean ratings, and their standard deviations for this round.

While all the means on the Likert scale averaged 6.0 or higher, keeping them in the study, none of the standard deviations for each competency were as low as in Round Two. While participants agreed this was the final set, there was less unanimity on the importance of each than had been shown previously.

In this third round, several statistical tests were performed on these data to see what kinds of demographic information might be drawn out to make these data more valuable. An ANOVA test was done comparing the means of the years of service as a librarian each of the participants had completed, for each of the individual final competencies. There were no significant differences between people's ratings of the individual competencies based on their years of working as libraries, except for one competency: Enthusiasm (Table 6).

Based on this chart, those directors who had been librarians for 25 or fewer years were more likely to rate this competency as of a higher importance than those working longer than 25 years. It could be speculated those directors spending many decades in their jobs could still derive personal and professional satisfaction, but feel less need for enthusiasm at work than newer directors.

Another ANOVA was performed comparing the individual competencies based on years worked as a library director. Only one competency emerged as having a significant difference in this comparison of means across the years of work: Maturity (Table 7).

From these data, it appears that the directors with the least amount of experience value the competency of maturity by far the highest; those valuing it least are those working as directors for 26 or more years. Here it may be that newer directors value the maturity – or experience or wisdom – of directors who

**Table 5.** Final set of competencies and their mean rating after Round Three

Answer options	Mean	Standard deviation
<b>Enthusiasm:</b> optimism, positive emotional connection	6.00	0.79772
<b>Demonstrating leadership:</b> being perceived as a leader; taking charge of situations effectively	6.39	0.72232
<b>Delegation:</b> handing off both responsibilities and sufficient authority to accomplish necessary tasks	6.04	0.63806
<b>Accountability:</b> taking responsibility for results - positive and negative	6.52	0.51075
<b>Planning:</b> setting goals and developing strategies to achieve those goals	6.17	0.77765
<b>Integrity:</b> following professional code, being honest, being a role model for how to behave; honesty	6.57	0.58977
<b>Risk Taking:</b> not taking the easy way; taking a chance of failure; bold or courageous action	6.00	0.8528
<b>Credibility:</b> building trust in others; doing what you say you will do; being consistent in speech and actions	6.52	0.51075
<b>Resource management:</b> finding money, facilities to accomplish goals	6.00	0.95346
<b>Creativity:</b> seeing different ways to accomplish goals; bringing forward new ideas	6.00	0.90453
<b>Customer service:</b> both internal and external; remembering that patrons are the focus of the library	6.57	0.50687
<b>Interpersonal skills:</b> effectively working together with others of different levels or different positions (staff and public); good social skills; building rapport	6.35	0.71406
<b>Communication skills:</b> speaking, writing, listening; understanding your message and conveying it to others	6.48	0.66535
<b>Flexibility:</b> changing course when necessary, changing plans to be successful	6.14	0.69442
<b>Vision:</b> looking at the future and see where the library can go; articulating directions	6.39	0.65638
<b>Political understanding:</b> government relations, Board relations, working with City departments, understanding organizational structure	6.39	0.78272
<b>Maturity:</b> calm and in control, emotional intelligence, thinking of others first	6.13	0.75705
<b>Problem solving:</b> assess a situation and see what needs to be done	6.04	0.70571
<b>Advocacy skills:</b> being visible in the community and library, active in community organizations, building relationships with decision makers	6.30	0.82212

**Table 6.** Enthusiasm ANOVA

Years as a librarian	Mean	Standard deviation			
8–14 years	6.33333	0.57735			
21–25 years	6.6666	0.5164			
26–30 years	5.25	0.5			
more than 30 years	5.8	0.78881			
	<b>Sum of squares</b>	<b>df</b>	<b>Mean square</b>	<b>Fisher F-value</b>	<b>Significance (p)</b>
Between groups	5.649	3	1.883	4.285	0.018
Within groups	8.350	19	0.439		
<b>Total</b>	<b>13.999</b>	<b>22</b>			

have spent years doing the job these directors are just beginning. It would be understandable that maturity would be seen as more helpful in this group.

Another ANOVA was done comparing each of the final competencies by the gender of the participants. Both genders were similar on their ratings of the

**Table 7.** Maturity ANOVA

Years as a director	Mean		Standard deviation		
1–7 years	6.83333		0.40825		
8–15 years	5.83333		0.98319		
16–25 years	6		0.57735		
26–30+ years	5.75		0.5		
	<b>Sum of squares</b>	<b>df</b>	<b>Mean square</b>	<b>Fisher F-value</b>	<b>Significance (p)</b>
Between groups	4.192	3	1.397	3.155	0.049
Within groups	8.415	19	.443		
<b>Total</b>	<b>12.607</b>	<b>22</b>			

**Table 8.** Vision ANOVA

Gender	Mean		Standard deviation		
Male	7		0		
Female	6.21053		0.71328		
	<b>Sum of squares</b>	<b>df</b>	<b>Mean square</b>	<b>Fisher F-value</b>	<b>Significance (p)</b>
Between groups	2.060	1	2.060	4.723	0.041
Within groups	9.158	21	.438		
<b>Total</b>	<b>11.217</b>	<b>22</b>			

**Table 9.** Risk taking ANOVA

Population served	Mean		Standard deviation		
5K or less	5.28571		0.95119		
10–25K	6.5		0.54772		
50–100K	6		0.70711		
250500+K	6.4		0.54772		
	<b>Sum of squares</b>	<b>df</b>	<b>Mean square</b>	<b>Fisher F-value</b>	<b>Significance (p)</b>
Between groups	5.872	3	1.957	3.672	0.031
Within groups	10.127	19	0.533		
<b>Total</b>	<b>15.999</b>	<b>22</b>			

importance of all items, except their ratings of Vision (Table 8).

The males in this study unanimously rated this with the highest rating of seven “absolutely necessary,” while females rated it much lower – still important, but less so.

The final ANOVA testing was done looking at the demographic grouping of population size served by the libraries. When these groups were examined, there were three competencies with significant differences between the ratings applied by each of the groups: Risk taking (Table 9), Political understanding (Table 10), and Advocacy skills (Table 11).

For the competency of Risk taking, those library directors serving in communities of 5000 people or fewer rated this competency significantly lower than did all other directors. This same group also rated

Political understanding significantly lower than did the other population groups. With the competency of Advocacy, the 5000 or less population group rated this significantly lower than did all the other groups. But the 10,000 to 25,000 population served group also rated it quite a bit lower than did the upper two population groups.

Those directors who are newer may see less value in taking risks with a job they may not be entirely comfortable in yet, in contrast to those who have been doing their job for a long time. Directors who have more experience are also rating advocacy and political skills higher than new directors, possibly because they have the experience to know the basic of their job and can look out to the potentially less obvious, but still important, competencies necessary for success in their jobs.

**Table 10.** Political Understanding ANOVA

Population served	Mean		Standard deviation		
5K or less	5.71429		0.48795		
10–25K	6.8333		0.40825		
50–100K	6.6		0.89443		
250–500+K	6.8		0.44721		
	<b>Sum of squares</b>	<b>df</b>	<b>Mean square</b>	<b>Fisher F-value</b>	<b>Significance (p)</b>
Between groups	5.391	3	1.797	5.453	0.007
Within groups	6.261	19	0.330		
<b>Total</b>	<b>11.652</b>	<b>22</b>			

**Table 11.** Advocacy Skills ANOVA

Population served	Mean		Standard deviation		
5K or less	5.71429		0.75593		
10–25K	6.16667		0.98319		
50–100K	6.8		0.44721		
250–500+K	6.8		0.44721		
	<b>Sum of squares</b>	<b>df</b>	<b>Mean square</b>	<b>Fisher F-value</b>	<b>Significance (p)</b>
Between groups	5.008	3	1.669	3.217	0.046
Within groups	9.861	19	0.519		
<b>Total</b>	<b>14.869</b>	<b>22</b>			

## Discussion and recommendations

The set of competencies developed in this study should be useful to the LIS profession, and specifically to new and aspiring public library directors looking for information on their own competency development. Using a set of research-based competencies, instead of those without an objective reason for including them in a training program, will help librarians to focus on those skills, knowledge, abilities, and attainments most important for them to learn to achieve success in the profession.

Having a set of research-based competencies is an important first step in developing better-trained directors for public libraries, but it is only one step in the process. Using this list as a starting point, training programs can be built to help new and aspiring directors develop these competencies. This set gives trainers a place to begin in setting goals for libraries, or gives the librarians themselves some direction for their self-education process. In an education program, it is important to begin with a defined set of goals, and this list can comprise some or all of those goals. There is no consensus yet in the LIS profession on the competencies necessary for library directors, leaving librarians disadvantaged when they attempt to climb into the managerial positions available within the library (Mackenzie and Smith 2009: 140). While this set of competencies is of necessity directly applicable

to a narrow group, it is a place to start in defining training goals to meet the needs of that group. Future studies will expand on the ideas learned here.

Training programs could involve the entire set of competencies, if there was a long enough time to devote to all 19 individual ideas. Or, for a more focused training opportunity, specific collections of these competencies could be singled out for the training, in small groupings. For example, one group of competencies could consist of interpersonal Skills, Customer Service, Communication Skills, and Advocacy Skills. This could give librarians a suite of competencies to help them build their comfort level and skill level in working successfully with other people.

Once the training goals are established, they should be defined to provide participants with a clear idea of the goals they will be obtaining. To make the training as useful as possible, specific skills identified in each competency should be taught. For example, in a training program to help librarians improve their communication skills, the definition derived in this research is “speaking, writing, listening, understanding your message and conveying it to others.” So specific training items should include practice in each of these areas, such as writing a press release, speaking in front of the group, listening to someone speaking without interrupting, etc. Once the training has been completed, it is important to evaluate whether it

produced any result in the participants. Setting up clear goals at the beginning of the program will help in developing a post-training evaluation process.

Enhancing and expanding the profession's knowledge of competencies for library managers and directors will require more work to build on the ideas here. More research is needed to ensure library managers at all levels are given the tools they need to be successful, especially as libraries continue to struggle with the economy and the pace of change in society. This study looked only at public library directors. Other research should look at academic, school, corporate, or special library directors and managers at other levels. Paraprofessionals are another group who are given responsibility for supervision and management of staff, but are less likely to receive training than are degreed librarians. This group would also benefit from further study and training opportunities directed at their individual needs.

### Appendix A: The initial list of competencies, with definitions of each

**Vision:** looking at the future and see where the library can go; articulating directions

**Flexibility:** changing course when necessary, changing plans to be successful

**Communication skills:** speaking, writing, listening; understanding your message and conveying it to others

**Teamwork:** working as part of the group, not always leading it

**Interpersonal skills:** effectively working together with others of different levels or different positions (staff and public); good social skills; building rapport

**Employee centered:** focusing on staff needs to be sure they have what they need to get their work done; creating a positive environment for staff

**Risk taking:** not taking the easy way; taking a chance of failure; bold or courageous action

**Customer service:** both internal and external; remembering that patrons are the focus of the library

**Multicultural awareness:** bringing in staff to reflect community; providing resources for diverse community members; not allowing overt discrimination in library

**Problem solving:** making decisions and use good judgment

**Motivating others:** bringing forward the best performance in others; keeping people going toward goals, even when things are hard or boring

**Commitment to the profession:** continuing education, attending conferences, writing about programs and advances; advocate for the profession

**Integrity:** following professional code, being honest, being a role model for how to behave; honesty

**Creativity:** seeing different ways to accomplish goals; bringing forward new ideas

**Self-awareness:** understanding your own motivations, knowing your own strengths and limits

**Ambition:** wanting to be successful, want to achieve in the library profession

**Previous experience:** experience as a manager, or in previous library jobs

**Conflict resolution:** work with people to get past conflict, cutting off conflict before it gets started or before it becomes toxic; not ignoring conflict - addressing it

**Tenacity:** staying focused on goals, continuing to work toward goals despite obstacles; persistence

**Planning:** setting goals and developing strategies to achieve those goals

**Personal energy:** healthy and active, projecting energy to others, having the strength to get through the daily job requirements; dynamic

**Accountability:** taking responsibility for results - positive and negative

**Delegation:** handing off both responsibilities and sufficient authority to accomplish necessary tasks

**Self-confidence:** knowing you can handle the responsibilities of your job and life

**Emotional intelligence:** understanding your emotions and ways to handle them productively

**Mentoring:** helping others learn by showing them the way, modeling behavior

**Demonstrating leadership:** being perceived as a leader; taking charge of situations effectively

**Resource management:** finding money, facilities to accomplish goals

**Time management:** multitasking, being punctual, following schedules

**Sense of humor:** keeping a situation light; looking at the funny side of things; laughing at self

**Credibility:** building trust in others; doing what you say you will do; being consistent in speech and actions

**Enthusiasm:** optimism, positive emotional connection

**Modeling values:** being transparent and committed to values; acting on values

**Intelligence:** IQ; education, cognitive abilities

**Diplomacy:** even-handed behavior; helping others to feel like their views are heard

### Note

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13–18 August 2011, San Juan, Puerto Rico, in session 125 – Continuing Professional Development (CPD) as a strategy to build strong libraries and library associations – Continuing Professional Development and Workplace Learning Section with Management of Library Associations.

## References

- Brill JM, Bishop MJ and Walker AE (2006) The competencies and characteristics required of an effective project manager: A web-based Delphi study. *Educational Technology Research and Development*, 54 (2): 115–140.
- Dole WV, Hurych JM and Liebst A (2005) Assessment: A core competency for library leaders. *Library Administration and Management* 19(3): 125–132.
- Gordon TJ (1994) The Delphi Method. *Futures Research Methodology*. Retrieved April 15, 2008, from [http://www.futurovenezuela.org/\\_curso/5-delphi.pdf](http://www.futurovenezuela.org/_curso/5-delphi.pdf).
- Helmick C and Swigger K (2006) Core competencies of library practitioners. *Public Libraries* 45(2): 54–69.
- Lester J and Van Fleet C (2008) Use of professional competencies and standards documents for curriculum planning in schools of library and information studies education. *Journal of Education for Library and Information Science* 49: 43–69.
- Mackenzie ML and Smith JP (2009) Management education for library directors: Are graduate library programs providing future library directors with the skills and knowledge they will need? *Journal of Education for Library and Information Science* 50(3): 129–142.
- Osa JO (2003) Managing the 21st century reference department: Competencies. *The Reference Librarian* 81: 35–50.
- Suwannarat P (1994) Library leadership in research university libraries. (Doctoral dissertation, Peabody College for Teachers of Vanderbilt University).
- Van Wert L (2004) How do we know what we don't know? Competencies and staff development in special libraries. *Colorado Libraries* 30(2): 10–14.

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# Information literacy and engineering design: Developing an integrated conceptual model

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## Abstract

Engineering education is moving increasingly toward an active-learning based pedagogy. Traditionally relegated to a final-year design project, more and more engineering design projects are appearing earlier, even in the first-year of undergraduate education. With the increased frequency of these projects that are problems without a single ‘right’ answer, engineering librarians are finding more opportunities to work with students throughout their educational careers instead of just in a capstone course. To fully take advantage of these opportunities, librarians need to translate their own knowledge of information literacy into the language of engineering educators, and indeed inform the pedagogy of those educators. This paper attempts to create just such a bridge, focusing on the information resources and processes needed by engineers engaged in the design process and bringing together the literature of both the engineering education and library science communities.

## Keywords

engineering education, engineering design, engineering librarians, information literacy

## Introduction

Engineering design is perhaps the defining technique used by professionals in the field. “Design is regarded by many as the core problem-solving process of technological development. It is as fundamental to technology as inquiry is to science and reading is to language arts” (International Technology Education Association 2007: 90). Using the knowledge developed by the scientific community, engineers translate, innovate, and ultimately design a solution to a problem faced by an individual, group, or society at large. Engineering is always situated in a societal context, and engineers are always solving *someone’s* problems.

Engineering design problems provide a real-world context for the underlying skills and techniques that students learn during their coursework. In particular, design problems highlight the importance of ‘professional skills’, i.e., non-content skills, to the work of engineers. It is precisely these professional skills that the *Engineer of 2020* report highlights as key to the success of the next generation of engineers. Indeed, it embraces the concept of the ‘Renaissance Engineer,’ who can contribute their expertise as a part of a team to solve the increasingly complex and interdisciplinary problems facing our society,

both locally and globally (National Academy of Engineering 2004).

Mosberg et al. (2005) surveyed professional engineers to determine what they felt were the most important design activities, and “seeking information” was the fourth highest rated activity out of 23 options, rated above prototyping, testing, building and brainstorming. When further asked how much they agreed with several statements about design, “information is central to design” was the third-highest rated statement out of 17 options. Ennis and Gyeszly’s (1991) study of professional engineers also found information gathering to be an integral part of the design process. Bursic and Atman (1997) declared that “expert designers should be able to gather information to adequately define the problem, generate appropriate alternative solutions, and

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analyze, evaluate, and select the best solution to meet customer needs.”

### How do engineering students perform?

One would think that engineering educators have analyzed the information gathering habits of engineers, since that stage does in fact appear in their own problem solving models. Indeed, there is some, but not very much research into the questions of how information is integrated into the design process. Overall, engineering educators have found that beginning students typically do not spend much time in the information gathering stage of design development and especially neglect the initial stages of the process, when a foundational understanding of the problem needs to be formed so a targeted solution can be found.

Condoor et al. (1992) found that students tend to lock in on a single solution, not exploring alternatives and ending up ‘satisficing,’ that is, coming up with a suboptimal solution that meets the minimal requirements of the project. Atman et al (1999) found that first-year students gathered very little information compared to seniors in a design protocol study, although they did spend about 13 percent of their time on the information gathering stage of the initial design process. They found a positive correlation in design quality with the number and breadth of information requests made by the students they studied. Mullins, Atman, and Shuman (1999) found gains in student capacity can be seen as early as the end of the first year of education, if students are introduced to the design process in the first year. Atman et al. (2007), meanwhile, found senior engineering students spent significantly more time on problem scoping and information gathering than first year students, and these results “support the argument that problem scoping and information gathering are major differences between advanced engineers and students, and important competencies for engineering students to develop.”

Recently, Ekwaro-Osire, Afuh, and Orono’s (2008) in-depth analysis of two student teams found only 0.1 percent of the time spent on a design project was doing ‘library research’. Half of the 7 percent overall amount of time gathering information was spent on “planning to gather information.” Denick et al. (2010) found students engaged in a design task underutilized handbooks and other formal information sources in favor of lower quality web resources, a finding echoed by Wertz et al. (2011). Wertz et al. also identified student weaknesses in appropriately applying information from resources to a design

project (i.e. misuse of information they located). In a general, large-scale survey of undergraduate students, Head and Eisenberg (2010) reported that less than one third of respondents reported having a “research strategy” when working on projects, less than one half had a system for organizing information found, three-quarters of students reported difficulty getting started on a project, and over half had difficulty choosing a topic and sifting through irrelevant results.

### Engineering design models

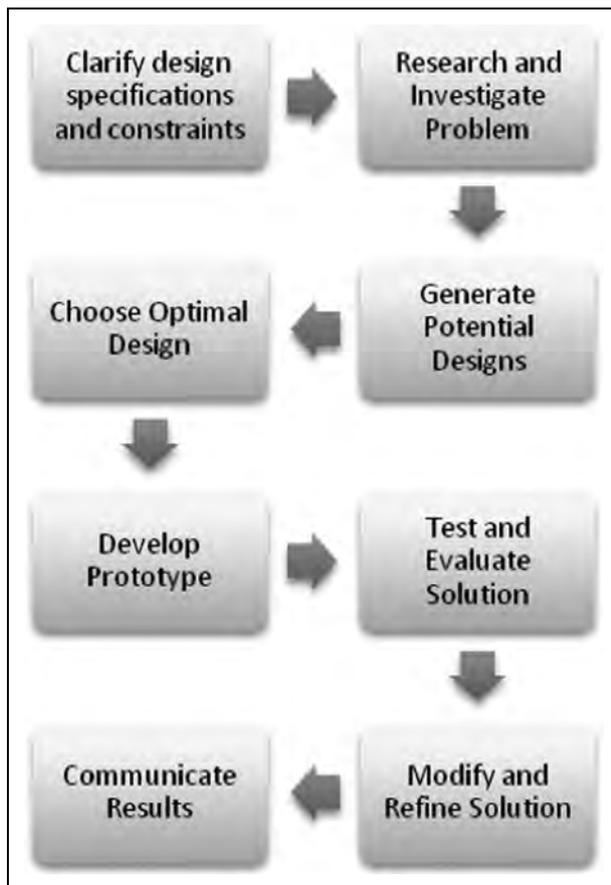
It is easy to equate information literacy (IL) with the ‘lifelong learning’ ABET student learning outcome (ABET Engineering Accreditation Commission 2010). This tends to marginalize IL in the discussion with engineering faculty. It limits the impact of IL skills on student education and the work of engineers. Rather than being relegated to a ‘professional development’ role, IL needs to be integrated into the fundamental problem solving process for engineers. Riley et al. (2009) were the first to map the ACRL IL standards to the ABET accreditation criteria for undergraduate engineering programs. However, even they did not explicitly tie information activities to the design process for engineering.

Several models of engineering design exist. Some popular models include Engineering is Elementary, a 6-step process appropriate for students under 12 years of age (Boston Museum of Science 2011), the Informed Design model (Figure 1, Hacker and Burghardt 2004), appropriate for ages 12–20, and Mosborg et al’s (2005) iterative block-diagram ‘One Model’ condensed from a selection of college-level textbook examples (Figure 2).

These design models anticipate the process steps to be iterative, even if not explicitly included in their model diagrams. Several studies have found that the more iterative the process used, the better the final results of the project (Guindon 1990; Radcliffe and Lee 1989). Although an information gathering stage is explicitly present in each of these models, IL principles are present in many of the other stages as well.

### Information search process model

The ACRL IL competency standards (Association of College and Research Libraries [ACRL] 2000) articulate a list of skills, abilities, and behaviors that information literate individuals demonstrate. Unlike the Informed Design Model, they do not describe a process, i.e. a sequence of steps information literate students go through in order to complete a task. Kuhlthau’s Information Search Process (ISP) (2004,

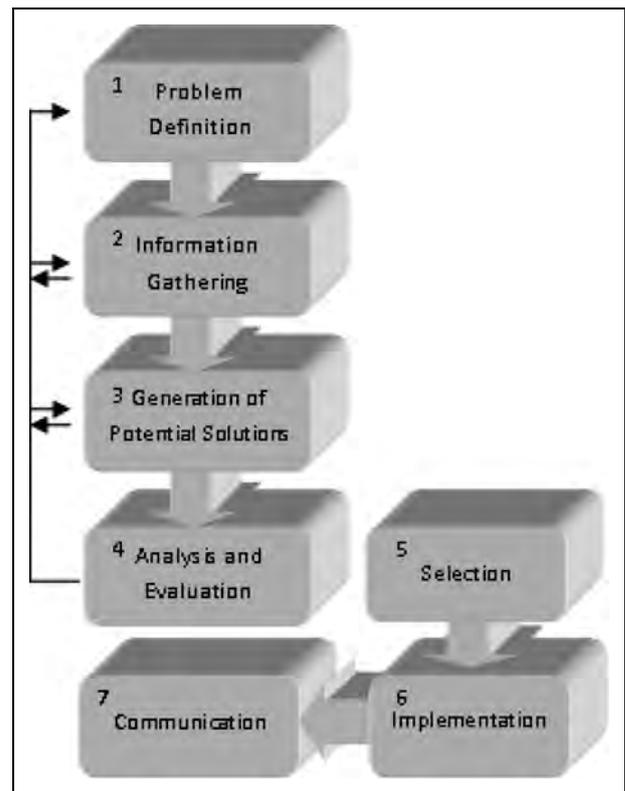


**Figure 1.** Informed Design Model (from Burghardt and Hacker 2004).

see Figure 3) provides such a process model that can be valuable to compare with the engineering design model. While the ISP has not been verified specifically in an engineering context, it has been shown to be robust in describing the activities of researchers in many fields. This paper argues that the stages of the ISP align with stages in the engineering design process and the design process incorporates several of the ACRL IL competency standards.

According to the ISP model, there are six stages that students go through when solving a problem, as follows:

- *Initiation*, when a person first becomes aware of a lack of knowledge or understanding and feelings of uncertainty and apprehension are common.
- *Selection*, when a general area, topic, or problem is identified and initial uncertainty often gives way to a brief sense of optimism and a readiness to begin the search.
- *Exploration*, when inconsistent, incompatible information is encountered and uncertainty, confusion, and doubt frequently increase and people find themselves ‘in the dip’ of confidence.

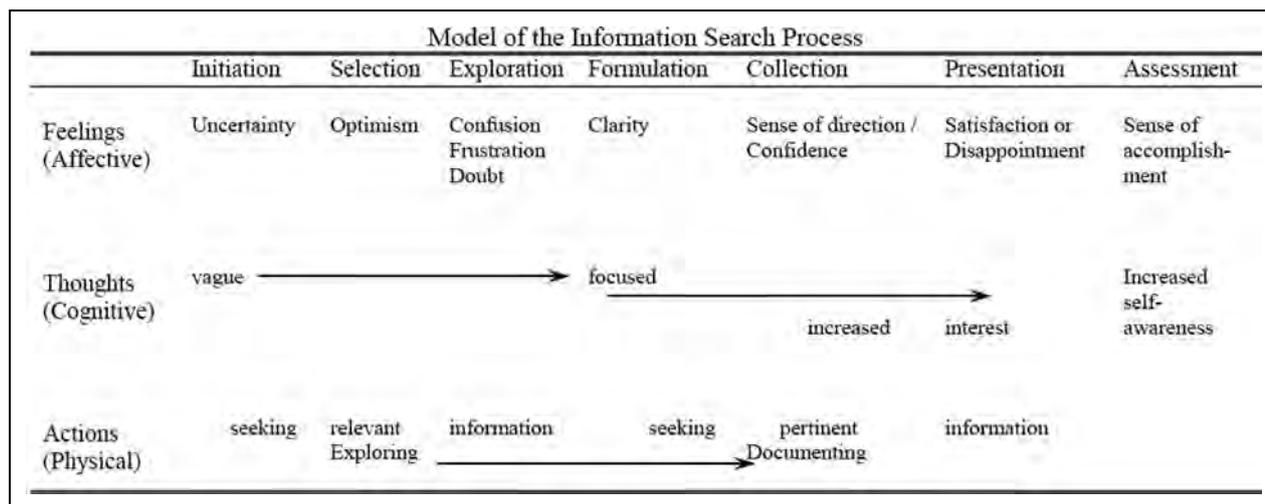


**Figure 2.** ‘One Model’ (from Mosborg 2005).

- *Formulation*, when a focused perspective is formed and uncertainty diminishes as confidence begins to increase.
- *Collection*, when information pertinent to the focused perspective is gathered and uncertainty subsides as interest and involvement deepens.
- *Presentation*, when the search is completed with a new understanding enabling the person to explain his or her learning to others or in some way put the learning to use. (Kuhlthau 2011)

In general, the first three stages of the ISP relate to the search for ‘relevant information,’ – trying to figure out what information is relevant to the task at hand, either the information that is searched for or that which accompanies the problem itself. Once a focus has been found in stage 4 and a formal, specific question has been articulated, then the search strategy changes from one of exploration to one of documentation. In the documentation stage, one primarily looks for information to fill in specific gaps of knowledge, rather than fundamental questions.

A key component of the ISP model is that it addresses not only peoples’ actions, but also their thoughts and feelings, when conducting a search for information. Acknowledging the confusion and uncertainty at the beginning of the search process can help students understand not only that those feelings



**Figure 3.** Information Search Process (Kuhlthau 2004: 82).

are natural. Then, they can get through that stage to the much more satisfying focused search for information. If students skip steps in the process, frequently they end up with suboptimal resolutions to their information task (Kuhlthau 2004). In particular, Holliday and Li (2004) found that Millennials, current students who have grown up as ‘digital natives’, with the widespread access to information on the Internet, frequently skip the crucial early stages of initiation, selection, and exploration. This leads to some of the perceived decline in student performance on research projects. Head and Eisenberg (2010) also found that students report the biggest challenges are getting started, choosing a topic, developing a research strategy, and having a system for organizing information. Certainly, if one does not fully understand a problem, it is very difficult to find a solution to it.

## Analysis

The Informed Design Model (Figure 1) will be used as a convenient example to show how IL competency standards are present in each stage of the engineering design process, to help illustrate these connections.

*Problem Clarification/Definition:* In the classical design model, this is the stage wherein students attempt to articulate what exactly the problem is that needs to be solved. Information needs to be gathered from clients concerning their expectations and the constraints and specifications of the project. Care must be taken not to jump to a particular problem statement or solution approach, but to consider the most fundamental nature of the question before looking for a solution. For example, if the fundamental problem is to bring potable water to a

community, a design team might scope the problem as ‘increasing the efficiency of transporting clean water to the community,’ rather than considering the class of solutions wherein potable water is created on site.

*Research and Investigate the Problem:* This stage focuses on determining what kinds of solutions others have applied to this type of problem, how those technologies might work, and what variables affect the performance of the design. This is the classic information gathering step of the design process and can consist of several steps in the ISP. The focus at this point is on the Exploration phase of the ISP, typified by a search for preliminary background information that helps build a basic understanding of the field and ultimately helps focus the problem definition. As indicated above, these stages are iterative, as the preliminary information one finds can help refine ones understanding of the problem, further questions that need to be asked, etc.

*Generate Potential Designs:* Much like in the first stage, it is important to not stop with the first possible solution, but to continue brainstorming other approaches to see if a better alternative exists. During this process, students can still be consulting the literature to find more focused information related to each class of design solution and to uncover novel potential solutions to the problem.

*Choose Optimal Design:* Evaluate the options against the problem constraints and specifications. This is akin to the Formulation stage of the ISP, where the preliminary information is analyzed and a focused problem is arrived at. At this point the search for information becomes focused on a specific solution, rather than the previous

general-level information search. While the previous information searches would have focused on introductory-level sources, in this and the next stage, more technical information needs to be consulted. The idea needs to be turned into something practical, which may include compliance with codes and standards, property information of the materials or products being used in the design, etc. *Develop Prototype*: Fabrication of a model of the design implementation follows in this stage. As fabrication proceeds, there may be the need to check interoperability of parts, sufficiency of materials properties, etc.

*Test and Evaluate Design Solution*: For example, ASTM standards might govern the testing of the prototype, and information about the performance of a system this design is supposed to replace might be available through a search.

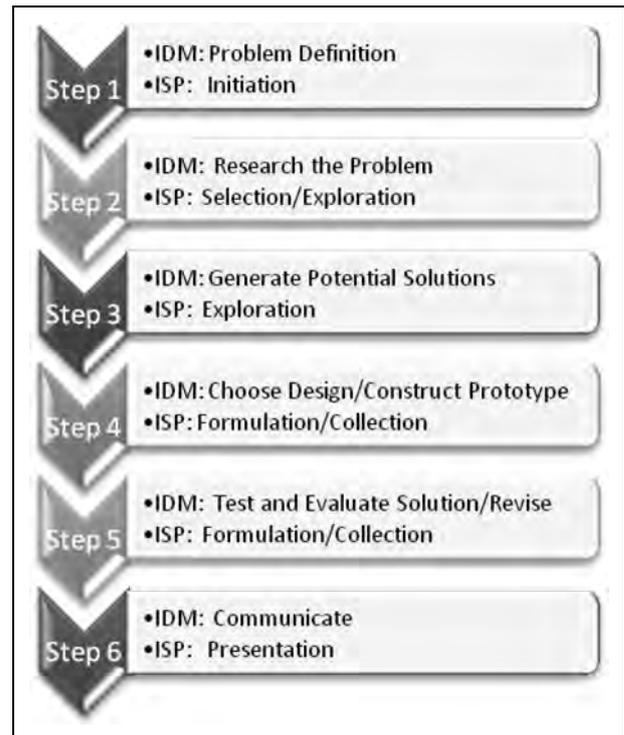
*Revise solution*: Comparing performance of design against specifications can show where improvements can be gained. An information search into different alternatives for a specific part of the system can help uncover alternate materials, parts, or designs for underperforming aspects of the design. Depending on how much improvement is needed, the brainstorming or selection phase might have to be revisited.

*Communicate*: Once the solution has been designed, built, tested, and optimized, the results need to be communicated to the target audience. This could be through report writing, posters, or in-person or virtual presentations. Important in this stage is appropriate documentation of resources used throughout the project, which is a quite familiar topic for librarians.

### Toward an integrated model

Figure 4 summarizes the analysis in the previous section, drawing a correlation between stages in the information and engineering design models. By identifying the kinds of information that a student might need at each stage, one can then develop instructional interventions to help students address a particular need, using the best practices from both disciplines. This figure, then, provides a translation tool between the engineering education literature and the IL, so librarians and engineering faculty can apply their own body of knowledge to the challenge of student learning and the teaching of the design process.

As an example of the utility of the model, if an instructor identifies that students are having trouble with Step 1, below, a librarian can understand that this means the ‘initiation’ phase of the problem solving



**Figure 4.** Comparison of Informed Design (IDM) and Information Search Process (ISP) models.

process needs work and can apply an activity from their own teaching toolkit to help the students clarify the ‘research question’ they have.

### Conclusions

Clearly, both student outcomes and integration of information skills need to be improved as applied to engineering design. Explicitly breaking down the engineering design process into stages and identifying the information gathering stages relevant during each stage will encourage deeper and more productive conversations and collaborations between engineering faculty and librarians. Librarians will understand better how engineers solve problems. Engineers will better understand the role information gathering, integration, and application can play in improving student performance. Information gathering activities do have a place throughout the engineering design process. Information skills can be more deeply integrated into design activities with a common language to express the kinds and purposes of information needed at each stage. The ISP is a robust conceptual model for the mapping between engineering design and information gathering.

### Note

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## References

- ABET Engineering Accreditation Commission (2010) *Criteria for accrediting engineering programs*. Baltimore, MD: ABET.
- Association of College and Research Libraries (2000) *Information Literacy Competency Standards for Higher Education*. Chicago: ACRL, ALA.
- Atman C, Adams R, Cardella M, Turns J, Mosborg S, and Saleem J. (2007) Engineering design processes: A comparison of students and expert practitioners. *Journal of Engineering Education* 96(4): 359–379.
- Atman C, Chimka J, and Nachtmann H (1999) A comparison of freshman and senior engineering design processes. *Design Studies* 20(2): 131–152.
- Boston Museum of Science (2011) Engineering is elementary. Accessed June 1, 2011. [www.mos.org/eie](http://www.mos.org/eie).
- Bursic K and Atman C (1997) Information gathering: a critical step for quality in the design process. *Quality Management Journal* 4(4): 60–75.
- Condoor SS, Shankar S, Brock H, Burger C, and Jansson D (1992) Cognitive framework for the design process. In *4th International Conference on Design Theory and Methodology*. American Society of Mechanical Engineers. 42: 277–281.
- Cross N, Christiaans H, and Dorst K (1994) Design expertise amongst student designers. *Journal of Art and Design Education* 13(1): 39–56.
- Denick D, Bhatt J, and Layton B (2010) Citation analysis of engineering design reports for information literacy assessment. In *Proceedings of the 2010 American Society for Engineering Education Annual Conference & Exposition*.
- Ekwaro-Osire S, Afuh I, and Orono P (2008) Information gathering activities in engineering design. In *Proceedings of the 2008 American Society for Engineering Education Annual Conference & Exposition*.
- Ennis C and Gyeszly S (1991) Protocol analysis of the engineering systems design process. *Research in Engineering Design* 3(1): 15–22.
- Guindon R (1990) Designing the design process: exploiting opportunistic thoughts. *Human-Computer Interaction* 5(1): 305–344.
- Hacker M and Burghardt D (2004) Informed design. *Technology Teacher* 64(1): 6–8.
- Head A and Eisenberg M (2010) Truth be told: how college students evaluate and use information in the digital age. *Project Information Literacy Progress Report*, Seattle, WA: University of Washington Information School. [http://projectinfolit.org/pdfs/PIL\\_Fall2010\\_Survey\\_FullReport1.pdf](http://projectinfolit.org/pdfs/PIL_Fall2010_Survey_FullReport1.pdf).
- Holliday W and Li Q (2004) Understanding the Millennials: updating our knowledge about students. *Reference Services Review* 32(4), 356–366.
- International Technology Education Association (2007) *Standards for technological literacy*. Reston, VA: ITEA.
- Kuhlthau C (2011) Information search process. Accessed June 1, 2011. [http://comminfo.rutgers.edu/~kuhlthau/information\\_search\\_process.htm](http://comminfo.rutgers.edu/~kuhlthau/information_search_process.htm).
- Kuhlthau C (2004) *Seeking meaning: a process approach to library and information services*. Westport, CT: Libraries Unlimited.
- Mosberg S, Adams R, Kim R, Atman C, Turns J, and Cardella M (2005) Conceptions of the engineering design process: an expert study of advanced practicing professionals. In *Proceedings of the 2005 American Society for Engineering Education Annual Conference & Exposition*.
- Mullins C, Atman C, and Shuman L (1999) Freshman engineers' performance when solving design problems. *IEEE Transactions on Education* 42(4):281–287.
- National Academy of Engineering (2004) *The engineer of 2020: visions of engineering in the new century*. Washington, DC: National Academies Press.
- Radcliffe D and Lee TY (1989) Design methods used by undergraduate engineering students. *Design Studies* 10(4): 199–207.
- Riley D, Piccinino R, Moriarty M, and Jones L (2009) Assessing information literacy in engineering: integrating a college-wide program with ABET-driven assessment. In *Proceedings of the 2009 ASEE National Conference*.
- Wertz R, Ross M, Fosmire M, Purzer S, and Cardella M (2011) Do students gather information to inform design decisions? Development of an authentic assessment tool of information gathering skills in first-year engineering students. In *Proceedings of the 2011 ASEE National Conference*.

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# Environmental literacy and the emerging roles of information professionals in developing economies

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## Abstract

Environmental degradation has become a serious source of concern for contemporary society, giving rise to efforts in the way of advocacies, conferences and awareness campaigns at different levels. While information professionals in developing economies are positioned to contribute to environmental sustainability; they need to apply creativity and innovation to overcome issues like low literacy levels, poor infrastructures, political apathy of environmental information to achieve the intended goal of environmental literacy. New roles are evolving beyond mere provision of information; these include information professionals as change agents, educators, electronic experts and partners to other change agents. The paper argues that information professionals could be more relevant to the needs of sustainable environment by repositioning themselves in terms of their roles in their various communities. Some recommendations made in the paper include revitalizing public libraries, training in Information and Communication Technology skills and collaboration with interest groups.

## Keywords

environmental literacy, environmental sustainability, information professionals, developing economies

*In nature there are neither rewards nor punishments—  
there are consequences.*

Robert G. Ingersoll (1833–1899)

## Introduction

From local to national and global news lines, the information that filters down to the world's population is grim stories of environmental challenges and evidence that all is not well with our earth. These leave nobody in doubt that drastic efforts are needed to halt or alleviate some of these problems. Advocacies and summits on environmental protection and management have been carried out in the past and present at different levels and by different forums. International concerns about the declining quality of the environment, especially on issues relating to scarcity of natural resources, are on the increase (Ijatuyi 2005).

The United Nations Environment Programme (UNEP) (1989) and Oyesola (1995) documented that contemporary international concerns began with the United Nations Conference on the Human Environment in Stockholm in 1972. This continued with efforts in the 1980s with the World Commission on Environment and Development (Brundtland Commission), through to the 1990s with the Earth Summit Conference (Rio Conference); this later culminated in the publication of Agenda 21 in 1992 (Francis 1996). In this conference, environmental issues were given a place of prominence in the process of sustainable development (Francis 1996). In December 2009,

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the parties of the United Nations Framework Convention on Climate Change (UNFCCC) met in Copenhagen, Denmark to renew the climate protocol in preparation for the expiration in 2012 of the Kyoto Protocol aimed at preventing climate changes and global warming.

These are sincere efforts; however governments in developing countries need to be more aggressive at different levels to make the goals and resolutions of these forums realizable in the long run. Grassroots orientation is required to provide the right level of sensitivity that will build a world population that is ready to relate more positively with mother earth.

Factors like low literacy levels in developing countries, poor infrastructural/ technological development and insufficient political will to uphold policy issues are some of the challenges information professionals in developing economies have to cope with. These professionals require innovative methods if they want to create an impact in their societies.

### **Sustainability – the goal**

The Millennium Development Goals have environmental sustainability as one of the eight goals. This is in recognition of the poor state of health of the earth brought about by industrialization and unhealthy human activities. Some of the effects of poor environmental management include erosion, decline in biodiversity, global warming, food insecurity, health problems, climate change, drought and desertification. The Atmospheric Radiation Measurement (2011) revealed that severe deforestation has reduced original world forest area from 6 billion hectares to about 4 billion hectares. This has affected the world carbon sink, contributed to global warming and reduced the biodiversity component of the earth.

The term ‘sustainability’ has a wider scope than is usually applied to it. Newport, Chesnes, and Lindner (2003) presented a picture of sustainability as a tripod comprising the environment, economic development and social equity. Sustainable development can only be achieved through an interaction of the three components rather than continuous emphasis on the environment at the expense of the others. The Brundtland Report captures these three components within a unifying picture by stating that sustainable development is the development which meets the needs of the present without compromising the ability of future generations to meet theirs (Mortensen 1998).

### **Environmental literacy**

The terms ‘environmental literacy’, ‘ecological literacy’ and ‘environmental education’ have been used

side by side (Ecological Society of America 2010). However, environmental literacy can be perceived as a goal of environmental education while ecological literacy relates to an individual’s intimate knowledge of a specific ecosystem. Experts have defined environmental literacy in various ways. Miller (2010) defined environmental literacy as the ability to recognize that one’s choices impact the environment; to identify the most sustainable solution to a problem; and to be able to act in the most environmentally friendly way on that solution. In the same vein, Disinger and Roth (1992) defined it as “essentially the capacity to perceive and interpret the relative health of the environmental systems and take appropriate action to maintain, restore and improve the health of those systems”. Carnegie Mellon University (2003) and Disinger and Roth (1992) clarified that action, not just a literacy of ‘knowing’ but one accompanied by observable behaviours, is a distinctive quality of environmental literacy.

Imparting information literacy is a traditional role for librarians and information professionals. Information literacy refers to the set of skills required to find, retrieve, analyze and use information. According to Hancock (2003) information literacy enables individuals to cope with the information explosion and disinformation and enhances their ability to make informed decisions. Environmental literacy is therefore one of the many literacies, and is required by individuals to manage their environment. Briggs (1998) pointed out some areas where environmental information is utilized. These areas include discussions on environmental hot-spots, environmental awareness, provision of a baseline for debate, environmental reporting and setting sustainability targets and goals.

David W. Orr, who coined the term ‘ecological literacy’, stated that “institutions that purport to improve minds” have a central role to play in correcting the disorder in the ecosystem which is a reflection of a prior disorder of the mind (Orr 2005). Palmer and Neal (1994) note that the Tbilisi report of 1977 and Agenda 21 of the United Nations Conference on Environment and Development (UNCED) expand on the theme of “education, public awareness and training” in relation to sustainable development. One of the good reasons why environmental education should be sustained, as explained by the Campaign for Environmental Literacy (2007), is that environmental education, when incorporated into the curriculum, improves students’ performance in the sciences and other core subject areas, since students are able to link classroom experience to the real world. Also, that contemporary business leaders consider an

environmentally literate workforce critical to business success and profitability, since sustainability, economy and efficiency are fundamental to the growth of enterprises in the present day.

Reynolds et al. (2010) identified three ways of reinforcing environmental sustainability on campuses. Citing Orr (2004), they opined that the campus itself was a powerful form of pedagogy, a “hidden curriculum” which can foster better appreciation and understanding for the environment. This is through the practice of sustainable technologies or “greening operations” in the way of architectural designs, waste management, renewable energy generation and use of energy efficient lighting. A good example is the use of solar energy lighting in the Federal University of Technology Akure, Nigeria. Also mentioned in Reynolds et al. (2010) is offering environmental or sustainability studies as major or minor programmes. This has been adopted by universities and colleges such as the University of Adelaide, the University of Lancaster and the University of Ibadan. Finally, introducing it as a basic competency course across the curricula for all students creates far-reaching positive effects such as an improvement in responsible environmental behaviour and other variables such as locus of control, environmental responsibility, intention to act, perceived knowledge of environmental issues and perceived knowledge of, and skills in using, environmental action strategies (Hsu 2004).

Cunningham and Cunningham, (2010) put forward some other methods of carrying out environmental education such as organizations engaging in teaching in schools, people carrying out internships in agencies or environmental organizations, and citizen science projects involving ordinary people and established scientists. Another model discussed by Rowe (2002) is integration of a sustainability paradigm into the mission statement of higher institutions. All these are practical methods that can succeed only if supported by a sound information base.

### **Information access, provision and management and the developing economy**

Providing citizens of developing countries with access to information has quite different challenges from that faced by the more developed countries. Poor literacy rates are a major challenge to information access in developing economies. UNESCO (2008) confirms that:

“More than three-quarters of the world’s illiterates live in only fifteen countries, including eight of the nine high population countries (E-9): Bangladesh, Brazil, China, Egypt, India, Indonesia, Nigeria and

Pakistan. In most of the fifteen countries, adult literacy rates have improved since 1985–1994, although continuing population growth translates into increases in absolute numbers of illiterates in several countries (e.g. Bangladesh, Ethiopia, Morocco). Adult literacy rates below 50% persist in several countries of South and West Asia, and sub-Saharan Africa.”

The implication for these information professionals is that they must submit to Marshall McLuhan’s proposition that “the medium is the message” (McLuhan 1964). Since information provided in print form will serve only a limited percentage of the population, information must therefore not only come in visual and audio forms, but must also be presented in local languages if the goals of universal access must be achieved. The issues are made worse by the fact that public libraries, that are the most accessible to the generality of the population, almost do not exist as functional institutions in a country like Nigeria (Abdulkarim 2010; Opara 2008; Nwokocho 1998). Governments are more engaged in managing political instability, unemployment and insecurity than in supporting such facilities, thus poor funding has become the lot of these structures, which now exist as mere shadows of their former selves. Ironically, investment in education, and by extension, libraries, is one of the most feasible solutions to social problems.

Energy or power supply is also a major barrier to full exploitation of the privileges of information and communication technology. It is a universal fact that ICT has revolutionized the way information is utilized, which is what globalization is all about. However, because there is need for power to drive the wheels of technology, the advantages of ICT are still not absolutely harnessed to bring about desirable changes in developing countries. Catching up with the pace of technological advancement puts many developing countries behind the line.

The essence of information literacy, which is basically to build an informed citizenry, is yet to be enjoyed in developing economies because of these challenges. This has implications for the skills, competencies and roles expected of information professionals engaged in environmental information literacy.

### **A definition of roles**

Traditionally, librarians and other information professionals served solely as custodians of knowledge; however, present day realities require greater professionalism, creativity and innovation. This is because contemporary users are better informed, know what they want and will go for nothing less. ICT has also widened the available options. Change is therefore

imperative for information professionals who want to survive.

In addition to this, environmental information is characterized by certain attributes that pose challenges to researchers, educators, information professionals and other individuals engaged in its use. Primarily, it is inter- and multidisciplinary and complex in nature cutting across so many other fields and concerns (Dosa 1974 and Francis 1996). Other attributes of knowledge in environmental information are that it is:

- fragmented and scattered in nature
- subject to value judgements because of its highly emotive nature
- expansive in vocabulary growth (new usages and colourful language such as eco-friendly, eco-consumer, eco-efficiency, greening and so on)
- dominantly localized.

Land (2011) supported this view by pointing out that the challenge for higher education is to exploit the rich and diverse expertise of other disciplines to enhance environmental curriculum and programming. These are some of the reasons that inform a change in the role of the information professional who would be relevant to the Millennium Development Goal of environmental sustainability.

A discussion of the role of librarians in the information society can be explored in two directions. Firstly, in terms of the prevailing and changing situations in the different library types and their various user groups; or secondly, according to the general overriding trends experienced in information environments. This second method is adopted in this paper.

### **The information provider**

Armstrong (1971) identified the role of the library in environmental education in terms of creating a special collection of materials including fiction, non-fiction and audio-visual resources and creating a pleasant and conducive environment that will attract users. As an intermediary, librarians and information professionals not only select and acquire information resources relevant to the needs of users, but also manage the information explosion and overload through bibliographic control. This becomes especially necessary in the light of the multi-disciplinary nature of environmental information. Nuhu (1994) observed the gap in information provision to the rural and non-literate communities in northern Nigeria. This implies that information professionals in such communities also necessarily have to repackage information to widen access to information.

### **The change agent**

Bhatti (2010) discussed the librarian as a change agent with the responsibility of providing relevant materials in various formats with the intention of attitudinal change. Theme-based exhibitions and displays also have a potential to pass on powerful messages to their audience. In the health and agricultural sector, extension work is a well-developed method of community awareness and information dissemination to societies with poor literacy levels. Librarians have the potential to work closely with extension workers in community information services in rural communities (Aboyade 1987 and Aina 2006).

### **Information professionals in partnerships**

Sharing of resources and ideas by libraries through partnerships and collaborations is a role that is taking on newer dimensions. The information manager may collaborate with interest groups and stakeholders in environmental information. Such groups include government, non-government and community-based organizations, volunteer groups, mass media and other change agents. Collaboration exists through organizing and participating in conferences, documentation, exchange of ideas and facilities amongst others. Since team leadership and collaborative skills are required in the management of consortiums for collection development, resource sharing and networking have expanded the roles and responsibilities of today's librarians. Indeed, academic and research librarians have realized that this is most practical way to widen user access.

### **The electronic resources expert**

Information technologies have created new roles for librarians as electronic-resources experts (Rowland 1998). The management of online catalogues, bibliographic databases, e-journals, Web 2.0 technologies and other Internet resources is a role librarians must play to enhance access. Subscription by libraries to e-resources such as OARE (Online Access to Research in the Environment), and AGORA (Access to Global Online Research in Agriculture), AEER (Applied Ecology and Environmental Research) and EBSCOhost has assisted librarians in the role of providing high quality environmental research material in these days of poor funding, consequently extending their roles. According to Troll (2001):

“libraries become publishers when they digitize collections, host journals that are ‘born digital’, or assemble student or faculty works online. Librarians become politicians when they lobby faculty not to

sign away copyright to a print publisher, who then requires them or the library to pay for use of their own works.”

These reflect some roles that come with change and the information society.

### The educator

Another role librarians need to emphasize to maintain their relevance is their reference and teaching role. While the situation of information users in developing economies is changing from one of extreme information scarcity to one of overload because of the influence of ICT, librarians from the smallest library to the largest are burdened with the responsibility of creating independent and lifelong users of information. The basic information literacy skills they impart to library users will ensure that users of environmental information will not only be able to find and use information, but also be able to evaluate the information retrieved and ensure that it is satisfactory and actually useful. The implication is that in such socially relevant areas of education like citizenship education, gender studies and environmental education that have lifelong value, the librarian needs to equip the user to cope with changing technologies and methods of information retrieval. For instance, Web 2.0 has changed how information is presented and utilized today, yet cumulative experience makes it a challenge that can be accommodated by the IT literate. This is actually what information literacy is about – learning how to learn.

### Conclusion and recommendations

Sustainable development is a collective responsibility. Since information professionals are strategically positioned to influence behaviour at different levels through information, awareness creation and education, the onus lies on them to contribute to building and maintaining an environmentally literate citizenry. Of significant importance is the plight of the illiterate population, most of whom are in developing countries and have little access to information.

The goal of environmental literacy goes beyond merely being custodians of information and calls for information professionals who are sensitive to the needs and characteristics of their environment. This is why contemporary professionals are evolving as active change agents, educators, and electronic experts who are ready to work with other sectors of society to create healthier environments.

This paper recommends the following towards improving the activities of information professionals engaged in environmental literacy:

- Information professionals should exploit a variety of techniques or methods in their efforts to achieve better access to environmental information, especially to the illiterate population, through repackaging, seminars, exhibitions, social media and awareness activities.
- ICT has contributed to changing roles, this implies that information professionals must develop skills that will enable them manage electronic resources. Training schools must consistently update their curriculum to reflect the changes, since these inform the roles. The consciousness of change as a reality of the times and its management should be incorporated into the training of present day information professionals.
- Training schools should incorporate competencies like background courses in environmental studies, management (to enable information professionals to cope with the complexities of collaboration) and repackaging skills, among others, into their programmes.
- Reviving public libraries through investment of both capital and competent manpower will ensure greater grassroots involvement and interest. Government and non-governmental organizations should set up urgent action plans to restore public libraries to their pride of place. Community information services have the potential to contribute to wider access to information and should be used to disseminate environmental information in rural areas.
- Greater collaborative activity is called for in information service. Collaboration or partnerships with interest groups with environmental concerns should come in the way of organizing conferences and workshops and participating in thinktanks. This will make interactions more robust and effective.
- Centres of excellence are being established in many strategic areas like gender, community health and conflict management as well as environmental research. Many more should be established in the area of environmental management; however, librarians and information professionals must be given a prominent position in these centres because of their distinctive competencies in information management, research and documentation.
- Information professionals must emphasize acquisition of local content in the provision of environmental information to their target groups.

### Note

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## References

- Abdulkarim M (2010) Improving public libraries in Nigeria. *Weekly Trust* Friday, 12 March. Available at: <http://www.dailytrust.com/weekly>. (Accessed on 15 March 2011).
- Aboyade BO (1987) *The provision of information for rural development*. Ibadan: Fountain Publications.
- Aina LO (2006) *Information provision to farmers in Africa: The library extension service linkage*. Available at: <http://www.ifla.org/IV/ifla72/index.htm>. (Accessed on 6 May 2011).
- Armstrong H (1971) *The role of the library in environmental education*. Available at <http://www.eric.ed.gov/ERICWebPortal/recordDetail?accno=ED102047>. (Accessed on 16 April 2011).
- Atmospheric Radiation Measurement (2011) The Atmospheric Radiation Measurement Background Information: Predictions of Climate Change. Available at: <http://education.arm.gov/teacher-lounge/background/predictions>. (Accessed on 8 May 2011).
- Bhatti R (2010) Libraries and education for peace in Pakistan. *Library Philosophy and Practice*. Available at: [www.webpages.uidaho.edu/~mbolin/bhatti4.htm](http://www.webpages.uidaho.edu/~mbolin/bhatti4.htm). (Accessed on 24 April 2011).
- Briggs D (1998) *State of environmental reporting* In: B. Nath, L. Hens, P. Compton and D. Devvyst (eds) *Environmental management in Practice: Volume 1 (Instrument in Environmental management)*. London: Routledge, 90–107.
- Campaign for Environmental Literacy (2007) Why is environmental education important? Available at: <http://www.fundee.org/campaigns/nclb/brief2b.htm> (Accessed on 15 April 2011).
- Carnegie Mellon University (2003) What is environmental literacy? Available at: <http://telstar.ote.cmu.edu/enviro/m2/sl/envlit.shtml> (Accessed on 2 April 2011).
- Cunningham WP and Cunningham MA (2010) *Environmental science: A global concern*. 11<sup>th</sup> ed. Boston: McGraw-Hill.
- Disinger J and Roth C (1992) Environmental literacy. *ERIC/CSMEE Digest*. Available at:
- Dosa M (1974) An integrating approach to environmental information. *Special Libraries* 65: 189–193.
- Ecological Society of America (2010) *Ecology and Education Summit: Environmental Literacy for a Sustainable World*. Available at [www.esa.org/eesummit/content/environmental-lit](http://www.esa.org/eesummit/content/environmental-lit). (Accessed 5 November 2011).
- Francis H (1996) Environmental information issues in the English speaking Caribbean. *Libri* 16: 34–40.
- Hancock V (2003) Information literacy for lifelong learning. *ERIC Digest* Available at: [www.libraryinstruction.com](http://www.libraryinstruction.com) (Accessed on 13 October 2010).
- Hsu SJ (2004) The effects of an environmental education program on responsible environmental behaviour and associated environmental literacy variables in Taiwanese college students. *Journal of Environmental Education* 35 (2): 31–48. <http://www.ericdigests.org/1992-1/literacy.htm> (Accessed on 13 October 2010).
- Ijatuyi O (2005) *Awareness and use of information as predictors of women's management of the physical environment in Ondo state, Nigeria*. Ibadan, Nigeria: Unpublished PhD thesis, University of Ibadan, Nigeria.
- Land MD (2011) Pace University: *Pace Academy for Applied Environmental Studies Faculty and Staff*. <http://www.pace.edu/paaes/faculty-and-staff>. (Accessed on 10 May 2011).
- MacLuhan M (1964) *Understanding media: The extensions of man*. New York: McGraw Hill.
- Miller K (2010) Environmental literacy and green volunteer opportunities for your community. *Public Libraries Online* Available at: [www.publiclibrariesonline.org](http://www.publiclibrariesonline.org) (Accessed on 13 October 2010).
- Mortensen LF (1998) Measuring sustainable development. In: N. Hens, P. Compton and D. Devvyst (eds). *Environmental management in practice: Vol. 1 Instruments for environmental management*. London: Routledge, 124–143.
- Newport D, Chesnes T and Lindner A (2003) *The "environmental sustainability" problem: ensuring that sustainability stands on three legs*. Available at: <http://www.emeraldinsight.com/1467-6370.htm>. (Accessed 10 May 2011).
- Nuhu A (1994) Public librarianship in Northern Nigeria: limitations and challenges. *African Journal of Library, Archives and Information Science* 4(1):27–36.
- Nwokocha U (1998) Public libraries in Nigeria: Decades of persisting problems. *International Information & Library Review*. 30 (2): 97–104.
- Opara UN (2008) The public library in contemporary Nigeria: Challenges and the way forward. *IFLA Journal* 34 (4) 349–358. (Accessed on 22 April 2011).
- Orr DW (2004) *Earth in mind*. Washington DC: Island Press.
- Orr D (2005) Foreword. In: K.S Michael and B. Zenobia (Eds.) *Ecological literacy: educating our children for a sustainable world*. San Francisco: Sierra Club Books, p. x
- Oyesola D (1995) *Essentials of environmental issues: The world and Nigeria in perspective*. Daily Graphics: Ibadan.
- Palmer J and Neal P (1994) *The handbook of environmental education*. Routledge: London.
- Reynolds HL et al. (2010) *Teaching environmental literacy across campus and across the curriculum*. Available at: <http://www.scribd.com/doc/38708623/Teaching-Environmental-Literacy-Introduction> (Accessed on 18 April 2011).
- Rowe D (2002) *Environmental literacy and sustainability as core requirements: Success stories and models*. Available at: [ncsonline.org/EFS/DebraRowe.pdf](http://ncsonline.org/EFS/DebraRowe.pdf). (Accessed 20 October 2010).
- Rowland F (1998) *The librarian's role in the electronic information environment*. Available at: [www.bodley.ox.ac.uk/icsu/rowlandppr.htm](http://www.bodley.ox.ac.uk/icsu/rowlandppr.htm). (Accessed on 5 April 2011).

Troll DA (2001) How and why are libraries changing? *Digital Library Federation*. <http://old.diglib.org/use/whitepaper.htm> (Accessed on 20th April 2011).

UNESCO (2008) *Education for all by 2015: Will we make it?* Education for All Global Monitoring Report 2008. Available at: <http://unesdoc.unesco.org/images/0015/001548/154820e.pdf>. (Accessed on 8 May 2011).

United Nations Environment Programme (1989) *Action on the environment: The role of the United Nations*. International Institute for Environment and Development, Nairobi.

Wikipedia (2011) *Ecological literacy*. Available at: [http://en.wikipedia.org/wiki/Ecological\\_literacy](http://en.wikipedia.org/wiki/Ecological_literacy). (Accessed 11 May 2011).

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# The second hand library building: Sustainable thinking through recycling old buildings into new libraries

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## Abstract

Old buildings are being recycled into libraries all over the world. The process of rededication of a building with a former different usage into a library is quite obviously a matter of recycling. The transformation of an existing building with a prior non-library function into a library brings the challenge and the opportunity for sustainable thinking in library planning. As non-renewable resources are decreasing, reusing and recycling are going to become increasingly necessary in the future. The recycling of old buildings means reducing the ecological footprint of library buildings in a cost-effective and efficient way. Beside 'green' aspects like water conservation, energy conservation, recycled or sustainable building materials, indoor air quality, and solar power from photo-voltaic panels, the planning of an adaptive reuse is a very different task than the planning of a library in a totally new building. Some best practice case studies from Germany, and other countries in Europe are presented.

## Keywords

library buildings, sustainable library buildings, building conversions, building renovation, architecture, library and information science students, ecological footprint

“We are ecologically interdependent with the whole of the natural environment; we are socially, culturally, and economically interdependent with all of humanity; sustainability in the context of this interdependence, requires partnership, equity, and balance among all parties.”<sup>1</sup>

## The second hand library – a way of reducing the ecological footprint

Why should libraries be sustainable buildings, and what is sustainability with regard to an adaptation of an old building for library use?

Old buildings are being recycled into libraries all over the world. Many buildings have been given a new purpose, such as an old grain silo, a post office, barracks, a brewery, a factory, a railway station, and a horse stable, to name but a few that were transformed into libraries. Recycling of buildings will

become increasingly important in the future. Conversion and reuse of old buildings with a different former usage into a library means per se a special aspect of sustainability. Revitalization includes elements and features to lessen the building's energy and environmental impact on our planet. Being green is an element of being sustainable, but sustainability is actually a larger and more holistic concept than being green. A matter of sustainable thinking is the realization of reducing the ecological footprint because of the chance of bringing green aspects into an old building. The proportion of libraries adapted from old buildings when compared to construction of new buildings is likely to remain significant in the future,

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especially in the developed parts of the world. Our paper will show the advantages of sustainable thinking by recycling of old buildings into libraries: the aspects of ecology, culture, urban regeneration, finance and corporate identity.

Libraries, as non-commercial public buildings, are especially suited to provide examples to illustrate the idea of sustainability, to distribute and to disseminate this idea to the people, and to promote civic involvement in sustainability. The Seattle Public Library gave a good example when “the architects and contractors who designed and built the Central Library were committed to constructing a sustainable building that meets the *Sustainable Building Policy of the City of Seattle*. The purpose of this policy is “... to demonstrate the City’s commitment to environmental, economic, and social stewardship, to yield cost savings to the City taxpayers through reduced operating costs, to provide healthy work environments for staff and visitors, and to contribute to the City’s goals of protecting, conserving, and enhancing the region’s environmental resources.”<sup>2</sup>

### An old subject in a new context

For a long time the question of adapting buildings to library use was mainly characterized by rejection of the re-use of old buildings and emphasis on the benefits of new buildings: “A librarian must never accept an old building which has previously been used for other purposes.”<sup>3</sup>

In 1985 there was a turning point in the librarians’ debate. At the IFLA conference in Budapest there was a discussion of what conditions must be fulfilled for an old building to be converted into a library and what must be considered when remodeling. This seminar initiated a change in the discussion: “Not all the advantages are evident in every project, but when one considers and contrasts a large number of these re-used, converted premises, one can discover a substantial number of differing factors which have definite advantages.”<sup>4</sup>

In 2007 Santi Romero pointed out the possibilities of re-use and developed a typology of adaptable buildings and identified the advantages and disadvantages of the conversion and the specific aspects of renovations by different building types.<sup>5</sup> He compiled a list of different conditions which a re-used building should meet. He points out the positive aspects, the symbolic value, meaning for the cultural identity, the urban situation, the most central location, the architectural heritage, the distinctiveness of the architecture, and acceptance by the population.

In 2011, Frank Seeliger gave an overview of the current state of research.<sup>6</sup> In the same volume, case

studies from Germany, Switzerland and Austria were presented by the authors.<sup>7</sup>

### Some examples

Sustainability means also preservation of the cultural heritage, the historical identity of places and buildings, and preservation of the ‘genius loci’. Some examples should illustrate the idea of sustainable revitalization and may draw librarians’ and architects’ attention to best practice examples of revitalization, and encourage them to look around and find their own ideas for reusable buildings in their own environment.

#### *Library of Braunschweig University of Art, former EXPO exhibition building of Mexico (2002)*<sup>8</sup>

A temporary construction for the EXPO 2000 at Hanover, Germany (Architects: Legorreta+Legorreta, Mexico City/Los Angeles) was changed to permanent use as a library: one of the 43 national pavilions – the Mexican Millennium Pavilion.<sup>9</sup> The architecture of the building is represented by a large crystal box, using very light material (glass and steel) because it had to be a temporary construction. This was a



**Figure 1.** Hanover, Mexican EXPO 2000 Pavilion (©Hochschularchiv der HBK)



**Figure 2.** Luckenwalde, railway station, mainhall, before ((c) Stadt Luckenwalde) and after ((c) A. Meichsner, Architekten: Arge WFF Wronna, Feldhusen, Fleckenstein) becoming a library

singular change to get a new library building within a very short time, because the opportunity to reuse the pavilion came just after the EXPO closed its doors.

The building consists of an outer and an inner cube structure. The interior was specially designed for the necessities of the library by KSP Jürgen Engel architects. A building connecting to the university was added (only one storey with basement). Here are the offices of the staff. So that the Expo pavilion is an example of a library building which consists only of space for users and collection, with the administration located in a separate building (like Norman Foster did in his project 'Berlin Brain' of the Freie Universität Berlin<sup>10</sup>). Closed stacks are in the main building of the university too. The cube measures 18 x 18 m and has a height of 18 m. The inner cube is 11 x 11 m and 12 m high. There are 4.5 levels and a basement. There is enough space for 60 user desks and 80,000 volumes on open shelves. The top level of the inner cube is reserved for exhibitions and events. Because the whole library consists only of one room, there are some acoustic problems, but sound insulation and sun protection were improved. Minus: an extension of the building is not possible.

It fits well with a university of art. Transparent, very clear, open to the outside, with a striking interior cube in colorful yellow, it became the new symbol of the entire university, with a high level of identification from students and teachers.

### *Municipal Library Luckenwalde (Germany)<sup>11</sup>*

The Municipal Library of Luckenwalde is a transformation of a railway station (2008) – a station building from the beginning of the 20<sup>th</sup> century in a small town a half-an-hour train ride from Berlin. It was transformed by ff-architekten Berlin / raumbewegung.

An excellent location for all citizens, especially for those who take the train. Because the building had not sufficient space for 45,000 volumes and 50,000 users a year, a shimmering golden extension was added for the children's' library (ground floor) and the library for young adults (first floor).

### *Library of the Lucerne University of Applied Sciences and Arts, Switzerland (end of 2011)<sup>12</sup>*

A nearly 30 year old logistic center of the Swiss Mail was transformed into a library and university building by the Swiss architects Enzmann + Fischer (Zurich).

A very excellent location: near the main station in the middle of the city with good access to public transport and next to the Convention Center KLL (designed by Jean Nouvel). Costs: less than half of a new building of this size and location. Typical for many projects of converted buildings is the surprise of more space than needed! It was a chance for cooperation with partners: another university, the Lucerne University of Teacher Education (PHZ), will join in collaborative use of the building. With space for 300,000 volumes and 670 user desks, this is nearly perfect space. The library is the pivotal point of the building, right in the middle, on the first floor.

Positive is the very flexible use of space of this type of building. It allows the load carrying capacity of the floor to be improved. Challenging is to bring light into the big spaces, the incomparable effect of daylight: more natural light for the impact on cognitive and psychosocial well-being and energy-saving.<sup>13</sup>

Negative is the low ceiling height (less than 2.95 m), therefore shelving is not very efficient – it's a compromise.



**Figure 3.** Siena, a medieval lane becoming the Public Library ((c) Petra Hauke)

### *An impressive history: La Biblioteca comunale degli Intronati di Siena – The Public Library of Siena*<sup>14</sup>

The Biblioteca degli Intronati in Siena is one of the most historic cultural institutions in Siena. The library in via della Sapienza was founded in 1758 through a donation given by the archdeacon and university professor Sallustio Bandini. The collection was brought to the ‘Palazzo’ dell’Accademia degli Intronati, the library’s home until today. Other donors followed Bandini’s example so that the collection expanded up to some 550,000 volumes, including 63,000 manuscripts and 1091 incunabula and illuminated books and other historic and precious items like 50,000 autographs, etc. today.

Like other Italian libraries with a similar history over a long time the Biblioteca degli Intronati had to be seen and was used as a kind of ‘museum’: a historic collection in a historic building with a historic reading room, etc. – beautiful and admirable, but nothing to be called a ‘public library’.

The history of the building goes back to the 13<sup>th</sup> century, when a couple of medieval houses were destined to become a so-called Domus Misericordia, serving poor or sick people, orphans, and pilgrims. More buildings such as a church and a public fountain, etc. were added, a medieval lane between via della Sapienza e via dei Pittori was overbuilt and remains hundreds of years later as today’s so-called ‘vicolo’. But all the construction work stopped rapidly with the plague in 1348.

In 1408, under the influence of pope Gregor XII, the Casa della Misericordia got a new chance and became Casa della Sapienza. During the following centuries more buildings were added, and famous architects were involved to realize a prestigious building, suitable for the home of the University of Siena,

‘La Sapienza’ and the scholarly society, Accademia degli Intronati. After 1758, when the library came to the Palazzo, it grew rapidly and occupied more space of the Domus, dislodging other institutions from the complex of buildings.

A new era was born when, in 1999, the library got financial support from the state as well as from sponsors. A new concept was created to develop the ‘biblioteca per presenza’ into a ‘biblioteca circolante’, based on the IFLA-UNESCO Public Library Manifesto.<sup>15</sup> New and more space was needed to offer a children’s library, as well as 70,000 volumes on open shelves, 100 reading seats, space for 14 OPACs and Internet research, and all the other modern library services.

But instead of building a new library, the overbuilt medieval lane, the ‘vicolo’, with all the small medieval houses on the left and right hand sides was rediscovered and re-used. Special solutions had to be found regarding safety and security, conservation issues, structural analysis, and organizing enough space for offering open shelves instead of storing the books. Some compromises had to be accepted, e.g. not all rooms have natural light, there is no large central reading room, and the architects had to design special furniture and open shelves for 70,000 volumes, etc.

But the most important thing is that a very user-friendly library was created where people – both adults and children – like to come and stay for reading and learning, for meeting people, for feeling comfortable. It is a very special, individual library, not confusable with other places and not possible or imaginable in any other place in the world. More important than some compromises is that users will identify the place as ‘their’ library and enjoy the very specific atmosphere.

### **Sustainable development and sustainable construction**

Contrary to the earlier dictum that projects where buildings are transformed into libraries could not become really good libraries, we can point out successful examples of the very last years from Germany, Italy, Austria and Switzerland: public libraries, academic libraries, and special libraries.

This requires that the old building is adaptable enough for library use, although “it is not realistic to expect the same level of functionality as we would expect from a new building”<sup>16</sup> preserve the symbolic value of the old building, helpful for the urban planning of the special location, the library will bring a lively atmosphere to the old place.

The benefits for sustainability relate to ecology, cultural heritage, urban regeneration, and finance. Sustainability concerning the reuse of an old building means: less land consumption and no disposal of the entire building; instead, conservation of the heritage.

It is a growth area for the future, because in times of empty public budgets investments for new buildings are often harder to enforce as renovations, redevelopments and upgrading. Often, instead of the dreaded effects of an order for conservation, there may be an opportunity to develop an old building to new use. A series of advantages are obvious: The buildings are often architecturally valuable properties in prominent locations. The charm, the ambiance of a distinctive urban building, or even a building that is enshrined in the public consciousness, can be useful for the image of the library – and it does not have to be a real baroque city palace. The history of the building can be inspiring and may promote the decision of planners and librarians. Later library users will enjoy the new response to the old building as exciting and unusual too. This could allow a joint use by different partners using one single building at the same time (libraries and tourist centers, educational institutions, shops or something else), looking forward to unexpected synergies. In a broader sense this is also about sustainability – the re-use of built space: a valuable resource, not only historically, in the case of prominent buildings. The library may expect some financial support – for example, from the European Union for countries of the EU – whether for historical preservation measures, or energy recovery from urban development programs, to motivate decision makers to accept a new library. The architect discovers with a professional eye the potential of an apparently useless building that can be re-used for the new purpose: libraries, the largest non-profit educational and cultural institutions and places of communication with their own specific qualities.

### **Encouraging librarians to accept sustainability**

We should encourage librarians as well as architects to think about the special value of an adapted building for library use. Sustainability should be seen as part of the corporate identity of the library, not only concerning energy saving, but as part of the strategic aims of the library. Sustainability is more than going green.

It becomes more and more obvious that to re-use and adapt an old building to transform it to a library

is not necessarily a case of a bad substitute or a less-than-ideal solution. Librarians should be more open-minded to the sustainability of re-use and should focus on the chance to transform an adaptable building to a high-level ecological-friendly library. To accept an old building may be the first step to reducing the library's ecological footprint.

The experience of the projects mentioned above shows that nothing should be idealized. 'Second hand' is in a positive sense cost-saving, but can also restrict creativity: for the planning librarian the pressure may become very hard with possibly many preset conditions of the building. The risk is to expect too little for the new library in an old re-used building and therefore the librarians may demand too little. In some older buildings the load-bearing limits of the floor may not make them suitable as a library. But even academic libraries today are no longer focusing on compact shelving, they have said goodbye to the myth of fully flexible space. In the digital age there are very few libraries still mainly thinking of book stacks. On the other hand, many library projects benefit from the converted building because they suddenly get more space available than planned, because 'second hand' does not necessarily mean a perfect fit.

We can learn from many projects that the re-use of a building is often a cheaper, often a surprising and realistic opportunity with an acceptable compromise to the alternative of a long and uncertain hope for a new building in the future.

### **Sustainability in library buildings through LIS students' education**

Last but not least we think that there is a special aspect of sustainability in building libraries that should be taught to LIS students and new librarians so that the new generation of librarians will adopt the ideas and goals of sustainability in library buildings through recycling old buildings for excellent library use.

In the Berlin School for Library and Information Science we used the model of project seminars. Every year the school offers a course called 'Turning a book from idea to realization'. The goal is to publish a book related to any library and information science issue. The students' task is to define an interesting subject and to find authors who are experts in their field. The students not only invite these authors to write an article on the chosen issue but they peer review the articles, rewrite them if necessary, and make the articles ready to print. Furthermore they have to find a publishing house that will accept an open access counterpart beside the printed version.

After two book projects published on 'Library buildings and equipment' in 2008/–2009<sup>17</sup> and 'Best practice examples in library buildings and equipment'<sup>18</sup> in 2009–2010, the theme in 2010–2011 was 'Secondhand, but excellent! The reuse of old buildings for library use'<sup>19</sup>. The exclamation mark in the book's title should make clear, first that excellence is definitely a requirement, and secondly that the projects described in the book are excellent examples of how to reuse an existing building for library use.

The students' task was not only to find new best practice examples of recycled buildings in Germany, Austria and Switzerland, but to invite and motivate the responsible librarians and/or architects to write an article about how they found an appropriate building, how they managed all the issues regarding the location factor, the suitability of the building for library use, the capacity for heavy book shelves, the restrictions for the protection of historic monuments, and the implementation of sustainability in their professional work.

The students met the German-American architect Robert Niess, who also serves as professor for 'The Architecture of Re-building' in Düsseldorf, Germany.<sup>20</sup> Together with his wife Rebecca Chestnut, the architect has transformed a historic entertainment building in Berlin into a public library which was the winner of the competition for the 'Renovation and Expansion of the Landmark Buildings at Luisenbad for a Library' in 1988.<sup>21</sup> Since then his office has become renowned for innovative designs for the restoration, refurbishment and expansion of historic buildings. These architects also have transformed a factory in Wildau near Berlin into a fascinating university library, a "Wow!" library as it was postulated by Andrew MacDonald as the 11<sup>th</sup> top quality of good library space.<sup>22</sup>

As a result of that meeting, a very interesting interview about his points of view, his ideals, his experiences and also the critical points of reusing old buildings is also published in the book.<sup>23</sup>

To make the book more useful for the target group – which includes building librarians as well as architects and building authorities – a literature review of national and international published books and articles on that issue was added. About 150 references were chosen for the bibliography, including overviews in English and German as well as articles on best practice examples from Germany, Austria and Switzerland.

Through different surveys about 750 examples of re-used buildings, mainly in Germany, Austria and Switzerland were identified. A selection of 150 interesting examples is listed in the book, including some

details like the building's former use, the year of transformation and the website.

The book was published in 2011 by the German LIS publishing house Bock + Herchen who also agreed to publish the preprint version on the Humboldt University's e-doc server<sup>24</sup> – available with open access without any restrictions.

The students are rather proud of the seminar's result. It was a lot of hard work for them. They got credits for the seminar, but they did more than they needed to do for the credits: they presented the project at the BOBCATSSS Symposium 2011 in Hungary and at the German Library Conference 2011 in Berlin, as well as at the IFLA Poster Session 2011 in San Juan, Puerto Rico.

Therefore we hope that this special aspect of sustainability will be propagated, not only through the LIS students' education when they might carry it into their professional work in the future, but also through their engagement in the international discussion of the idea of reusing old buildings for excellent library use.

## Conclusion

We would like to point out sustainable thinking as a new criterion for good library buildings and to add sustainability to the 'Top Ten Qualities of Good Library Space' by Andrew McDonald.<sup>25</sup> In our mind 'sustainability' should be a main quality for good library space as an overall goal: the 12<sup>th</sup> factor according to McDonald's list. Why the 12<sup>th</sup> quality in a list of only ten? Because actually there is an 11<sup>th</sup> factor in McDonald's paper, which can be described as "wow!" or "oomph!" for exciting features of the building. Sustainability may be not so fascinating as first sight, but it is extremely important for the future.

## Notes

1. Declaration of Interdependence for a Sustainable Future, UIA/AIA World Congress of Architects, Chicago 1993.
2. The Sustainable Building Policy of the City of Seattle, Section 6.9.1. [www.spl.org/locations/central-library/cen-building-facts/cen-sustainable-design](http://www.spl.org/locations/central-library/cen-building-facts/cen-sustainable-design).
3. Sven Plovgaard, Seminar of the IFLA Library Buildings and Equipment Section in 1975 staged in Finland, cit. after Papp (1987), p. 58.
4. Kroller (1985), p. 13.
5. Romero (2007).
6. Seeliger (2011).
7. Hauke/Werner (2011b).
8. Stiller, F. (2011).
9. Gonzáles (2000).
10. Diecks/Werner (2004).
11. Sanne (2009).
12. Schelling (2011).

13. Sands (2002).
14. Biblioteca comunale degli Intronati, via della Sapienza, I - 53100 Siena, Italy. [www.bibliotecasiena.it/](http://www.bibliotecasiena.it/). For further information see Ciampolini (2006).
15. [www.ifla.org/VII/s8/unesco.manif.htm](http://www.ifla.org/VII/s8/unesco.manif.htm).
16. Romero (2007), p. 227.
17. Hauke/Werner (2009).
18. Hauke/Werner (2011a).
19. Hauke/Werner (2011b).
20. [www.chestnut-niess.de](http://www.chestnut-niess.de).
21. [www.berlin.de/citybibliothek/bibliotheken/luisenbad/](http://www.berlin.de/citybibliothek/bibliotheken/luisenbad/).
22. [www.th-wildau.de/bibliothek.html](http://www.th-wildau.de/bibliothek.html); MacDonald (2007).
23. Dieses Bedürfnis nach Ort, nach Raum, nach Würde ... Interview mit dem Architekten Robert Niess, Berlin.
24. <http://edoc.hu-berlin.de/browsing/series> -> Institut für Bibliotheks- und Informationswissenschaft.
25. McDonald (2007).

## References

- Diecks M and Werner KU (2004) "The Brain" – The Philological Library, Free University of Berlin. *LIBER Quarterly* 14 (2004), No.2. <http://liber.library.uu.nl/publish/issues/2004-2/index.html?000077>
- Ciampolini M (2006) *Una nuova biblioteca pubblica a Siena*. Siena: Gli Ori, 2006.
- González GM (2000) *Pabellón de México, Mexican Pavilion, Mexikanischer Pavillon*. Mexico: Fideicomiso Expo Hannover 2000.
- Hauke P and Werner KU (eds.) (2009) *Bibliotheken bauen und ausstatten*. Bad Honnef: Bock + Herchen. Free available online at <http://edoc.hu-berlin.de/miscellanies/bibliotheksbau/>.
- Hauke P and Werner KU (eds.) (2011a) *Bibliotheken heute! Best Practice in Planung, Bau und Ausstattung*. Bad Honnef: Bock + Herchen. Free available online at <http://edoc.hu-berlin.de/miscellanies/bibliothekenheute/>
- Hauke P and Werner KU (eds.) (2011b) *Secondhand – aber exzellent! Bibliotheken bauen im Bestand*. Bad Honnef: Bock + Herchen. Free available online at <http://edoc.hu-berlin.de/>.
- Kroller F (1985) Adaptation of buildings to library use: an overview. In: M. Dewe (ed.) *Adaptation of buildings to library use*. Proceedings of the Seminar held in Budapest, June 3–7, 1985. München: Saur. (IFLA Publications, 39). pp. 13–16.
- MacDonald A (2007) The top ten qualities of good library space. In: K. Latimer and H. Niegaard (eds.) *IFLA Library Building Guidelines: Developments & Reflections*. München: Saur. pp. 13–29.
- Papp I (1987) Can a librarian accept an old building? In: M. Dewe (ed.) *Adaptation of buildings to library use. Proceedings of the Seminar held in Budapest, June 3–7, 1985*. München: Saur. (IFLA publications ; 39).
- Romero S (2007) Renovating historic buildings. In K. Latimer and H. Niegaard (eds.) *IFLA Library Building Guidelines: Developments & Reflections*. München: Saur. pp. 219–229.

- Sands J (2002?) *Sustainable library design*. [www.librisdesign.org/docs/SustainableLibDesign.pdf](http://www.librisdesign.org/docs/SustainableLibDesign.pdf).
- Sanne L (2009) Vom Bahnhof zur Bibliothek. Best practice in Luckenwalde. In: P. Hauke and K.U. Werner. *Bibliotheken bauen und ausstatten*. Bad Honnef: Bock + Herchen. pp. 114–131. Free available online at <http://edoc.hu-berlin.de/miscellanies/bibliotheksbau/>.
- Schelling T (2011) Hier ging einmal die Post ab. Die Zentral- und Hochschulbibliothek Luzern in einem nachgenutzten Industriegebäude. In: P. Hauke and K.U. Werner. *Secondhand – aber exzellent!* Bad Honnef: Bock + Herchen. pp. 50–73. Free available online at <http://edoc.hu-berlin.de/>
- Seeliger F (2011) Chancen und Risiken einer baulichen Konversion. Oder: Gibt es einen patinierten Erlebnisraum Bibliothek? In: P. Hauke and K.U. Werner. *Secondhand – aber exzellent*. Bad Honnef: Bock + Herchen. pp. 46–59. Free available online at <http://edoc.hu-berlin.de/>
- Stiller F (2011) Zehn Jahre danach: Wahrzeichen mit Kompromissen. Ein EXPO-Pavillon wird für die Hochschule der Künste Braunschweig als Bibliothek nachgenutzt. In: P. Hauke and K.U. Werner. *Secondhand – aber exzellent!* Bad Honnef: Bock + Herchen. p. 74–87. Free available online at <http://edoc.hu-berlin.de/> All websites last visited 1 June, 2011.

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# The Gov Doc Kids Group and free government information

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## Abstract

Free government information fuels innovation among all the world's children and has the potential to enhance every aspect of their lives. The Gov Doc Kids Group, located in the United States, was formed to promote the use of government information to children, kindergarten through high school. Members of the Gov Doc Kids Group describe the formation of the group, international and country websites useful for children, and present tried-and-true, effective means of opening the doors of government information to children. The paper will explore ways the group utilizes the web to promote government information to children and provide an in-depth description of how a Government Documents Children's Collection was formed. Although the examples discussed here are United States-centric projects, these ideas could flourish in almost any country.

## Keywords

government information for children, Gov Doc Kids Group, United States

## Introduction

Government information is the output of actions, concepts and processes associated with daily, yearly, and era-based government operations at multiple levels, local, provincial, country, and international. It is usually a credible source of data, description, provenance, measurement, and – most importantly – human endeavor. While much government information may be easily recognized and understood by adults, it can be much harder to recognize and understand by children who are still developing their critical thinking skills, particularly those related to information location and evaluation.

Although the examples discussed here are United States-centric projects, these ideas could flourish in

almost any country. In the spirit of open access to government information, all countries of the world owe it to their children and young adults to explore, be knowledgeable about and to learn from the wealth of government documents in their home country. This article may serve as a model for achieving that goal.

In order to provide an understanding of agencies and programs that are mentioned throughout this paper, this description is provided. Acting on the

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fundamental belief that in order to sustain a democracy, the public must have access to information about their government's activities, in 1813 Congress made available to all Americans information about the work of the three branches of Government. The United States Government Printing Office (GPO) publishes and disseminates government publications to the American public, Federal depository libraries, Congress, and Federal agencies. Identifying libraries as a means to disseminate government information to the public, the Federal Depository Library Program (FDLP) was established by Congress. Since 1813, the FDLP has provided government information free of charge to depository libraries throughout the country and territories. In turn, these depository libraries provide free access to this information in an impartial environment with professional assistance. Most of this information is free and online, making it available worldwide.

The various segments of this paper seek to provide a forum for discussion as to how various types of government information are defined and made accessible for children. Three segments, Gov Doc Kids Group, FDLP Community and the Gov Doc Kids Group, and How to Create a Government Documents Children's Collection identify historical facts, structural elements, and group dynamics which illustrate both general government information for children. These concepts are key components of successful child-based government information service strategy and specific Gov Doc Kids Group best practices, which have enabled the group to reach out worldwide to children and educators to promote the use of government information for children.

Other segments will provide specific examples of resources and services which are targeted for children. *Joining Hands Around the World: Countries Resources for Children and Teachers* and *Country Information for Kids/Teens* examine worldwide country resources which allow children to learn more about important country-related facts, concepts, and contextual relationships, which influence how they will ultimately participate in a global social, political, economic, and environmental culture. The five sections are introduced here:

**Gov Doc Kids Group** by Martha Childers discusses the Group's formation, purpose, and activities. Government information is by and large reliable. As a result, the Gov Doc Kids Group was formed to promote government information in order to engage kindergarten through high school students in learning about history, culture, science, and government through games and other interactive activities. Group members are active and involved, offering

**Table I.** An example of one of the resources

<b>All authors/ contributors</b>	United States. Environmental Protection Agency. Office of Solid Waste and Emergency Response.
<b>OCLC number</b>	76891949
<b>Notes</b>	Title from title screen (viewed on Dec. 6, 2006). "EPA530-K-00-001S." "Enero de 2002." Spanish version of: Trash and climate change: planet protectors discover the hidden reasons to reduce, reuse, and recycle.
<b>Description Details</b>	[10] p : digital, PDF file Mode of access: Internet from the EPA website. Address as of 12/6/06: <a href="http://www.epa.gov/epaoswer/osw/kids/pdfs/k00001s.pdf">http://www.epa.gov/epaoswer/osw/kids/pdfs/k00001s.pdf</a> ; current access is available via PURL.
<b>Other titles</b>	Trash and climate change. Protectores del planeta descubren las razones escondidas para reducir, reutilizar, y reciclar

presentations, writing articles, and providing children's programming. Due to the nature of current information dispersal, which is primarily electronic, the Group maintains the following websites: <http://community.fdlp.gov/govdockidsgroup>, [govdocs4children.pbworks.com/](http://govdocs4children.pbworks.com/), and [wikis.ala.org/godort/index.php/Gov\\_Doc\\_Kids](http://wikis.ala.org/godort/index.php/Gov_Doc_Kids).

**FDLP Community and the Gov Doc Kids Group** by Katy Davis discusses the use of the Federal Depository Library Program (FDLP) Community in promoting the Gov Doc Kids Group and their Constitution Day Poster Contest and on the web by leveraging the tools available on the FDLP Community website. As a result, the FDLP Community site allows the Gov Doc Kids Group to use web technologies available that were previously unavailable to them (e.g. photo gallery to display posters).

**How to Create a Government Documents Children's Collection** by John H. Faria explores the establishment of a government documents children's collection. The Government Documents Department at El Paso (Texas) Public Library was doing outreach to staff with a series of informative workshops on government documents in early 2008. Great interest by the attendees prompted the Children's Supervisor to offer a section from the Children's Department to form the Government Documents Children's Collection.

**Joining Hands Around the World: Countries Resources for Children and Teachers** by Tom Adamich presents a variety of resources about countries.

In the spirit of forming a better understanding of the world today, having good country descriptions and resources enables children to grow in their understanding of other cultures and population groups. Profiled are two such resources working in tandem, the United States Department of State Countries Portal (<http://www.state.gov/countries/>) and the Library of Congress Country Studies (<http://lcweb2.loc.gov/frd/cs/>). Jim and Justine Veatch's 'Kids Government Documents Online' (<http://www.worldcat.org/profiles/jveatch/lists/599894>), a collection of United States government e-resources is also discussed.

**Country Information for Kids/Teens** by Antoinette W. Satterfield delves into the challenges and opportunities of using the Internet for country research. With so much information being available on the Internet, school children often turn to the web when searching for resources to use when learning about our world. These searches should also include government information. There are maps and educational games regarding the European Union available from the Europa Teacher's Corner website and information about the United States can be found on Kids.gov. The *World Factbook* available from the United States CIA website gives basic information about all countries around the world that could be useful for both the elementary or high school student.

Together, these five segments present a range of practices and experiences utilized in the United States. They may serve as models for promoting the use of government information in other regions of the world.

### Gov Doc Kids Group

The Gov Docs Kids Group was conceived during a summer 2006 meeting of the Kansas (USA) Library Association, Government Documents Roundtable. The group is made up of government information librarians and archivists. Providing credibility, sponsors provide support by publicizing group efforts and by donating prizes for Constitution Day Poster Contest winners.

In order to state the group's purpose and direction, early in its formation, the group developed this mission statement:

To promote government information in order to engage K-12 students in learning about history, culture, science, and government through games and other interactive activities; to assist teachers and school librarians with locating teaching aids, lesson plans, and exciting tools to enhance students' learning, and to provide librarians with a collection of free

government resources to advance their reference interview and collection development decisions.

The project was conceived as a promotional tool for the value of government documents to K-12 students and teachers in addressing the requirement to integrate Constitution Day into public school curricula. The Group fulfills its mission by making presentations to groups of children and professional organizations, writing articles, creating websites, and organizing an annual Constitution Day Poster Contest.

The group is co-sponsored by the State Library of Kansas (USA), Kansas Library Association Government Documents Roundtable (KLA GODORT), Wichita State University (Kansas, USA), the Kansas State Library, the State Library of Ohio (USA) and the Government Documents Roundtable of Ohio. Corporate sponsors include ConstitutionFacts.com, Naperville, Illinois (USA) and Mannington Mills, Salem, New Jersey (USA). Government partners are the United States Defense Commissary Agency, United States Department of Energy, United States Office of Scientific and Technical Information, and the United States Department of Agriculture National Agricultural Library.

The Gov Doc Kids Group Constitution Day Poster Contest, which started in 2007, is a promotional tool for the value of government information to kindergarten through high school students and teachers in addressing a United States federal mandate requiring primary and elementary schools receiving federal funds to have a program on Constitution Day, September 17 each year.

The group creates a contest form and publicizes the event through the news releases, an e-blast to listservs, an e-blast to organizations, and an e-mail publicity notice that the Kansas State Librarian sends to other state librarians. The e-blast includes a request for individuals and groups to resend the publicity to other listservs, organizations, and individuals. These become viral and provide a wide network of publicity requiring no financial outlay.

ConstitutionFacts.com designs a poster promoting the contest that is distributed to United States Defense Commissary Agency (DCA) around the world. Contest entries are received, sorted, and judged. The contest is supported on the ConstitutionFacts.com website where images of the previous winning posters and the current entry information are provided. Participation has increased each year:

- 2007: 161 entries from 8 states and two United States Department of Defense schools in Japan with 10 winners



**Figure 1.** 2007 Constitution Day Poster Contest winner: Eui Min Kim – Grade 9–12 / Age 16 / Kadena High School, Kaneda, Okinawa, Japan.

- 2008: 1,100 entries from 7 states with 14 winners
- 2009: 2,395 entries from 37 states and United States Department of Defense schools in Italy, Japan, and Korea with 13 winners
- 2010: 9,347 entries from 45 states and Department of Defense Schools in Italy, Japan, and South Korea with 13 winners and 9 honorable mentions
- 2011: 31,000 entries from most states and Department of Defense Schools in various countries with 12 winners.

The winners receive two posters, a certificate, and a press release to a local paper of their choice. They receive age appropriate promotional materials from the United States Department of Energy, Office of Scientific and Technical Information, the United States Government Printing Office, and the United States Department of Agriculture National Agricultural Library. The first 100 entrants receive one copy each of the United States Constitution from Oak Hill Publishing Company. Articles about winners have appeared in various newspapers such as the *Chicago Tribune* and the *Stars and Stripes*. Shown is an image of a 2007 Constitution Day Poster Contest winner by Eui Min Kim, age 16 at the time, Kadena High School, Okinawa, Japan.

The group supports four websites. The original wiki is located at <http://govdocs4children.pbworks.com/>, which provides the greatest wealth of sources about government information for children and those who serve them; such as parents, teachers, and librarians. Links to some of the United States governmental agencies offering information for children can be found here.

ConstitutionFacts.com created a website <http://www.constitutionfacts.com/> devoted to the poster contest. Each year the site has been enhanced. Because of its user-friendly name, the group chose to use this website as the primary site for publicity.

The group has been the first to utilize the new Federal Depository Library Program (FDLP) Community to develop a presence for government information librarians and has worked closely with the United States Government Printing Office staff to utilize the capabilities of the Community site (<http://community.fdlp.gov/groups/viewgroup/14Gov+Doc+Kids+Group.html>). This site is of interest due to the availability of space. Even before the site was publicized, it was tapped for documents early in its development. The following segment of this paper describes this project in detail.

The American Library Association Government Documents Round Table (ALA GODORT) continues

to support a Group wiki on its site as well ([http://wikis.ala.org/godort/index.php/Gov\\_Doc\\_Kids](http://wikis.ala.org/godort/index.php/Gov_Doc_Kids)); however, space limitations exist on this site.

Group members have published articles in professional publications, including *Library Media Connection*, *OELMA Media Spectrum*, and *DttP: Documents to the People*. The group continues to actively engage in presentations to promote the mission. Group members have presented programs to children as well as professional organizations, such as the American Library Association, Kansas Library Association, and the Kansas City (Missouri, USA) Metropolitan Library & Information Network, and IFLA's World Library and Information Congress.

New members who are willing to be active, self-directed, and collaborative are welcome to join the Gov Doc Kids Group. To date, the group has been a national group based in the United States, but in today's electronic world, the potential of becoming an international organization is feasible. Group members are fully aware of the rich government resources available at local, regional, national, foreign, and international levels and look forward to finding ways to more effectively promote this wealth of information to children.

## **FDLP Community and the Gov Doc Kids Group**

### *About the FDLP Community site*

The FDLP Community (<http://community.fdlp.gov>) is a site designed to create an online, interactive venue to enhance the world of government documents. Some of the content was created by employees of the US Government Printing Office (GPO); however, the content in this site is primarily created by members. Members are typically Federal documents librarians who participate in the Federal Depository Library Program (FDLP). Tapping into the knowledge of members, the FDLP Community site can offer relevant, real-world experience, observations, and advice from the contributions of the people who work with government documents on a daily basis. The more members share, the richer a resource the FDLP Community site becomes for those who seek or share relevant information.

The FDLP Community provides a no-cost solution for members from all geographic locations to network and exchange ideas. The site is available 24 hours a day, allowing members to contribute when it is convenient for them as opposed to having to adjust an already crowded schedule.

### *Why not just use a free social networking tool already available?*

*Technologies.* Similar to currently available social networking sites, the FDLP Community gives members multiple channels of communication. A member can create a profile, 'friend' associates, comment, blog, upload photos, private message fellow community members, start a group, create web links, upload documents, and search. Each of those functionalities has additional features attached to them as well. GPO is continually researching ways to improve the existing technologies and looking into technologies that can be added to the site in the future.

*Security.* The Community provides members with a safe, private, and secure environment. Privacy concerns matter with GPO and the privacy settings will not arbitrarily be changed. Additionally, there is no outside advertising or behind the scenes harvesting of personal information.

*True community.* Federal depository librarians have a very specialized role as people who build, catalog, organize, maintain, and provide public access to government documents. GPO knows that these professionals are a close-knit group and encounter unique challenges. With awareness of this knowledge and as administrators of the FDLP, GPO can insure that the proper tools for communication best suited for librarians are made available, and build an online community that meets their specific needs. GPO conforms to the technological needs of the FDLP librarian, rather than conforming to the somewhat inflexible technologies offered by other free social networking sites. This awareness of the specific needs of the FDLP librarian, along with member participation, will build a stronger community online.

### *Gov Doc Kids Group and the Constitution Day Poster Contest*

*History and Objectives.* A representative from the Gov Doc Kids Group contacted the GPO late October/early November in 2009. The group was interested in exploring new technologies for promoting their Constitution Day Poster Contest and expanding awareness about the Gov Doc Kids Group. The group also needed a cost free solution. After a couple of conversations with GPO, it was agreed that the Gov Doc Kids Group could leverage the tools of the FDLP Community to reach out to a targeted audience of government librarians, along with their current audience (teachers, kids, parents, librarians, etc.).

The FDLP Community site enabled:

- collaboration between the Gov Doc Kids group and other members on the site
- a public online presence
- access to technologies that FDLP Community had available that other websites the group was using did not
- the ability to leverage tools to share information about their group and the Constitution Day Poster Contest.

**Implementation.** The Gov Doc Kids Group used a number of tools and features on the FDLP Community Site. The following is a list of what they utilized:

**Groups.** Gov Doc Kids Group established an online group by forming one on the FDLP Community site. This allowed members of this group to share a mission statement, publish announcements, create and reply to discussions related to the group, create photo albums, and post to a group wall. The group can be found on the FDLP Community here: <http://community.fdlp.gov/groups/viewgroup/14-Gov+Doc+Kids+Group.html>.

**Web links.** The FDLP Community has a tool that allows members to share links to websites they consider helpful or resourceful to other members. Gov Doc Kids Group took advantage of this feature. GPO created their own section under Community Groups where they are able to continually add links as needed. Their section is further organized by categories. The Gov Doc Kids Group links can be found here: <http://community.fdlp.gov/weblinks/community-groups/gov-doc-kids-group.html>.

**File sharing.** Gov Doc Kids Group utilized the FDLP Community's file sharing feature to upload and share documents with others. They were able to make their Constitution Day Poster Contest entry form available as a PDF for those who wished to apply to the contest by filling out the form and submitting it along with the original artwork by post. They were also able to make their Press Kit and various flyers available for anyone who wanted to download them. Their documents can be found here: [http://community.fdlp.gov/files/cat\\_view/71-gov-doc-kids-group.html](http://community.fdlp.gov/files/cat_view/71-gov-doc-kids-group.html).

**Gallery.** Constitution Day Poster Contest winner and runner-up submissions are featured in our Gallery. You can find the top submissions from 2008–2011. All of Gov Doc Kids Group photo albums can be found here: <http://community.fdlp.gov/gallery.html>.

### *Lessons learned and best practices*

The collaboration with the Gov Doc Kids Group gave the administrators of the FDLP Community a window into user experience. GPO had the opportunity to see how people are interacting with each other and with the tools made available on the site. The feedback from Gov Doc Kids Group gave GPO an invaluable understanding of needed usability improvements on the Community site. GPO also learned what features this group of members wanted, either through their actions or by direct request.

The main audience is members of FDLP Community, and it is necessary to keep this audience in mind when content is provided from a group. The information that is posted by a group allows other members to respond, share ideas or collaborate with a group. The general public can view most of the information on FDLP Community (unless some privacy features were enacted, e.g. setting a profile to private or making a private group), but the general public does not have access to the tools provided for members.

If a library organization is not in the position of having its own web presence, and the members of the organization are associated with the FDLP, the Community site can be a place to provide it. However, getting an individual web presence is recommended for the following reasons:

- Allows a group to provide information clearly targeted to a particular audience. In Gov Doc Kids Group, this would be teachers, kids, and parents.
- Gives the administrator of the site the ability to gather customized statistics geared toward the group who owns the site.
- Allows the group to drive traffic to one main place giving the group a more unified presence.
- Eliminates posting similar information on a number of different sites, making information easier to update and maintain.
- Provides the group's main audience with a streamlined, easy to navigate user experience.

Continually developing and improving different features on both the front end and back end of the FDLP Community site, and by observing how the members interact, allow GPO to improve services for the members. The GPO will continue to invest efforts to make the FDLP Community more effective and user-friendly for the members. GPO encourages the members of the FDLP Community to continue to contribute to the site to explore what possibilities are available to them and to discover options that

provide them with the most appropriate solution for their objectives. Feedback is always welcome and valuable. You can provide it by going to the Beta Feedback form at <http://community.fdlp.gov/home/contact.html>.

### How to create a government documents children's collection

At El Paso (Texas) Public Library several steps were taken to create a Government Documents Children's Collection, the first of which was outreach to the Main Library staff, the branches staff, and management. During February 2008, library staff attended training given by experts in the State of Texas to go over the latest developments in government documents and to ensure staff was up-to-date on government documents processes and procedures. Then at a Management Team meeting a presentation was made by the Head of Government Documents Department focusing on the resources of the Government Documents Department, both print and online. The branch managers in particular were surprised by the offerings. This was followed by a series of workshops presenting a broad overview of the Government Documents Collection and the Federal Depository Library Program to library staff, first to the Main Library staff, then the branches' staffs.

As a result, interest was sparked in the Children's Supervisor and her staff to determine whether government documents were also available for children. Since they are, a staff member was assigned to go through the collection and identify items suitable for the Children's Department. This is the method used to put together the Government Documents Children's Collection for the Children's Department. First, it was observed that many government agencies produce various documents that are geared toward schoolteachers, parents, and children. Some of the documents are curriculum based and class ready. Other documents are full of information on how to help children read, study, etc. Kits and DVDs also contain instructions on how to stay physically healthy and eat the right foods. The National Aeronautics and Space Administration (NASA) and the Department of Health and Human Services have published puzzles, activity books, and board games. Many children's books have been written to teach children about numerous subject areas from planting a seed and watching it grow to how and what to eat if they are diabetic. There are even comic books about libraries.

Within the general government documents collection these materials were not used to their full extent.



**Figure 2.** The government documents 'tree' in the El Paso Public Library.

So when the Children's Supervisor showed interest in these government document materials, the idea was conceived and accepted to identify those materials in the collection that were geared towards children, parents, and teachers and to see if a children's collection could be put together. Materials are published by a variety of agencies, such as NASA, the Department of Health and Human Services, the Department of the Interior, and the State of Texas. Formats include books, pamphlets, AV kits, DVDs, VHS, puzzles, games, coloring books, and binders. A 'tree' in the Children's Department was chosen to house the collection, which is broken down into three sections, for children, parents, and teachers. The selected items were processed and transferred in a week.

The Government Documents Children's Collection has been a success. The Children's Supervisor wants more of these kinds of materials, and this has been accommodated in the selection process. Since these items were placed in the Children's Department they have seen an increase in usage and circulation. The assignment of these materials has also allowed the Government Documents Department to reach out to children and their parents and make them aware of the government documents resources at the El Paso (Texas) Public Library.

### *Joining hands around the world: countries resources for children, teachers, and parents*

In today's global arena, as a result of cyber-communication and worldwide virtual access to information via the Internet, the need to identify and use basic information on countries of the world (in reports, cultural exchange, commerce, etc.) has become increasingly important. Additionally, understanding the overall jurisdiction of a country including its dependencies and special areas of sovereignty is also important. Knowing where to find credible and comprehensive countries of the world information and how to use the information is the goal of this discussion.

*US Department of State Country Profiles and Background Notes.* The US Department of State Country Profiles Database is a comprehensive database which contains basic information for over 200 countries, territories, and other special areas of sovereignty. Located at <http://www.state.gov/p/>, the Country Profiles Database is a compilation of information which identifies basic facts about countries which may fall within one or more of the following descriptive categories:

- General profile
- Government
- People
- History
- Political conditions
- Economy
- Foreign relations
- US relations
- Travel/Business

Most of this information is found in the Background Notes section. Each section explores the country's geographical, economic, cultural, and political composition from both the macro and micro perspectives. According to the website:

Background Notes include facts about the land, people, history, government, political conditions, economy, and foreign relations of independent states, some dependencies, and areas of special sovereignty. The Background Notes are updated/revised by the Office of Electronic Information and Publications of the Bureau of Public Affairs as they are received from the Department's regional bureaus.

In addition to current Background Notes entries (which profile over 100 countries and territories), access to an archive of older versions of Background Notes can be found at <http://www.state.gov/outofdate/bgn/index.htm>. The following example examines the

country Austria. According to the resources found at <http://www.state.gov/r/pa/ei/bgn/3165.htm>, Austria's profile covers the following topics: Geography, People, Government and Economy.

A Department of State Country Profile may also include a link to a Library of Congress Country Study page. This resource explores further various aspects of the country, including its economic policies, laws/legal codes, era/epoch history, sociology, and ecological issues.

Both the Library of Congress *Country Studies* and the US Department of State *Country Profiles* are compiled from the various reports submitted by members of the regional bureaus of the Department of State's Bureau of Public Policy and Bureau of Affairs for the appropriate geographical location (in this case, the Bureau of European and Eurasian Affairs).

*Kids Government Documents Online* (<http://www.worldcat.org/profiles/jveatch/lists/599894>) is a collection of United States government e-resources, or those resources accessible only via the Internet. These examples of the rich resources providing country information which are easily accessible online for children and teens illustrate the new frontier created through the Internet. All are available worldwide free of charge to anyone with a computer and Internet connectivity. Most of the resources found in this bibliography are accessible worldwide and profile government information resources available via the United States Government, particularly the United States Forest Service and the United States Environmental Protection Agency (EPA).

### **Country information for kids or teens**

There was a time when most school papers were written by finding information in printed encyclopedias and other books and magazines. At that time, we would not have used the term 'printed encyclopedias', because all encyclopedias were printed. The dining table or floor would often be covered in such material, and the young child or high school student would have pen or pencil in hand and paper on which to write the information he or she had recently discovered.

However, many children today retrieve their information from the Internet. Realizing the increased dependence on computers for information, governments and various organizations use the Internet to disseminate educational materials. These resources include games, videos, different languages, music, stories, as well as facts and detailed information about individual countries and continents.

Tahiroglu (2007) states, in a study involving Turkish youths, that they are found to use the computer first to

play games and second to gather information.<sup>1</sup> These findings could most likely be used to describe youth in any country. If youth are spending so much time with the computer, then having information they need for education purposes in the same location is surely a positive attribute.

Also, an article by Chiang and Lin (2010) concentrated on a playfulness trait found in adolescents. To hold the attention of adolescents and create an eagerness to continue with an online game, these games must focus on the trait of playfulness.<sup>2</sup> Many educational sites focus on this trait by offering interactive maps, games, and puzzles. Others may use cartoon characters, bright colors, and flashing lights. By doing so there is a greater chance of holding a child's attention for longer spans of time.

For instance, the Public Broadcast Service (PBS) has a site for children titled 'Africa for Kids' (<http://pbskids.org/africa>) with information about life in Africa. Two activities on the PBS site are particularly impressive. One is a link titled My World, which offers pictures and information about the lives of children that attend schools in four different countries in Africa. There are stories and pictures about schools in Accra, Ghana; Wundanyi, Kenya; Winterveldt, South Africa; and Kampala, Uganda. Young people can learn about how these students dress, eat, play, and live. They can easily compare some of the differences and similarities between themselves and those living in these areas and attending these particular schools.

There is also a link here to a site about a traditional African musical instrument titled Thumb Piano Tunes. Here we read that the thumb piano is "simple to make and easy to play" and that it is common in almost all parts of Africa. Users are given the opportunity to virtually play this African musical instrument using the mouse, as well as record the music they create, play it back, and listen to the tune just performed.

For the older child, the World Bank ([www.http://worldbank.org](http://worldbank.org)) offers a website with basic information on 180 countries. As students dig deeper and deeper into the website, they can find tables with information about any of these countries, such as population numbers, literacy percentages, and mortality rates. Some of these sites are offered in more than one language. There are also reports and publications about economy, industry, agriculture, and other topics.

If just fundamental information is needed, the *World Factbook* is quickly available from the United States Central Intelligence Agency website (<http://www.cia.gov>). Here the student can find principal information about countries, such as population, currency, military, and structure of their government.

Europa is the official website for the European Union (EU) where students can find information about currency (euro), member countries, and basic information on the structure and function of the European Union. The page with links to kid's games, quizzes, and competitions ([http://europa.eu/quick-links/eu-kids/index\\_en.htm](http://europa.eu/quick-links/eu-kids/index_en.htm)) has activities that can be played in a multitude of languages. These games offer information about the euro, the appearance of various banknotes, how to count them, and how the currency has changed since the earliest of times. By logging in, the players can each keep up with their scores within each game.

From this page is also a game site titled Europa Go! where students can take quizzes (with noises and cartoon characters to signify whether answers were right or incorrect) about history, geography, language, and even agriculture of the various countries of the EU. Even though it is geared towards children, it can be educational for older students and adults when trying to increase their own knowledge of the global community.

The Royal Embassy of Saudi Arabia (<http://saudiembassy.net/about/>) in Washington, DC, offers information in great detail about Saudi Arabia, including ancient history, the birth of Islam, basic laws of governance, procedure before Shari'ah Courts, education, agriculture, and sports, among other topics. Many embassies offer such pages for their countries. Information is just a click away for our computer generation.

Some websites may simply be fun, but they encourage concentration, stimulate the senses for sight and sound, and teach basic computer skills without needing much supervision (content is appropriate for the young). Australia offers one titled ABC for Kids (<http://www.abc.net.au/abcforkids>) that includes videos, games, television shows, pages to print and color, crafts, and recipes. This site utilizes cartoon characters as well as humans.

The US National Security Agency (NSA) publishes a fun website, mostly for older youth, titled America's CryptoKids (<http://www.nsa.gov/kids>) that teaches users how to create and decipher codes. Focusing more on the older student, there is a Morse code activity as well as a student resources page giving information about the history of cryptology and the listing of high school and college programs in this field. The games found on this website may encourage youth to consider a future in the fields of math and science.

Many more intricate, authoritative, and useful websites for gathering information for school research papers can be found. Also, even more are just plain fun, with lessons to be learned even when the child does not realize it!

## Conclusion

The world of government documents for children is as yet uncharted. An introduction into this wealth of information has been provided here, providing descriptions of some websites and connections to an active association, the Gov Doc Kids Group, which promotes its use. As this information is by and large reliable and free, individuals, groups, and associations around the world are encouraged to explore and promote this realm for the benefit of children and those who help them.

## Notes

1. Tahiroglu, p. 537.
2. Chiang and Lin, p. 629.

## References

- Chiang Y and Lin SSJ (2010) Early adolescent players' playfulness and psychological needs in online games. *Social Behavior and Personality: an International Journal* 38(5): 627–636.
- Library of Congress. *Country Studies – Austria*. Retrieved 6 March 2010 from [http://lcweb2.loc.gov/cgibin/query/r?frd/cstdy:@field\(DOCID+at0058\)](http://lcweb2.loc.gov/cgibin/query/r?frd/cstdy:@field(DOCID+at0058)).
- Tahiroglu AY (2008) Internet use among Turkish adolescents. *CyberPsychology & Behavior* 11(5): 537–543.
- United States. Department of State. *Background Notes*. Retrieved 6 March 2011 from <http://www.state.gov/r/pa/ei/bgn/>
- United States. Department of State. *Country Profiles – Austria*. Retrieved 6 March 2011 from <http://www.state.gov/r/pa/ei/bgn/3165.htm>
- Revised version of a paper presented at the World Library and Information Congress: 77th IFLA General Conference and Assembly, 13–18 August 2011, San Juan, Puerto Rico, in session 124 – e-Government: the role of librarians – Government Information and Official Publications Section with Government Libraries.*

## About the authors

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# Learning to read before you walk: Portuguese libraries for babies and toddlers

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## Abstract

The aim of this paper is to present and analyse some examples of public libraries which have been especially designed for babies and toddlers in Portugal, termed *bebetecas* in Portuguese, highlighting the role the promotion of reading from a very young age plays in the reader's development. Some projects implemented in these areas, particularly those which target the family as an audience, but which in some cases are also intended for day care centres and nurseries, create an increased awareness of the role of the library in the dissemination of children's books, as well as creating dynamic reading habits at an early age. This strengthens family ties and promotes healthier and more balanced child development. Taking family and school as two important contexts for the development of the readers, the library becomes a privileged space and vehicle to promote good reading practices from a very young age, and where books can act as the backdrop for interaction between young children, their families and care givers.

## Keywords

public libraries, children's libraries, pre-readers, libraries for infants, Portugal

## Introduction

Practices to promote reading in pre-readers – including very young readers from birth up to the age of 6 – are now established in a number of countries and incorporate official politics and programmes. These measures, some of which have been implemented for decades in pioneering countries and include the Book-start project in the UK (1992), stem from the widespread consensus about the individual and social relevance of reading and the possibilities it provides individuals with, as well as awakening public and political awareness to early promotion of reading practices.

The development of reading occurs mainly in two contexts, family and school, which are crucial in the construction of the readers' first perceptions of reading. These perceptions are largely determined by their first book experiences, in that the positive ones stimulate reading whereas the negative experiences have a tendency to put up barriers between the readers and books.

Research has shown that learning to read starts well before its formal introduction at school and is a process of lifelong learning. As a result, an awareness

of reading should be started as early as possible within the family. Reading is the result of a highly motivating learning process and consists of steady progress, which demands, among other things, effort and attention. This is the case in the development of oral discourse, and includes not only a wide range of rich vocabulary and the knowledge of complex structures, but also the prior construction of concrete representations about the usefulness of reading. In this way, early contact with diverse written material, even if not exclusively literary material, plays a crucial role in making literature more appealing to the child, and providing them with meaningful experiences about the use of literature in a wide range of contexts. It is also important that the first reading experiences within the family unit be associated with pleasure, well-being and affection and constitute routines which in turn become habits. The aim is for external

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reading stimuli (attention from adults, playing games and reinforcement of parental affection) to become internalized (reading for pleasure), contributing to the development of autonomous readers. Besides the sheer pleasure of listening to a story, doing so on a repetitive basis has a positive effect on the language development of children and provides relevant experiences about language structures and the narratives themselves, thus establishing significant relationships between oral and written discourse. The discovery of symbolic language values and the aesthetic features which stem from language use within a literary context are other assets associated with these experiences. In cognitive terms, the relationship established between language development and organized narrative thinking is very relevant. The narrative structure for example, favours the acquisition of notions of temporal order and cause and effect. Many narratives for early childhood enable the reproduction of familiar scenarios, establishing relationships between them and their surroundings or clarifying abstract concepts through specific examples.

### Parents and libraries

Parents should act as role models and the presence of books and reading habits should be natural within the household and associated to the family gathering around books to create moments of pleasure and affection. Generating daily routines which revolve around books and reading from birth can be complemented with the support of the librarian, the educator or from autonomous learning, particularly when it comes to choosing the most appropriate books or obtaining information about how best to exploit the materials available. Public libraries have always played a crucial role in the development of reading and have as their mission the establishment of specific areas and contexts for various target audiences, thus creating a connection between families and books. In the case of very young children, including babies and toddlers, this becomes even with more apparent with the development of *bebetecas*, specialized sections in libraries whose aim is to create an increased awareness of the importance of early promotion reading habits in families, in particular parents. By carrying out activities which involve handling books and developing oral discourse, the aim is to bring together a ludic dimension associated with entertainment, affection and socialization. Generally speaking, there are various relevant competences which are a focus for more or less specific 'work' in this context, with a special emphasis on linguistics and narration as well as social and artistic areas. Even more generally, it is

important to mention a relevant Portuguese reading project *O meu brinquedo é um livro* (My toy is a book) developed in partnership with the Association of Portuguese Language Teachers and the Association of Nursery School Teachers, together with various public and private institutions whose aim is to increase society's awareness of the promotion of books and reading, particularly reading aloud to the child since birth. This scheme, which began in 2005, takes into account a large number of activities, including the training of parents and nursery school teachers, but also the publication of a range of support materials. This is the case with the brochure available online called *Porquê ler ao meu bebé?* (Why read to my baby?)<sup>1</sup>.

This initiative, among others, supports the main conclusions of this essay in relation to the development of reading competences, highlighting the importance of emerging behaviour (Sulby and Teale 1991; Pressley 1999), and the role of the family in establishing a relationship of proximity and personal identification with books. In this way, this brief presentation about the situation in Portugal is supported by relevant studies from different areas, with special prominence given to Bamberger (1986), Gómez del Manzano (1986), Spiegel (2001), Poslaniec (2004 and 2006) and Rigolet (1997 and 2009), among many others.

### Portuguese *Bebetecas*

The Portuguese public libraries service has been growing rapidly in the past two decades, as a consequence of a governmental rule which in April 1986 established a national reading policy determining an increasing role and functions for Portuguese public libraries. As a result, we have been witnessing the emergence of a strong public library network all over the country, through the creation and recreation, at a very good pace, of many libraries in almost every city. The library catalogues have also been completed and the offer in terms of activities has become more diverse. Statistics report that there were only 89 public libraries in Portugal in 1960, as against 1018 in 2003. Although there is no formal data on this aspect after that date, the number of libraries is still growing nowadays. Correspondingly, the number of readers also increased eight times between 1960 and 2003.

Following the IFLA *Guidelines for Library Services to Babies and Toddlers* (IFLA. Section of Libraries Serving the General Public 2007), the establishment of *bebetecas* in Portugal came into being through the creation of specific sections within public libraries, namely the children's sections, or the

reorganization of existing areas which underwent (re)decoration. The choice of alternative bookshelves, which are accessed more easily because they are almost at floor levels, the painting of the walls and the use of throw cushions and other objects which create comfort are strategies which are common in all existing *Bebetecas*. The use of specific and/or adapted furniture is also frequent and *Bebetecas* are very often enhanced with support material, as is the case with educational toys, games (such as puzzles, building blocks and other construction games), puppet stages, string puppets or musical instruments. *Bebetecas* stand out particularly in the way they organize numerous activities with relatively limited space and scarce catalogues, which put the imagination and creativity of the librarians and educators of the libraries to the test. Subsequently, the services on offer, which are increasingly more popular, generally include specific storytelling time (for babies and toddlers), ludic activities in which contact with books is involved, workshops for parents and ongoing clubs and projects. In some cases, in an attempt to meet the demands of parents and families, the libraries 'publish' and distribute short homemade publications which include reading suggestions (for parents and for babies and toddlers), advice and tips on how to promote reading and books in the family and at home and short thematic catalogues. In the case of some projects which have had external sponsorship, it is possible to access more materials which have been specifically created for use in the *Bebeteca*, such as reading passports (or reading identity cards) and reading ledgers for example. Telling and listening to stories, leafing through books, naming objects in them, playing with words through the listening and repetition of rhymes, chants, tongue twisters and hand clapping games are some of the most popular activities.

### Best reading practices

In this section we look at some concrete examples of best practices developed in Portugal in this area. The selection process is random and took into account the diversity of proposals as well the extent to which these activities are distributed throughout continental Portugal. Whenever possible, cases which had external sponsorship and evaluation were chosen, making the analysis and the recognition of the project as an example of best practice more independent. Naturally, many other examples which are worthy of mention were not included, however, it is commendable that in recent years, after some pioneering examples, such as the

Public Library in Beja, the opening of *Bebetecas* as well as the activities organized there have become widespread in Portugal.

With considerable experience in the early promotion of reading habits and of parental involvement in the development of reading skills, the Public Library in Beja has offered over the last few years various activities in the *Bebeteca*. This is the case of *Rodas de Colo* (Lullaby Circles), a project which focuses on enhancing the communication between mother and baby, targeted at mothers and babies up to one year of age. Examples include *Patáti Patáti* (One for Me, One for You), whose objective is to increase parents' awareness of the importance of language development through playing with books and oral literature (chants, rhymes and other types of poems) aimed at parents and children between the ages of 18 and 36 months; and *Histórias de Colo e Embalo* (Lullaby Storytime), which tells stories to a group of parents and their children, who are aged between 3 and 5 years.

In Odivelas, a laboratory was opened which studies the results of early reading and is part of the Gulbenkian – Casa da Leitura (Gulbenkian – Reading Home) project. Called *Dois braços para embalar, uma voz para contar* (Two arms for rocking, one voice for storytelling), it promotes the sharing of books between adults and children between the ages of 9 months and 3 years. The groups, which cannot have more than 10 babies and toddlers, meet regularly in the *Bebeteca*, where different activities which promote reading are organized. The aim is to stimulate language development and children's levels of attention and concentration, but more importantly to establish and strengthen long lasting bonds among children, parents and books. This study gave rise to a Masters in Library Studies directed by Susana Silvestre in Évora University and its findings can be found in various publications<sup>2</sup>.

Some projects have had external sponsorship, namely by the prestigious Calouste Gulbenkian Foundation, and are notable in the systematization of both the practical and theoretical activities which are organized at the *Bebetecas*. This is the case with the projects *(A)Braços com a leitura* (Embracing reading) at the Public Library in Chamusca, *Cantinho do Embalo* (Lullaby Corner) at the Afonso Lopes Vieira Public Library in Leiria or *Nascido para ler* (Born to read) at the Public Library in Santa Maria da Feira. What they all have in common besides the establishment of sections and specific catalogues is that these projects, given by professionals, revolve around regular activities based on specifically chosen themes and books.



**Figure 1.** Chamusca Bebeteca.



**Figure 2.** Chamusca Bebeteca activities.

Other examples chosen include weekly activities which take place at the Public Library in Ílhavo on Saturdays, when it is easier for families to attend. In addition to story time, activities which provide interaction among the children, language development and motor coordination practice are organized, which take into account the competences of the young readers.

As a general rule, the libraries have created sections for babies and toddlers which are not limited to general use by the library goers but have also organized activities, thus creating routines and habits in both children and parents. These activities vary in terms of frequency, but are generally monthly gatherings which share the desire to promote regular contact with books, associating that contact with well-being



**Figure 3.** Ilhavo Bebeteca.



**Figure 4.** Ilhavo Bebeteca activities.

and pleasure and demystifying many preconceived ideas about the relationship between the child on the one hand and books and reading on the other. This is the case with the *Bebetecas* in Vila Nova de Famalicão, Arouca, Seixal, Paços de Ferreira and many others. The fact that these activities, which were sporadic only a decade ago, have now become commonplace, shows an awareness of the individual and social importance of reading and the need to promote it from a very early age within the family. In Portugal, the clear shift in official discourses and practices may be due to the work carried out by the network of public libraries and the network of school libraries in recent years, which has resulted in the opening or renovation of many of these sections.

### **Bebeteca catalogues**

In terms of the creation of adequate catalogues for this group of readers, both in terms of toy books and literary works, in Portugal there is a clear imbalance of publications, since there are many translations, some of works by classic writers, as opposed to a lack of original Portuguese publications for pre-readers. As regards the board book – or even the reduced size book, which includes cloth, sponge, bath, pop-up and toy books, the only collection to highlight is the one by André Letria, a renowned illustrator in Portugal. Despite the fact that since the 1970s, the picture book has become an object of interest to some prominent writers, such as Maria Keil or Leonor Praça, only in the 1990s did the genre attract some local attention with Manuela Bacelar. In the last 10 years however, particularly as a result of the sudden international increase in the genre, there has been widespread interest, drawing the attention of publishers and writers alike. It is possible to bring together the translations of classic works by such names as Maurice Sendak, Leo Lionni, Eric Carle, Bruno Munari, Iela Mari and Tomi Ungerer, contemporary foreign literature by David McKee, Jutta Bauer, Anthony Browne and Lucy Cousins and Portuguese works which have seen some international acclaim, as is the case with works from the publishing company Planeta Tangerina. This is particularly evident in the publications created by Isabel Minhós Martins in partnership with the illustrators Bernardo Carvalho and Madalena Matoso. This publishing genre has been responsible for the most salient development in recent years in the area of Portuguese children's literature, shedding light on a set of highly significant acclaimed works and writers.

### **Conclusions**

In response to the goals set by the *Objetivos do Milénio* (Millennium Development Goals), in particular the development of education and the promotion of reading, in relation to the service provided by public libraries and the guidelines set out by IFLA, it is clearly stated that these institutions “have a special responsibility to support the process of learning to read, and to promote books and other media for children. The library must provide special events for children, such as storytelling and activities related to the library's services and resources. Children should be encouraged to use the library from an early age as this will make them more likely to remain users in future years” (IFLA. Section of Public Libraries 2001: 26). In fact, as stated in the IFLA Guidelines, the first missions of public libraries highlight the importance of this target audience, stating that the library's responsibilities include “creating and strengthening reading habits in children from an early age” (p. 88), highlighting in point four the importance of “stimulating the imagination and creativity of children and young people” (idem).

The projects presented here, as with other similar ones, provide a number of positive outcomes, particularly in relation to the way they involve the families in the process of training readers from an early age. The more or less implicit awareness that early reading practices are fundamental for the formal development of reading itself results from the work carried out by librarians, who provide parents with ongoing training. In practical terms, the opening of *Bebetecas* and the activities which are organized there enable the enhancement of library catalogues and collections, thus diversifying the publications on offer to this target audience, namely through the use of toy books for example, but also picture, interactive (lift-the-flap or pull-the-tag, etc), board and pop-up books. The same occurs in relation to the range of diversity in the strategies and activities organized in libraries, which clearly attract new publics. They are in essence, projects which are relatively simple to implement and economically feasible in the current economic climate, since they require comparatively low investment in terms of materials, reduced space (with some simple transformations to decoration and layout) and a fairly limited need for books. From a human resources perspective, the demands are greater, with the need for specific staff training and the importance of keeping group size small so that more personalized attention can be given to the children and their parents, who should continue stimulating long term reading experiences at home. Besides

increasing libraries' target audience to babies and toddlers, the production of supplementary material for the activities for parents, book selection, reading guidelines and reading tips and advice, in particular how to create stimulating reading routines and practices at home and within the family are fundamental in the library due to impact they are likely to have in the future. These materials, which can be home-made or of a more professional nature, especially with regard to graphic design, play an essential role in enhancing awareness and increasing family training. They are simple and appealing, resorting to images and photographs<sup>3</sup> and generally contain suggestions on the books which are most appropriate for babies, toddlers and young children (for example nursery rhymes, simple short stories, pop-up books, picture books and fairy and folk tales, among others) as well as clear guidelines saying when, where and how to read to children, listing examples of activities which are easy to carry out.

There are some important steps which need to be taken, such as the creation of a national database of *Bebetecas* and projects implemented in Portugal, and the analysis and publication of the evaluation of these practices so that conclusions can be drawn for the future. This was the case in Spain, with the publication of a book<sup>4</sup> called *Primeros contactos con la lectura. Leer sin saber leer*. ('The first contact with reading. Reading without knowing how to') published by the Germán Sánchez Ruipérez Foundation, which carries out an exhaustive description of the evaluation of reading promotion activities for children from birth up to the age of 6. Although they are slightly fragmented and isolated, the Portuguese projects need a common conceptual framework and appropriate theoretical and methodological support stemming from official policies to clearly and unequivocally promote reading in order to guarantee unity and sustainability and enable its development, both by its reach and by the enhancement and expansion of the activities which are organized. Examples of national programmes in other countries which have the above-mentioned features and have had a strong impact include Bookstart<sup>5</sup> (The United Kingdom), Born to read<sup>6</sup> (USA) and Nati per leggere<sup>7</sup> (Born to read, Italy).

As has already been mentioned, the qualitative jump which took place in Portugal in the last decade is more related to the generalization of practices than the creation of infrastructures. These play an important role in the initial phase, bringing books closer to the reader but it was the increase in the dynamics of these library sections, through the effort and determination of the library staff, which had visible

effects on the profile of the library members and their awareness of and training within the library itself. In the case of *Bebetecas*, they are places (and moments) where reading takes place and positive experiences are shared among the children and their families, with the library becoming a meeting place and a constant source of interest. The favouring of a sensory experience with books and reading through storytelling and song, looking at books and images, body movement, the handling of books and objects, particularly if the surroundings are simultaneously ludic and pleasurable is essential when the objective is to promote reading with very young age groups. *Bebetecas* are increasingly versatile, also open to disabled children, or those with special educational needs, to ethnic groups or those who are culturally marginalized and to immigrants, and are often the door through which the children and their parents enter the world of reading, and family literacy and socialization is promoted.

## Notes

1. <http://omb.no.sapo.pt/documentos/guia-texto.pdf>
2. Findings can be consulted in documents on the development and evaluation of a year's worth of activities, drawn up in February, 2008. Available at [http://195.23.38.178/casadaleitura/portalfbeta/bo/documentos/lab\\_2%20bracos%20p%20embalar\\_a\\_C.pdf](http://195.23.38.178/casadaleitura/portalfbeta/bo/documentos/lab_2%20bracos%20p%20embalar_a_C.pdf) and [http://195.23.38.178/casadaleitura/portalfbeta/bo/documentos/Odivelas\\_avaliao.pdf](http://195.23.38.178/casadaleitura/portalfbeta/bo/documentos/Odivelas_avaliao.pdf)
3. Can be consulted at [http://195.23.38.178/casadaleitura/portalfbeta/bo/documentos/tem\\_ler\\_para\\_crescer\\_a.pdf](http://195.23.38.178/casadaleitura/portalfbeta/bo/documentos/tem_ler_para_crescer_a.pdf)
4. Can be consulted at [http://www.fundaciongsr.es/activos/texto/wfun\\_pdf\\_0171-rOQWM8NwNyW4btJ7.pdf](http://www.fundaciongsr.es/activos/texto/wfun_pdf_0171-rOQWM8NwNyW4btJ7.pdf)
5. Can be consulted at [www.bookstart.co.uk](http://www.bookstart.co.uk)
6. Can be consulted at [www.ala.org/ala/alsc/alscresources/born\\_toread](http://www.ala.org/ala/alsc/alscresources/born_toread)
7. Can be consulted at [www.aib.it/aib/npl/npl.html](http://www.aib.it/aib/npl/npl.html)

## References

- Bamberger R (1986) *Como incentivar o hábito de leitura*. São Paulo: Ática.
- Gómez del Manzano M (1986) *A criança e a leitura. Como fazer da criança um leitor*. Porto: Porto Editora.
- IFLA. Section of Libraries Serving the General Public (2007) *Guidelines for Library Services to Babies and Toddlers*. The Hague, IFLA Headquarters, 2007. (IFLA Professional Report 100) 23p. [available at <http://archive.ifla.org/VII/d3/pub/Profrep100.pdf>]
- IFLA. Section of Public Libraries (2001) *The Public library service: the IFLA/UNESCO Guidelines for Development: Prepared by a working group of the section of Public Libraries chaired by Philip Gill*. München: Saur. (IFLA Publications 97) ISBN 3-598-21827-3. 116p.
- Linuesa MC and Ramírez Orellana E (2008) *Primeros contactos con la lectura. Leer sin saber leer. Descripción y*

- evaluación del trabajo con niños y niñas de 0 a 6 años.* Salamanca: Fundación Germán Sánchez Ruipérez de Salamanca [available at [http://www.fundaciongsr.es/activos/texto/wfun\\_pdf\\_0171-rQQWM8NwNyW4btJ7.pdf](http://www.fundaciongsr.es/activos/texto/wfun_pdf_0171-rQQWM8NwNyW4btJ7.pdf)].
- Poslaniec C (2004). *Le plaisir de lire expliqué aux parents.* Paris: Retz.
- Poslaniec C (2006) *Incentivar o prazer de ler.* Porto: ASA.
- Pressley M (1999) *Cómo enseñar a leer.* Barcelona: Paidós.
- Rigolet SA (1997) *Leitura do Mundo – Leitura de Livros. Da Estimulação Precoce da Linguagem Escrita.* Porto: Porto Editora.
- Rigolet SA (2009) *Ler livros e contar histórias com as crianças. Como formar leitores activos e envolvidos.* Porto: Porto Editora.
- Spiegel DL (2001) Um retrato dos pais dos leitores bem sucedidos. In Eugene H. Cramer and Marrietta Castle (Coord.) *Incentivando o amor pela leitura.* Porto Alegre: Artmed, pp.89–102.
- Sulby E and Teale W (1991) Emergent literacy. In R. Barr, M.L. Kamil, P.B. Mosenthal and P.D. Pearson (eds.) *Handbook of reading research, 2.* New York: Longman, pp. 727–758.

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# Internet Librarian International 2011: The innovation and technology conference for information professionals

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**Report by Sanjay K. Bihani**

I recently attended the two-day conference organised by Information Today Group at Cophorne Tara Hotel, London on 27–28 October 2011. The conference is organised every year and this is the 13th year of Internet Librarian International.

Internet Librarian International's primary focus was case studies of innovation and technology in action in a variety of library settings. This year, more than 30 case studies were featured from around the world, including Australia, Belgium, Hungary, Norway, Sweden, United Kingdom and the United States.

This year's conference theme was 'Navigating the New Normal – Strategies for Success'. Conference Chair, Marydee Ojala explained that innovation and experimentation are still taking place. We are amazingly proficient at revolutionising our work environments, understanding and utilising new technologies, and also bringing creative thinking to problem solving. The new normal isn't just about austere budgets, it's also about new technologies and new ways of working. It's about partnerships and transparency, about new ways to develop and disseminate knowledge, about the increasing importance of communication skills, and about opening up access to information, data, and knowledge.

The opening keynote address was delivered by Klaus Tochtermann, Director of the German National Library of Economics and Professor of Computer Media at the University of Kiel. Professor Tochtermann shared his vision of the future of the Internet and how it will affect information professionals and libraries, based around the four elements of the future Internet that he has identified: the Internet of content and knowledge, the Internet by and for people, the Internet of things, and the Internet of services. The second-day keynote speakers were journalist Kevin Anderson and social software consultant Suw Charman-Anderson. They focused on

the evaluation and adoption of digital innovations, issues around data journalism, social media, semantic search, crowd sourcing, digital rights and press freedom.

ILI 2011 was organised into six tracks to help delegates focus on topics of their particular interest:

Track 1 – 'Technology Developments and Trends' kicked off by UKOLN's Brian Kelly and Åke Nygren of Stockholm Public Library who explored what's on the technology horizon. The track includes a presentation from Andrew Woolfson of law firm Reynolds Porter Chamberlain LLP who explained how RPC have developed 'Edge', a new social platform designed to understand the way people work, married to the attributes of social media within the unique demands of a legal environment. Other speakers in this track include the Open University's Tony Hirst, the University of Huddersfield's Dave Pattern and Bryony Ramsden, and Rurik Thomas Greenall from Norway's NTNU.

Track 2 – 'New Models for the New Normal', included presentations from Linda Vidlund and Cecilia Petersson from Uppsala University Library, who talked about how they are experimenting with technologies such as QR codes to find out how digital materials can be made more visible in the physical library, and how the library can become both a social and a learning space. Other speakers in this track come from the European Bank for Reconstruction and Development, the Wellcome Trust, National Library Board of Singapore, the Scottish Qualifications Authority and Defence Science and Technology Laboratory (UK).

Track 3 – 'Transforming Resource Management' kicked off with a look at the e-book revolution in libraries. Kate Worlock of industry analyst firm

Outsell revealed some of the publishing trends underlying the future development of e-books. Ceri Hughes of KPMG discussed experimenting with e-resources to keep a dispersed and highly mobile workforce informed. Trevor Dawes and Jennifer Baxmeyer of Princeton University talked about how university library prepared for a programme to circulate electronic devices such as Kindles and iPads to library patrons. Also in this track, Hugh Look presented the first comprehensive look at the JISC Collections review of its banding scheme.

Track 4 – ‘Search and Discovery’ featured presentations from conference favourites Phil Bradley and Karen Blakeman as well as an examination of the state of play of linked data and Web scale discovery.

Track 5 – ‘New Users, New Audiences, New Behaviours’ focused on new ways to engage and understand users, and to develop services accordingly. Joanna Ptolomey discussed a case study that looks at the information community journey of Long Term Conditions Scotland and asks if community members can effectively curate and moderate content for themselves.

Track 6 – ‘Teaching Others, Developing Ourselves’ featured presentation from Michael Stephens of San Jose State University with an overview of emerging literacy related to digital media, information exchange and education as well as presentation regarding teaching information skills and developing ourselves.

The conference was attended by delegates from more than 30 countries and from academic, public, corporate, government, medical, law and various

other types of libraries. My most favourite sessions were:

- Rethinking Library Websites
- Efficient and Effective: Case studies for the new normal
- The e-book Revolution in Libraries
- On the Move: Library Services on Mobile Devices
- Experimenting with e-Resources
- Phil’s Latest Discoveries
- Searching Without Google
- Teaching Others / Teaching Information Skills

The Internet Librarian International conference ended with a panel discussion tackling the question of whether the new normal requires a new you. The panel was made up of three speakers from the conference, Michael Stephens, Ulla de Stricker and Joanna Ptolomey and was chaired by Marydee Ojala.

I attended really interesting sessions, met renowned experts on various fields and had engaging discussions in the field of current trends in library and information management during this conference. I personally feel that I don’t completely need to reinvent myself to work with the new normal, but I can use my existing knowledge and resources as a basis to adapt myself to meet new needs and challenges.

#### **About the author**

**Sanjay K. Bihani** works as Attaché (Library and Press & Information) in the High Commission of India at London is a Member of IFLA Standing Committees on Government Libraries, RSCAO, CLM and the IFLA Journal Editorial Committee. He may be contacted at [sanjaykbihani@gmail.com](mailto:sanjaykbihani@gmail.com) or [bihanisk@hotmail.com](mailto:bihanisk@hotmail.com)



## News

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### IFLA policies and programmes

#### *IFLA Manifesto for Digital Libraries*

*Bridging the Digital Divide: making the world's cultural and scientific heritage accessible to all*

*The digital divide is an information divide.* Bridging the digital divide is a key factor in achieving the Millennium Development Goals of the United Nations. Access to information resources and the means of communication supports health and education as much as cultural and economic development.

The dissemination of information enables citizens to participate in life-long learning and education. Information about the world's achievements allows everyone to participate constructively in the development of their own social environment.

Equal access to the cultural and scientific heritage of mankind is every person's right and helps promote learning and understanding of the richness and diversity of the world, not only for the present generation, but also for the generations to come.

Libraries have long been essential agents in fostering peace and human values. Libraries now operate digitally, and their digital services open up a new channel to the universe of knowledge and information, connecting cultures across geographical and social boundaries.

**Digital libraries.** A digital library is an online collection of digital objects, of assured quality, that are created or collected and managed according to internationally accepted principles for collection development and

made accessible in a coherent and sustainable manner, supported by services necessary to allow users to retrieve and exploit the resources.

A digital library forms an integral part of the services of a library, applying new technology to provide access to digital collections. Within a digital library collections are created, managed and made accessible in such a way that they are readily and economically available for use by a defined community or set of communities.

A collaborative digital library allows public and research libraries to form a network of digital information in response to the needs of the Information Society. The systems of all partners in a collaborative digital library must be able to interoperate.

A digital library complements digital archives and initiatives for the preservation of information resources.

**Mission and goals.** The mission of the digital library is to give direct access to information resources, both digital and non-digital, in a structured and authoritative manner and thus to link information technology, education and culture in contemporary library service. To fulfil this mission the following goals are pursued:

Supporting digitisation, access to and preservation of cultural and scientific heritage.

Providing access for all users to the information resources collected by libraries, while respecting intellectual property rights.

Creating interoperable digital library systems to promote open standards and access.

Supporting the pivotal role of libraries and information services in the promotion of common standards and best practices.

Creating awareness of the urgent need to ensure the permanent accessibility of digital material.

Linking digital libraries to high-speed research and development networks.

Taking advantage of the increasing convergence of communications media and institutional roles to create and disseminate digital content.

**Content creation, access and preservation.** Building a digital library requires sources of content in digital form, whether digitised or born digital content.

Many countries have created national digitisation programmes, and more will do so, as agreed by the World Summit on the Information Society. IFLA strongly supports and encourages both national and international digitisation strategies as well as single library and partnership initiatives. Digitisation allows the creation of virtual collections bringing together material across continents. Digitisation also has a preservation role in the case of deteriorating original documents and media.

The products of digitisation themselves must be preserved, just as born-digital material must be preserved. All digital library initiatives must include plans for digital preservation by an appropriate authority.

The digital library serves as an environment to bring together collections, services, and people in support of the full life cycle of creation, dissemination, use and preservation of data, information and knowledge.

Interoperability and sustainability are key to the vision of digital libraries able to communicate with each other. Digital libraries that conform to commonly agreed open standards and protocols improve world-wide knowledge dissemination and access.

**Implementing the Manifesto.** IFLA encourages national governments, intergovernmental organisations and sponsors to recognise the strategic importance of digital libraries and to actively support their development. Contributions to large-scale digitisation programmes serve to make cultural and scientific information resources more widely available, and advance national and international digital library initiatives that will be sustainable over time.

Specific legislation and financial support from national and local governments is required to bridge the digital divide and to ensure sustainable access. Any long-term strategy must aim to bridge the digital divide and to strengthen the development of education, literacy, culture – and most of all – to provide access to information.

Bridging the digital divide also implies the need for action by the appropriate authorities to incorporate information literacy into education curricula, and to raise awareness that much valuable information from the past is not in digital form.

IFLA encourages libraries to collaborate with other cultural and scientific heritage institutions to provide rich and diverse digital resources that support education and research, tourism and the creative industries.

Consultation with rights owners and other stakeholders is essential. Designers and implementers of digital libraries should consult fully with indigenous communities, whose tangible and intangible cultural heritage it is proposed to digitise, to ensure that their rights and wishes are respected. The implementation of the digital library must also support equity of access to the content by meeting the special needs of people with disabilities.

Authorities should be aware that active planning for digital libraries at any level (national, regional and local) should cover the following issues:

- Trained personnel
- Adequate buildings and facilities
- Integrated planning for libraries and archives
- Funding
- Target setting

National e-strategies, as recommended by the World Summit on the Information Society, could establish a firm basis for planning digital libraries.

*Revised version endorsed by the IFLA Governing Board. December 2010*

<http://www.ifla.org/publications/ifla-manifesto-for-digital-libraries>

PDF version: <http://www.ifla.org/files/digital-libraries/documents/ifla-unesco-digital-libraries-manifesto.pdf>

*Last update: 14 December 2011*

**UNESCO endorsement.** UNESCO endorsed the IFLA Manifesto for Digital Libraries at its General Conference 2011.

The endorsement enables IFLA members to work with UNESCO Member States within the context of national e-strategies aimed at increasing access to information and development. It provides IFLA members with a stronger foundation on which to lobby for and to implement digitisation activities.

<http://www.ifla.org/en/news/unesco-endorses-the-ifla-manifesto-for-digital-libraries>

### **Action for Development through Libraries Programme (ALP)**

**ALP Small Project Report: Transparency, Good Governance and Freedom from Corruption, Serbia.** In Serbia, rampant corruption is present and almost all spheres of social life are affected by it. In the process of fighting against corruption it is very important to act preventively and to educate the public through special programs. IFLA ALP selected the Serbian Library Association (SLA) project “Transparency, Good Governance and Freedom from Corruption” to be funded in 2010/2011, with which SLA was given a

great opportunity to support anti-corruption campaigns in the library community.

*Full report:* <http://www.ifla.org/en/news/alp-small-project-report-transparency-good-governance-and-freedom-from-corruption-serbia>

**ALP Small Project Report: In-country training for small library associations in the South Pacific, Samoa.** During 2011 the Library Association of Samoa undertook two projects funded by the IFLA ALP programme. These were a workshop and training session for the librarians of Samoa and a National Library Week. These projects helped the Library Association of Samoa to pass on Information Literacy skills and offer the “Building Strong Library Associations” materials provided by IFLA covering libraries in organisations and libraries in society. The workshop and training sessions were attended by 56 participants representing the school, university, public and special librarians of Samoa.

*Full report:* <http://www.ifla.org/en/news/alp-small-project-report-in-country-training-for-small-library-associations-in-the-south-pacific>

#### **Botswana: BSLA Workshop 2 focuses on advocacy and communication**

Following the stakeholder summit in November 2010 and workshop in May 2011, the second workshop in the Building Strong Library Associations Programme (BSLA) in Botswana was held November 9–11 at Boipuso Hall, Gaborone. Core trainer Winnie Vitzansky facilitated the workshop. At the workshop, participants reported an extremely positive result: since the start of the BSLA project in Botswana, the Botswana Library Association has more than doubled its membership.

*More:* <http://www.ifla.org/en/news/botswana-bsla-workshop-2-focuses-on-advocacy-and-communication>

**Cameroon: BSLA second workshop raises visibility of a young association.** The IFLA BSLA Programme, launched in 2010, is taking shape and making an impact on the information profession in Cameroon. The first training, successfully organized in January 2011, focused on Modules 1&2 of the BSLA training packages. The first workshop resulted in the re-birth of the Library Professional Association, ABADCAM, which is now active with 25 paid up members. The second BSLA workshop (Workshop-2) was successfully delivered on 17–19 November 2011, in Yaoundé, Cameroon. This report highlights the activities and outcomes of the BSLA Cameroon Workshop 2.

*More:* <http://www.ifla.org/en/news/cameroon-bsla-second-workshop-raises-visibility-of-a-young-association>

#### **Nepal: BSLA programme commences with first workshop.**

The IFLA Building Strong Library Associations programme has commenced in Nepal, with the first of three scheduled workshops being held between the 7th and 9th of November 2011. In Nepal the BSLA programme is being undertaken with the Nepal Community Library Association (NCLA) a relatively small and recently established library association which has been formed to support the development and sustainability of rural community libraries. The NCLA also works very closely with READ (Rural Education and Development) Nepal, which has been responsible for setting up 50 libraries in villages and hamlets in Nepal, and which was also the recipient of the 2006 Bill and Melinda Gates Foundation Access To Learning Award.

*More:* <http://www.ifla.org/en/news/nepal-bsla-programme-commences-with-first-workshop>

### **Membership matters**

#### **New members**

We bid a warm welcome to the 21 members who have joined the Federation between 24 September and 15 December 2011.

#### **International associations**

Association of Parliamentary Librarians of Asia and the Pacific (APLAP), Australia

#### **Institutional members**

University of Ottawa, Canada

Università degli Studi di Milano, Divisione Coordinamento Biblioteche, Italy

University of Nairobi, Kenya

Gradska knjižnica Marka Marulica Split / Marko Marulic City Library of Split, Croatia  
Biblioteca Nacional Ernesto J. Castillero R. de Panama, Panama

Troms fylkesbibliotek, Norway

ASLIB, United Kingdom

#### **Personal affiliates**

Michael Crose, United States

Jean Collins, United States

Brian Bannon, United States

Elizabeth Avery, United States

Margaret Van Dyk, United States

Josephine Siegrist, Switzerland

Maria Violeta Bertolini, Argentina

Stephanie Jane Wilson, United Kingdom

Megan Macken, United States

Megan Finney, United States

*Student affiliates*

Sandra Mannings, United States  
 Dorian Lange, United States  
 Elizabeth Gartley, United States

**Future IFLA conferences and meetings*****IFLA International Newspaper Conference 2012***

The IFLA International Newspaper Conference 2012 will take place at the Bibliothèque nationale de France, Grand Auditorium, Quai François Mauriac, Paris, from 11–13 April 2012. Theme: Newspaper Digitization and Preservation: New Prospects. Stakeholders, Practices, Users and Business Models.

The conference is organized by the Bibliothèque nationale de France, the IFLA Newspaper Section and the IFLA PAC Core Activity. The Conference will take place during a major exhibition dedicated to the History of Newspapers in France at the BnF. Conference languages: English and French. Simultaneous translation will be provided.

*Further information:*

Christiane Baryla, IFLA PAC Director. Email: [christiane.baryla@bnf.fr](mailto:christiane.baryla@bnf.fr)

Frederick Zarndt, Chair, IFLA Newspaper Section. Email: [frederick@frederickzarndt.com](mailto:frederick@frederickzarndt.com)

Pascal Sanz, Director Department Law, Economics, Politics, BnF. Email: [pascal.sanz@bnf.fr](mailto:pascal.sanz@bnf.fr)

***Helsinki 2012***

**The World Library and Information Congress: 78th IFLA General Conference and Assembly**, will take place in Helsinki, Finland from 11–16 August 2012. Theme: Libraries Now!—Inspiring, Surprising, Empowering.

*Further information:* <http://conference.ifla.org/ifla78>

*Final announcement:* <http://conference.ifla.org/sites/default/files/files/wlic2012/final-announcement.pdf>

**Conference Secretariat.** K.I.T. Group GmbH Association & Conference Management has been appointed as the Congress Secretariat for the IFLA World Library and Information Congress 2012.

Contact: IFLA Congress Secretariat, c/o K.I.T. Group GmbH – Association & Conference Management, Kurfürstendamm 71, DE-10709 Berlin, Germany. Tel.: +49 30 24 60 3-329. Fax: +49 30 24 60 3-200. Email: [wlic2012@kit-group.org](mailto:wlic2012@kit-group.org)

***Helsinki satellite meetings***

The following satellite meetings were approved by IFLA's Professional Committee at its 2011 meeting.

***Libraries in Networks: creating, participating and co-operating***

Dates: 2 days prior to Congress  
 Location: Klaipeda, Lithuania  
 Sponsor: IFLA Public Library Section  
 Contact: Dzeinara Kaunaite, [dzeinara.kaunaite@cb.ku.lt](mailto:dzeinara.kaunaite@cb.ku.lt)

***The Future of Health Information***

Date: 10 August 2012  
 Location: University of Helsinki, Finland  
 Sponsor: IFLA Health and Biosciences Section  
 Contact: Terhi Sandgren, [terhi.sandgren@helsinki.fi](mailto:terhi.sandgren@helsinki.fi)

***Art now! Contemporary Art Resources in Library Context***

Dates: 9–11 August 2012  
 Location: Museum of Contemporary Art Kiasma and Aalto University, School of Art and Design, Helsinki, Finland  
 Sponsor: IFLA Art Libraries Section  
 Contact: Jan Simane, [simane@khi.fi](mailto:simane@khi.fi)

***Let's Read Reading and Print Disabilities in Young People***

Dates: 2 days prior to Congress  
 Location: Tallinn, Estonia  
 Sponsor: IFLA Libraries Serving Persons with Print Disabilities Section  
 Contact: Minna von Zansen, [minna.vonzansen@celia.fi](mailto:minna.vonzansen@celia.fi)

***Global policies, Imperatives and Solutions for the Efficient Library Collection Management and Access to Less Used Documents***

Dates: 9–10 August 2012  
 Location: Kuopio Academy of Design, Savonia University of Applied Sciences Piispankatu 8, FI-70101 Kuopio, Finland  
 Sponsor: IFLA Acquisition and Collection Development Section with Serials and Other Continuing Resources Section  
 Contact: Pentti Vattulainen, [pentti.vattulainen@nrl.fi](mailto:pentti.vattulainen@nrl.fi)  
 Website: <http://www.nrl.fi/ifla2012/kuopiosatellite>

***The Electronic Re-Evolution . . . News Media in the Digital Age***

Dates: 7–9 August 2012  
 Location: Mikkeli, Finland  
 Sponsor: IFLA Newspapers Section, Preservation and Conservation Section, Core Activity on Preservation and Conservation (PAC), Genealogy and Local History Section  
 Contact: Frederick Zarndt, [frederick@zarndt.net](mailto:frederick@zarndt.net)

*Libraries for Young People: Breaking through Boundaries*

Dates: 9–10 August 2012  
 Location: Joensuu Main library and other premises in the city center, Joensuu, Finland  
 Sponsor: IFLA Libraries for Children and Young Adults Section  
 Contact: Viviana Quiñones, viviana.quinones@bnf.fr

*Beyond libraries – subject metadata in the digital environment and semantic web*

Dates: 17–18 August 2012  
 Location: National Library of Estonia, Tallinn  
 Sponsor: IFLA Classification and Indexing Section  
 Contact: Jo-Anne Belair, jo-anne.belair@bibl.ulaval.ca  
 Website: <http://www.nlib.ee/tallinnsatellite>

*Knowledge Management Theory in Action: how to plan, apply, and assess knowledge management in libraries*

Date: 10 August 2012  
 Location: Goethe-Institut, Helsinki, Finland  
 Sponsor: IFLA Knowledge Management Section  
 Contact: Leda Bultrini, leda.bultrini@arpalazio.it

*Bibliography in the Digital Age*

Date: 9 August 2012  
 Location: Biblioteka Narodowa, Warsaw, Poland  
 Sponsors: IFLA Bibliography Section and IFLA Cataloguing Section  
 Contact: Carsten Andersen, cha@dbc.dk

*The Homeless and the Libraries – the Right to Information and Knowledge For All*

Dates: 10 August 2012  
 Location: Tallinn Central Library, Tallinn, Estonia  
 Sponsor: IFLA Library Services for People with Special Needs Section  
 Contact: Veronica L C Stevenson-Moudamane, vlscmoudamane@gmail.com

*The Road to Information Literacy: Librarians as facilitators of learning*

Dates: 8–10 August 2012  
 Location: Tampere, Finland  
 Sponsor: IFLA Continuing Professional Development and Workplace Learning Section and IFLA Information Literacy Section  
 Contacts: Susan Schnuer, schnuer@illinois.edu; Leena Toivonen, leena.t.toivonen@uta.fi

*Library's Efficiency, Impact and Outcomes: Statistical Evaluation and Other Methods as Tools for Management and Decision-making*

Dates: 8–9 August 2012  
 Location: University of Turku, Finland  
 Sponsor: IFLA Statistics and Evaluation Section, Management and Marketing Section, Academic and Research Libraries Section  
 Contact: Markku Laitinen, markku.laitinen@helsinki.fi  
 Website: <http://kirjasto.utu.fi/ifla2012>

*IFLAcamp: New Professionals Now!*

Dates: 9–10 August 2012  
 Location: Hämeenlinna City Library, Hämeenlinna, Finland  
 Sponsor: IFLA New Professionals Special Interest Group  
 Contact: Sebastian Wilke, sebastian.wilke@ibi.huberlin.de  
 Website: <http://npsig.wordpress.com/iflacamp>

*How can libraries and information centres improve access to women's information and preserve women's cultural heritage?*

Dates: 8–10 August 2012  
 Location: University of Tampere, Finland  
 Sponsor: IFLA Women, Information and Libraries Special Interest Group  
 Co-sponsor: Women Information Network Europe (WINE)  
 Contact: Maria Cotera, wilsig@googlemail.com  
 Website: <http://www.minna.fi/web/guest/ifla-pre-conference-2012>

*Information for Civic Literacy*

Dates: 8–10 August 2012  
 Location: Riga, Latvia  
 Sponsor: IFLA Access to Information Network – Africa (ATINA) Special Interest Group, IFLA Information Literacy Section, IFLA Africa Section  
 Contact: Frank Kirkwood, kirkwood.professional@sympatico.ca  
 Website: <http://www.lnb.lv/iflariga2012> (will be available on 15 January 2012)

*Transcending Boundaries to Increase Cultural Understanding Between Countries*

Dates: 8–9 August 2012  
 Location: Lappeenranta, Finland

Sponsor: IFLA Library Services to Multicultural Populations  
Contact: Tess Tobin, TTobin@CityTech.Cuny.Edu

*Parliamentary libraries – empowering parliaments and citizens*

Dates: 8–10 August 2012  
Location: Helsinki, Finland  
Sponsor: IFLA Library and Research Services for Parliaments Section  
Contact: Sari Pajula, iflaparl2012@parliament.fi  
Website: <http://lib.eduskunta.fi/Resource.phx/library/conference/index.htx>

*The Future of Information and Library Associations*

Dates: 7–9 August 2012  
Location: The Hague, Netherlands  
Sponsor: IFLA Management of Library Associations Section (MLAS) & Building Strong Library Associations Programme (BSLA)  
Contact: Sjoerd Koopman, sjoerdkoopman1@gmail.com  
Last update: 21 December 2011

*Singapore 2013*

**The World Library and Information Congress: 78th IFLA General Conference and Assembly**, will take place in Singapore from 17–23 August 2013.  
*Theme:* Future Libraries: Infinite Possibilities

More information regarding the 79th IFLA General Conference and Assembly will be available on this website. Please check back at a later date.

<http://conference.ifla.org/ifla79>

**IFLA publications**

**Designing Library Space for Children.** Edited by Ingrid Bon, Andrew Cranfield, and Karen Latimir. Berlin/Munich: De Gruyter Saur, 2011. ISBN 978-3-11-023216-5. (IFLA Publications; Nr 154) Euro 89,95 / for USA, Canada, Mexico US\$ 135.00. Special price for IFLA members Euro 69,95 / for USA, Canada, Mexico US\$ 105.00. Also available as an eBook.

In recent years the library community has seen a renewed interest in library architecture and design. This is due to the change of focus from content and collection development to how libraries engage with their users in a digital age. This means that librarians, architects, politicians and patrons must develop new visions, concepts and ideas for the design and building of libraries. This book brings together a number of articles based on presentations from the IFLA World Congress 2009: historical view of the development of children's libraries over the last century, a

look at how children use new media, libraries of the future, innovative design projects for children's libraries from around the world.

**Libraries in the early 21st century, volume 1. An international perspective.** Edited by Ravindra N. Sharma. Berlin/Munich: De Gruyter Saur, 2012. ISBN 978-3-11-027056-3. Euro 99,95 / for USA, Canada, Mexico US\$ 150.00. Also available as an eBook.

Libraries have been part of human civilization for centuries. They have been developed and destroyed many times due to acts of war and natural disasters, but they have kept up with the challenges. The introduction of technology in libraries in the last quarter of the twentieth century has changed the face of libraries, their operations, and access to their collections. This unique volume of "Libraries in the Early 21st Century: An International Perspective", edited by Ravindra N. Sharma, an experienced dean of libraries at Monmouth University, USA and an author/editor, gives a truly international overview of the development of libraries and library technology in many countries of the world, including: Australia, New Zealand, South Africa, United Kingdom, Canada, China, France, Azerbaijan, Germany, Hungary, Japan, Nigeria, Russia, Spain, Morocco, Turkey, Uzbekistan, and others. All chapters have been written by well-known library leaders and library educators-including several former IFLA presidents. 2009-2011 IFLA President Ellen Tise contributed the Foreword.

The individual chapters deal with current development in libraries with an emphasis on technology and the future of libraries to the year 2025.

A second volume of the book will be published by De Gruyter in 2012 with chapters from a variety of developed and developing nations with rich information concerning the impact of technology on libraries, for the benefit of all librarians, scholars, and library educators.

*Please order any IFLA De Gruyter Saur Publication from:*

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**Revisionism and Professional Ethics II.** Guila Cooper. (FAIFE Spotlight)

Available at: <http://www.ifla.org/en/publications/revisionism-and-professional-ethics-ii>

## Abstracts

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### قتطفات

#### The state of e-legal deposit in France: looking back at five years of putting new legislation into practice and envisioning the future

الإيداع القانوني للمحتوى الرقمي في فرنسا: إعادة النظر في خمس سنوات من تطبيق التشريعات الجديدة ووضع تصورات للمستقبل

Peter Stirling, Gildas Illien, Pascal Sanz and  
Sophie Sepetjan

IFLA Journal 38 (2012) No. 1 pp. 5–24

يصف المقال الوضع القانوني لإيداع المواد الرقمية في فرنسا، ويوضح كيف تم تفعيله في المكتبة الوطنية الفرنسية. يُركز أيضًا على الأرشفة والتوثيق الإلكترونيين، حيث تعود خبرة المكتبة إلى ما يقرب من عشر سنين ماضية، بينما يُناقش المقال أيضًا جوانب أخرى للإيداع القانوني للمحتوى الرقمي وما قد يطرأ عليه من تطورات مستقبلية وما يواجهه من تحديات. هذا مع إجراء مقارنات مع الأوضاع في الدول الأخرى.

#### Out of the classroom and into the laboratory: teaching digital curation virtually and experientially

في المعمل، خارج قاعة الدراسة: تدريس المُعالجة الرقمية افتراضيًا وتجريبيًا

Ross Harvey and Jeannette A. Bastian  
IFLA Journal 38 (2012) No. 1 pp. 25–34

يتزايد اتضاح الحاجة إلى أدوات وطرق تدريس مُبتكرة، نظرًا لسعي التعليم في مجال المكتبات والمعلومات للاستجابة لزيادة المعلومات الافتراضية وأماكن الحفظ والصيانة. فيجب أن تُكمل أدوات التدريس وتُحسن من وضع تقديم منهجًا فنيًا في مواد مثل مادة المُعالجة الرقمية. تُظهر دورات المُعالجة الرقمية المُقدمة في كلية المكتبات والمعلومات بكلية سيمونز في بوسطن، منهجًا افتراضيًا وتجريبيًا مُبتكرًا. ويُعد معمل الوثائق الافتراضية والحفظ والصيانة في قلب المنهج الرقمي. يُناقش هذه البحث ويوضح العلاقة بين معمل المنهج الرقمي والنجاح في تدريس منهج المُعالجة الرقمية ونتائج ذلك على المستوى الدولي.

#### Professional development, values and strategy – the means for building strong libraries for the future!

التنمية المهنية، قيم واستراتيجيات: أساليب بناء مكتبات قوية من أجل المُستقبل

Catharina Isberg

IFLA Journal 38 (2012) No. 1 pp. 35–36

يخضع قطاع المكتبات لتغيير هائل، ويجب علينا أن نخلق في هذا العالم المُتغير بيئة تروج لتطوير كبير يضمن مكتبات قادرة على البقاء والنمو مُستقبلًا، تعود بالنفع على مُستخدمينا. وتُعد التنمية المهنية عنصرًا ضروريًا من عناصر هذه البيئة، يجب أن يُحاذي إستراتيجية وقيم المؤسسة. إن تغير توقعات العملاء وسلوكياتهم والتطور التكنولوجي يُزيد من أهمية تحديد هوية المكتبة وأنشطتها التي تحظى بالأولوية. يتم وضع القيم والإستراتيجيات وتتم التنمية المهنية جنبًا إلى جنب مع عملية التنمية. وتخلق مُشاركة العاملين في عملية التنمية مُناخًا خلاقًا بل إنها وسيلة تضمن النجاح في المُستقبل. لقد عملنا في مكتبة جامعة العلوم الزراعية على التنمية المهنية ووضع قيم واستراتيجيات ومبادئ تمكين وقيادة العاملين. شملت هذه الجهود كل العاملين، وكانت لها نتائج مُتأثرة.

#### Developing leadership competencies in librarians

تنمية الكفاءات القيادية لدى أمناء المكتبات

Mary Wilkins Jordan

IFLA Journal 38 (2012) No. 1 pp. 37–46

ما الذي يخلق مُديرًا جيدًا؟ كيف تعرف أخصائية المكتبات أنها تتمتع بالكفاءة اللازمة لتكون قائدة أو مديرة؟ ما الذي يجب أن تبحث مهنة أمانة المكتبات عنه في مُديرها الصاعدين؟ لا توجد إجابات واضحة لهذه الأسئلة حتى الآن. ولكن سيتم الإجابة على هذه الأسئلة من خلال تطوير مجموعة من الكفاءات والمؤهلات مبنية على البحث. كما سيضع أساسًا لأفكار أخرى قائمة على البحث يمكن تطويرها لمساعدة قادة ومُديري المكتبة. إن الهدف البحثي لهذه الدراسة هو الارتقاء بمجموعة المؤهلات التي خرج بها البحث، من خلال آراء مديري المكتبة العامة الحاليين. إن تنمية المديرين والقادة أهم بكثير من أن تترك للمصادفة. إن من شأن الاستعانة بمجموعة من المؤهلات الموضوعية بناءً على عملية من البحث، أن تُساعد على إتاحة فرص تدريب للمكتبيين الذين يتطلعون إلى النجاح كمديرين.

### Information literacy and engineering design: developing an integrated conceptual model

محو الأمية المعلوماتية والتصميم الهندسي: تطوير نموذج علمي متكامل

Michael Fosmire

IFLA Journal 38 (2012) No. 1 pp. 47–52

يتزايد اتجاه التعليم الهندسي نحو الأسلوب القائم على التعلم النشط. لقد أصبحت هناك مشروعات تصميمات هندسية قبل السنة النهائية من الدراسة حتى أنها قد تكون في السنة الدراسية الأولى، ويتزايد معدل عمل مثل هذه المشروعات التي تُصيح مُشكلة؛ لعدم وصولها لإجابة واحدة صحيحة، يجد المكتبيون المُتخصصون في مجال الهندسة فرصًا أكثر للعمل مع الطلاب خلال حياتهم الدراسية. ويحتاج المكتبيين؛ كي يستفيدوا من هذه الفرص، أن يترجموا معرفتهم ووعيهم المعلوماتي إلى لغة مُدرسي الهندسة بل وأن يضيفوا إلى أسلوب تدريسي هؤلاء المُعلمين. يُحاول هذا البحث خلق جسرًا يركز على مصادر المعلومات التي يحتاجها المُهندسون الذين يقومون بتصميم وجمع البحث الذي يُجرى في مجال التعليم الهندسي ومُجتمعات المكتبة العلمية.

### Environmental literacy and the emerging roles of information professionals in developing economies

نشر المعرفة البيئية والدور المُتنامي لأخصائيي المعلومات في اقتصاد الدول النامية

Oluchi O. Okere and Oluremi A. Abiolu

IFLA Journal 38 (2012) No. 1 pp. 53–59

لقد أصبح التدهور البيئي مصدر قلق حقيقي للمُجتمع المُعاصر، مما زاد من جهود حشد الدعم وعقد المؤتمرات وحملات التوعية به على مُختلف المُستويات. وبما أنه على أخصائيي المعلومات في الدول النامية الإسهام في الحفاظ على الاستدامة البيئية، فهم يحتاجون إلى اللجوء إلى الإبداع والابتكار في التغلب على ما يواجههم من مشكلات مثل انخفاض مستويات الإلمام بالقراءة والكتابة، ضعف البنية التحتية، عدم اهتمام السلطة السياسية بالمعلومات البيئية اللازمة للوصول إلى الهدف المرجو ألا وهو نشر الوعي البيئي. يتخطى تطور الأدوار الجديدة التي يُمكن لأخصائيي المعلومات القيام بها، مجرد تقديم المعلومات، بما ليكونوا أيضًا: عاملين على التغيير، مُعلمين، خبراء إلكترونيين، شركاء لغيرهم من العاملين على التغيير. يوضح البحث أن بإمكان أخصائيي المعلومات أن يكونوا أكثر صلةً باحتياجات الحفاظ على الاستدامة البيئية بإعادة النظر في أدوارهم في مُجتمعاتهم المُختلفة. وطرح البحث بعض التوصيات منها إعادة تنشيط المكتبات العامة والتدريب على مهارات تكنولوجيا الاتصالات والمعلومات والتعاون مع المجموعات ذات الاهتمام المُشترك.

### The second hand library building: sustainable thinking through recycling old buildings into new libraries

مباني المكتبات التي كان قد سبق استخدامها: التفكير المستمر في إعادة استخدام المباني القديمة وتحويلها لمكتبات جديدة

Petra Hauke and Klaus Ulrich Werner  
IFLA Journal 38 (2012) No. 1 pp. 60–67

يتم إعادة استخدام المباني القديمة وتحويلها لمكتبات جديدة في جميع أنحاء العالم. إن إعادة تخصيص مبنى سبق استخدامه لغرض مُختلف ليُصبح مكتبة هو شكل واضح من أشكال إعادة الاستخدام. يخلق تحويل مبنى قائم بالفعل، كان له استخدام آخر غير كونه مكتبة، إلى مكتبة، تحديًا وفرصة للتفكير المُستديم في التخطيط للمكتبات. وبما أن الموارد غير المُتجددة أخذت في التناقص فتتزايد ضرورة إعادة الاستخدام في المستقبل. إن إعادة استخدام المباني يعني تقليل بصمة المكتبة البيئية بتكلفة عملية وطريقة فعالة. وبجانب الأمور المتعلقة بالحفاظ على البيئة مثل ترشيد المياه والطاقة، والمواد المُعاد استخدامها أو القابلة للاستدامة، وجودة الهواء الداخلي، والطاقة الشمسية المولدة من الألواح الضوئية الجهدية، تختلف مهمة التخطيط لإعادة استخدام المبنى تمامًا عن التخطيط لإنشاء مكتبة في مبنى جديد. كما يتم تقديم عدد من دراسات الحالة لأفضل الممارسات في ألمانيا ودول أوروبية أخرى.

### The Gov Doc Kids Group and free government information

مجموعة المستندات الحكومية للأطفال والمعلومات الحكومية المجانية والحرّة

Tom Adamich, Martha Childers, Katy Davis,  
John H. Faria and Antoinette W. Satterfield

IFLA Journal 38 (2012) No. 1 pp. 68–77

تحفز المعلومات المجانية عن الحكومة، الابتكار بين الأطفال على مستوى العالم، بل ويمكنها أن تطور كل جوانب حياتهم. تشكلت مجموعة "الأطفال للوثائق الحكومية" في الولايات المتحدة الأمريكية؛ للترويج لاستخدام المعلومات الحكومية بين الأطفال من مرحلة رياض الأطفال وحتى المدرسة الثانوية. يوضح البحث كيفية تشكل المجموعة والمواقع الإلكترونية المحلية والعالمية المُفيدة للأطفال، وطرق حقيقية مُجربة تفتح أبواب المعلومات الحكومية للأطفال. سيتناول البحث أيضًا الطرق التي تستفيد بها المجموعة من الإنترنت؛ في الترويج للمعلومات الحكومية بين الأطفال ويُقدّم وصفًا مُفصلاً كيف تم تكوين مجموعة الوثائق الحكومية الخاصة بالأطفال، وبالرغم من أمثلة المشروعات المُقدمة تُركز على الولايات المتحدة الأمريكية ولكن هذه الأفكار يُمكن أن تُطبق وتنمو في أية دولة أخرى.

### Learning to read before you walk: Portuguese libraries for babies and toddlers

تعلّم القراءة قبل المشي: المكتبات البرتغالية للأطفال حتى عمر سنتين

Ana Margarida Ramos

IFLA Journal 38 (2012) No. 1 pp. 78–85

يهدف هذا البحث إلى تقديم وتحليل بعض الأمثلة من المكتبات العامة المُصممة خصيصًا للأطفال حتى عمر سنتين في البرتغال، والتي تُدعى بالبرتغالية "bebetecas". يُبرز البحث الدور الذي يلعبه الترويج للقراءة منذ سن صغيرة، في تنمية القارئ، إن بعض المشروعات التي

تم تنفيذها في هذا المجال وخاصةً تلك التي تستهدف العائلات وتكون أحيانًا موجهة لمراكز الرعاية النهارية ودور الحضانة، تخلق وعيًا مُتزايدًا بدور المكتبة في نشر كتب الأطفال، كما تخلق عادات القراءة في سن مُبكرة. وهو ما يقوي الروابط الأسرية ويُعزز نمو الأطفال في صورة أكثر صحة وتوازن. ومع اعتبار الأسرة والمدرسة سياقين هامين ينمو فيهما القراء، تُعد المكتبة مكانًا مميّزًا ووسيلةً للترويج لممارسات القراءة الجيدة منذ سن صغيرة بل صغيرة جدًا، وحيث يُمكن أن تكون الكتب خلفيةً لتفاعل الأطفال الصغار وأسرتهم ومن يقومون على رعايتهم.

## 摘要

### **The state of e-legal deposit in France: looking back at five years of putting new legislation into practice and envisioning the future**

法国电子缴存现状：回顾新法实施的5年并展望未来

Peter Stirling, Gildas Illien, Pascal Sanz and Sophie Sepetjan

IFLA Journal 38 (2012) No. 1 pp. 5–24

本文描述了法国关于数字文献法定缴存的立法现状，展示了其在法国国家图书馆实践中的执行情况。重点是关于法国国家图书馆已实施了10年的网页存档，也讨论了数字法定缴存的其他方面，以及未来发展的可能与挑战。文章还对其他国家的情况做了各方面的比较。

### **Out of the classroom and into the laboratory: teaching digital curation virtually and experientially**

走出教室，进入实验室：用虚拟和体验结合的方式教授数字保存

Ross Harvey and Jeannette A. Bastian

IFLA Journal 38 (2012) No. 1 pp. 25–34

图书馆与信息科学/信息科学的研究生教育旨在响应日益增强的虚拟信息和保存环境，需要创新性教学工具和教学方法这一点已经越来越清楚。这些教学工具必须补充并加强诸如数字保存这样具有最高水准的课程。波士顿西蒙斯学院的图书馆与信息科学学院提供的数字保存课程展示了一种虚拟和体验相结合的创新方式。该课程的核心是数字课程实验室，一个虚拟档案馆和保存实验室。本文讨论并演示了数字课程实验室与数字保

存课程的成功教授之间的关系，并探讨了更广泛的国际影响。

### **Professional development, values and strategy – the means for building strong libraries for the future!**

专业发展，价值观和战略——为建设面向未来的强大图书馆的方法！

Catharina Isberg

IFLA Journal 38 (2012) No. 1 pp. 35–36

图书馆与信息部门正在经历巨大的变化。在这个变化的世界中，我们必须创造一种促进强劲发展的环境，以确保可行的未来，确保一个让我们所有的用户都受益的图书馆。职业发展是这一环境的重要组成部分。它必须与组织的战略和价值观一致。用户期望、行为以及技术发展的变化，对于图书馆如何定位更为重要。价值观、战略和职业发展与发展进程携手并进。员工参与发展进程会形成一种创造性的氛围，一种保证未来成功的手段。在瑞典农业科学大学图书馆，我们一直将专业发展，战略和价值观与员工的能力和领导力一起发展。这针对所有的工作人员，并且已经有了良好的效果。

### **Developing leadership competencies in librarians**

发展图书馆馆长的领导力

Mary Wilkins Jordan

IFLA Journal 38 (2012) No. 1 pp. 37–46

是什么造就了一个好的图书馆馆长？一位馆长如何知道她具有成为有效管理者和领导者的能力？图书馆委员会或社区如何知道该寻找一个怎样的领导呢？图书馆专业人员会对他们的新兴管理者有什么期望？现在这些问题没有明确的答案。但发展一套基于研究的能力将对这些问题给予一些回答，并给其他基于研究的想法提供发展基础，以帮助图书馆的管理者和领导者。本文的研究目的是从文字定义出发，通过一些现任公共图书馆馆长的建议，完成一套系统的能力建设。图书馆界管理者/领导者的发展非常重要，不能存在侥幸心理。用一套基于研究的能力作为基础，将会

帮助那些希望在岗位上有所成就的馆长拓展培训机会。

### **Information literacy and engineering design: developing an integrated conceptual model**

信息素养与工程设计：开发一种整体概念模型

Michael Fosmire

IFLA Journal 38 (2012) No. 1 pp. 47–52

工程教育日益朝着基于主动学习的教学方式转变。传统上设计项目集中于最后一年，但越来越多的工程设计项目更早出现，甚至在本科教育的第一年就出现。随着这些没有单一“正确”答案的问题增加，工程学科的馆员可以有更多机会与学生在他们的整个教育生涯一起合作，而不是只在一个毕业课程中。要充分利用这些机会，馆员需要将他们关于信息素养的知识翻译成工程教育工作者的语言，并将其融入这些教育者的教育法中。本文试图创造这样一个桥梁，着重于工程师在设计过程中需要的信息资源和过程，并将工程教育和图书馆学届的文献汇集起来。

环境素养与发展中经济体信息专业人员的新兴角色

### **Environmental literacy and the emerging roles of information professionals in developing economies**

Oluremi A. Abiolu and Oluchi O. Okere

IFLA Journal 38 (2012) No. 1 pp. 53–59

环境恶化已成为当代社会关注的重要问题，引发了社会不同层面以倡导建议、召开大会、宣传运动等方式进行的努力。发展中经济体的信息专业人员注定要环境可持续性发展做出贡献；他们需要付出创造力并进行创新，克服诸如素养水平低、基础设施差、政治冷漠等问题，取得环境素养的预期目标。新的角色正在发展，超越了单纯的信息提供；包括信息专业人员作为变革推动者、教育者、电子专家和其他变革推动者的伙伴。本文提出信息专业人员可以通过重新定位自己在各自社群中的角色，变得更加切合环境可持续发展的需要。文中的一些建议包括重塑公共图书馆的活力，信息和通信技术的培训以及与利益集团的合作等。

### **The second hand library building: sustainable thinking through recycling old buildings into new libraries**

二手图书馆建筑：通过旧楼再利用建设新图书馆的可持续性思考

Petra Hauke and Klaus Ulrich Werner

IFLA Journal 38 (2012) No. 1 pp. 60–67

全世界范围内都有旧的建筑被再利用成为图书馆。一个曾用作其他用途的建筑成为图书馆的改造过程，显然是一种再利用。将一个曾经不具备图书馆功能的现存建筑改造为一个图书馆，会带来许多关于图书馆规划可持续性思考的机遇和挑战。由于不可再生资源正在减少，资源的重新利用和回收在未来将会越来越必要。旧建筑的再利用意味着用一种划算而高效的方式减少图书馆建筑的生态足迹。除了像节约用水、节约能源、再利用或可持续的建材、室内空气质量以及太阳能光伏电池板的电源这样的“绿色”方面，适应性改造的规划与在全新建筑内规划图书馆的工作完全不同。文中还给出了一些德国和欧洲其他一些国家的最佳实践案例研究。

### **The Gov Doc Kids Group and free government information**

儿童政府文献组织与免费政府信息

Tom Adamich, Martha Childers, Katy Davis, John H. Faria and Antoinette W. Satterfield

IFLA Journal 38 (2012) No. 1 pp. 68–77

免费政府信息激发了全世界儿童的创新性，并有望提高儿童生活的方方面面。位于美国的儿童政府文献组织的成立目的是为了推动儿童从幼儿园到高中对政府信息的使用。加入我们，成为儿童政府文献相关组织的一员。本文描述了这个组织的组成，包括国际和国内对儿童有用的网站，和目前向儿童开放政府信息大门的一些靠得住的有效途径。本文探讨了该组织利用网络向儿童推广政府信息的方法，并对政府信息的儿童集是如何形成的进行了深度描述。虽然文中讨论的例子是以美国为中心的项目，但这些思想可以在任何国家研究实践。

### **Learning to read before you walk: Portuguese libraries for babies and toddlers**

学走路之前先学阅读：葡萄牙婴幼儿图书馆

Ana Margarida Ramos

IFLA Journal 38 (2012) No. 1 pp. 78–85

本文的目的是举例并分析一些葡萄牙专为婴幼儿设计的公共图书馆的例子，葡萄牙语中称之为 *bebetecas*，这突显了从很小就推广阅读对读者发展的重要性。在这些领域实施的一些项目，特别是那些将整个家庭为一个受众的项目，虽然某些情况下也是为日间护理中心和托儿所而做，但却增加了图书馆在传播儿童图书方面，以及在儿童幼年形成活跃的阅读习惯方面所扮演角色的认识。加强了家庭的纽带联系，并促进儿童更健康、更平衡的发展。以家庭和学校作为两个发展读者的重要环境，图书馆成为一个优越的空间和媒介，以促进孩子从幼年时期就形成良好的阅读习惯，书籍可作为儿童、其家庭还有看护者之间的互动的背景。

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### **Sommaires**

**The state of e-legal deposit in France: looking back at five years of putting new legislation into practice and envisioning the future**

**L'état du dépôt légal des publications électroniques en France : retour sur cinq années d'application d'une nouvelle législation et regard vers l'avenir**

Peter Stirling, Gildas Illien, Pascal Sanz and Sophie Sepetjan

IFLA Journal 38 (2012) No. 1 pp. 5–24

L'article décrit la situation juridique du dépôt légal de publications électroniques en France et montre comment il a été mis en place dans la pratique à la Bibliothèque nationale de France (BnF). L'accent est mis sur l'archivage du Web, dans la mesure où la BnF a une expérience remontant à près de dix ans, mais d'autres aspects du dépôt légal des publications électroniques sont abordés, avec les développements éventuels et les défis futurs. L'article établit constamment des comparaisons avec les situations dans d'autres pays.

**Out of the classroom and into the laboratory: teaching digital curation virtually and experientially**

**Échanger la salle de classe contre le laboratoire : enseignement virtuel et expérimental de la conservation numérique**

Ross Harvey and Jeannette A. Bastian

IFLA Journal 38 (2012) No. 1 pp. 25–34

Alors que l'enseignement supérieur en science bibliothécaire et de l'information cherche à répondre à l'intensification des informations virtuelles et des environnements de conservation, il semble de plus en plus évident qu'il faut disposer de méthodes et d'outils novateurs d'enseignement. Ces outils d'enseignement doivent venir compléter et renforcer le programme avancé de cours, en proposant des sujets comme celui de la conservation numérique. Les cours sur la conservation numérique proposés par l'École de science bibliothécaire et de l'information du Simmons College de Boston illustrent une approche virtuelle et expérimentale innovante. Ces cours sont axés autour du Laboratoire pédagogique numérique (Digital Curriculum Laboratory), un laboratoire virtuel d'archivage et de conservation. Cet article aborde et démontre la relation entre un laboratoire pédagogique numérique, le fait de proposer avec succès un programme numérique de cours sur la conservation et ses implications internationales plus larges.

**Professional development, values and strategy – the means for building strong libraries for the future!**

**Développement professionnel, valeurs et stratégie : les moyens de mettre en place des bibliothèques fortes pour l'avenir !**

Catharina Isberg

IFLA Journal 38 (2012) No. 1 pp. 35–36

Le secteur des bibliothèques et de l'information subit des changements considérables. Dans un monde qui évolue, nous devons créer des environnements qui encouragent un développement fort afin de garantir un avenir viable et des bibliothèques qui offrent des avantages à tous nos clients. Le développement professionnel est une composante essentielle de cet environnement. Il doit correspondre à la stratégie et aux valeurs de l'organisation. L'évolution des attentes et du comportement des consommateurs ainsi que le développement technologique rendent encore plus nécessaires de donner une vraie identité à la bibliothèque

et d'établir un ordre de priorité dans nos activités. Valeurs, stratégie et développement professionnel vont de pair avec le processus de développement. La participation du personnel au processus de développement génère un climat créatif et est un moyen d'assurer un succès futur. À la bibliothèque universitaire de l'Université agronomique de Suède, nous nous sommes consacrés au développement professionnel, à la stratégie et aux valeurs ainsi qu'aux concepts de responsabilisation et de leadership du personnel. Cet effort a impliqué tous les membres du personnel et a produit d'excellents résultats.

### **Developing leadership competencies in librarians**

#### **Développer les compétences de leadership chez les bibliothécaires**

Mary Wilkins Jordan

IFLA Journal 38 (2012) No. 1 pp. 37–46

Qu'est-ce qui fait un bon directeur ? Comment un(e) bibliothécaire sait-il/elle possède les compétences nécessaires pour être un dirigeant efficace ? Comment la direction de la bibliothèque ou la communauté qui la compose sait ce qu'il faut pour faire un bon directeur ? Que devrait rechercher la profession bibliothécaire chez ses futurs dirigeants ? Il n'y a actuellement pas de réponse claire à ces questions. Mais le développement d'un ensemble de compétences basées sur la recherche devrait fournir des réponses et servir de fondement au développement d'autres idées basées sur la recherche afin d'aider les dirigeants au sein des bibliothèques. Pour cette étude, l'objectif de la recherche est d'identifier un ensemble de compétences à partir de la littérature, en se basant sur les opinions des directeurs actuels de bibliothèques publiques. Le développement de dirigeants dans l'univers bibliothécaire est trop important pour être laissé au hasard. Prendre pour fondement un ensemble de compétences basées sur la recherche devrait permettre d'aider à développer des possibilités de formation pour les bibliothécaires qui souhaitent jouer avec succès leur rôle de directeur.

### **Information literacy and engineering design: developing an integrated conceptual model**

#### **Maîtrise de l'information et conception technique : développer un modèle conceptuel intégré**

Michael Fosmire

IFLA Journal 38 (2012) No. 1 pp. 47–52

L'enseignement technique devient de plus en plus une pédagogie basée sur un apprentissage actif. Alors qu'ils étaient traditionnellement relégués en fin d'étude, de plus en plus de projets de conception technique sont entrepris plus tôt et même au cours de la première année de premier cycle. Avec la fréquence accrue de ces projets, qui sont des problèmes n'ayant pas vraiment une seule réponse « exacte », les bibliothécaires spécialistes des techniques ont de plus en plus d'occasion de travailler avec des étudiants pendant toute la durée de leurs formations au lieu de la faire seulement à la fin de leur formation. Pour tirer pleinement parti de ces possibilités, les bibliothécaires doivent traduire leurs propres connaissances de maîtrise de l'information dans le langage des enseignants techniques, et même connaître la pédagogie de ces éducateurs. Cet article tente d'établir un tel lien en se concentrant sur les ressources et processus d'information nécessaires aux ingénieurs engagés dans un processus de conception et en rassemblant la littérature de l'enseignement technique et des communautés bibliothéconomiques.

### **Environmental literacy and the emerging roles of information professionals in developing economies**

#### **Conscience de l'environnement et rôles émergents des professionnels des sciences de l'information dans les économies en développement**

Oluremi A. Abiolu and Oluchi O. Okere

IFLA Journal 38 (2012) No. 1 pp. 53–59

La dégradation de l'environnement est devenue un important motif d'inquiétude pour la société contemporaine, suscitant des initiatives sous forme d'actions, de conférences et de campagnes de sensibilisation à différents niveaux. Dans les économies en développement, les professionnels des sciences de l'information occupent une position qui doit leur permettre de contribuer à un développement environnemental durable, mais ils doivent faire preuve de créativité et d'innovation pour surmonter des problèmes tels que faibles niveaux d'alphabétisation, mauvaises infrastructures, apathie politique en matière d'informations environnementales, afin de parvenir à atteindre l'objectif visé de prise de conscience de l'environnement. Au-delà de la simple fourniture d'informations, de nouveaux rôles se font jour, les professionnels des sciences de l'information jouant notamment le rôle d'agents du changement, d'éducateurs, d'experts de l'électronique et de partenaires d'autres agents du

changement. Les auteurs de cet article estiment que les professionnels des sciences de l'information pourraient mieux répondre aux besoins en matière d'environnement et de développement durable en redéfinissant le rôle qu'ils jouent dans leurs diverses communautés. Parmi les recommandations faites dans cet article : la revitalisation des bibliothèques publiques, la formation aux technologies de l'information et de la communication et la collaboration avec les groupes d'intérêt.

### **The second hand library building: sustainable thinking through recycling old buildings into new libraries**

#### **Bâtiment bibliothécaire de seconde main : une réflexion durable grâce à la réhabilitation de bâtiments anciens pour en faire de nouvelles bibliothèques**

Petra Hauke and Klaus Ulrich Werner  
IFLA Journal 38 (2012) No. 1 pp. 60–67

Dans le monde entier, des bâtiments anciens sont transformés en bibliothèques. Le fait de réhabiliter un bâtiment ayant eu un usage différent par le passé pour en faire une bibliothèque est véritablement une forme de recyclage. La transformation en bibliothèque d'un bâtiment existant ayant eu auparavant une fonction autre que bibliothécaire introduit dans les projets de bibliothèques le défi du développement durable et ses opportunités. Avec la raréfaction des ressources non renouvelables, la réutilisation et le recyclage vont devenir de plus en plus indispensables. Recycler des bâtiments anciens signifie réduire l'empreinte écologique des bâtiments bibliothécaires de façon économique et efficace. En plus des considérations « vertes » telles qu'économies d'eau et d'énergie, usage de matériaux de construction recyclés ou durables, qualité de l'air ambiant et production d'énergie solaire par des panneaux photovoltaïques, un projet de réutilisation adaptative pour une bibliothèque diffère considérablement d'un projet de construction entièrement nouvelle. Certaines études de cas de pratiques d'excellence en Allemagne et dans d'autres pays européens sont présentées.

### **The Gov Doc Kids Group and free government information**

#### **Le Gov Doc Kids Group et le libre accès aux informations gouvernementales**

Tom Adamich, Martha Childers, Katy Davis, John H. Faria and Antoinette W. Satterfield  
IFLA Journal 38 (2012) No. 1 pp. 68–77

Le libre accès à des informations gouvernementales peut inspirer tous les enfants du monde à innover et valoriser leurs vies à tous les niveaux. Le Gov Doc Kids Group, basé aux États-Unis, a été constitué afin de promouvoir l'usage d'informations gouvernementales procurées aux enfants, de la maternelle au lycée. Les membres du Gov Doc Kids Group décrivent la formation du groupe, les sites web nationaux et internationaux pouvant être utiles aux enfants ainsi que les moyens éprouvés actuels pouvant ouvrir l'accès des enfants aux informations gouvernementales. Cet article explore les façons dont le groupe utilise la Toile pour promouvoir les informations gouvernementales auprès des enfants et donne une description approfondie de la façon dont une collection de documents gouvernementaux à l'intention des enfants a été constituée. Bien que les exemples abordés concernent des projets centrés aux États-Unis, ces idées pourraient être développées dans pratiquement n'importe quel pays.

### **Learning to read before you walk: Portuguese libraries for babies and toddlers**

#### **Apprendre à lire avant de savoir marcher : les bibliothèques portugaises pour bébés et très jeunes enfants**

Ana Margarida Ramos  
IFLA Journal 38 (2012) No. 1 pp. 78–85

Cet article a pour objet de présenter et d'analyser quelques exemples de bibliothèques publiques spécialement conçues pour les bébés et les très jeunes enfants au Portugal, appelées « bebetecas » en portugais, tout en soulignant le rôle joué dans le développement du lecteur par la promotion de la lecture dès le plus jeune âge. Certains projets mis en place dans ces domaines, en particulier ceux qui s'adressent à la famille en tant que public, mais qui dans certains cas sont également destinés aux crèches et aux pouponnières, font encore mieux prendre conscience de l'importance des bibliothèques dans la diffusion des livres pour enfants, et stimulent également l'acquisition d'habitudes dynamiques de lecture dès le plus jeune âge. Cela renforce les liens familiaux et favorise un développement plus sain et plus équilibré des enfants. En considérant que la famille et l'école sont deux contextes déterminants pour le développement des lecteurs, la bibliothèque devient un espace et un véhicule privilégié pour promouvoir de bonnes pratiques de lecture à partir d'un très jeune âge, où les livres peuvent servir de toile de fond à l'interaction entre les jeunes enfants, leurs familles et les personnes chargées de s'occuper d'eux.

## Zusammenfassungen

### **The state of e-legal deposit in France: looking back at five years of putting new legislation into practice and envisioning the future**

#### **Der Status des E-Legal Deposit (des Pflichtexemplargesetzes) in Frankreich: ein Rückblick auf fünfjährige Bemühungen zur praktischen Umsetzung der neuen Gesetzesvorschriften mit einem Blick in die Zukunft**

Peter Stirling, Gildas Illien, Pascal Sanz und Sophie Sepetjan

IFLA Journal 38 (2012) No. 1 pp. 5–24

Dieser Artikel beschreibt die Rechtslage in Frankreich bezüglich der Pflichtabgabe digitaler Materialien. Er zeigt, wie diese bei der Bibliothèque Nationale de France (BnF) in die Praxis umgesetzt worden ist. Dabei liegt der Schwerpunkt auf der Web-Archivierung – einem Bereich, in dem die BnF über eine fast zehnjährige Erfahrung verfügt. Es kommen aber auch andere Aspekte der digitalen Pflichtabgabe zur Sprache, auch die möglichen zukünftigen Entwicklungen und Herausforderungen. Dabei werden überall auch Vergleiche mit den Situationen in anderen Ländern gezogen.

### **Out of the classroom and into the laboratory: teaching digital curation virtually and experientially**

#### **Raus aus dem Klassenraum und rein ins Labor: Digital Curation - Unterricht, virtuell wie auch experimentell**

Ross Harvey und Jeannette A. Bastian

IFLA Journal 38 (2012) No. 1 pp. 25–34

Während die LIS/IS-Graduiertenausbildung danach strebt, auf die zunehmende Intensivierung virtueller Informations- und Konservierungsumgebungen zu reagieren, wird immer deutlicher, dass in diesem Zusammenhang innovative Lernhilfen und Lernmethoden benötigt werden. Diese Lernhilfen sollten die neuesten Angebote im Rahmen der Lehrpläne in Bereichen wie Digital Curation ergänzen und verbessern. Die von der LIS School am Simmons College in Boston angebotenen Digital Curation – Kurse sind ein Beispiel für eine innovative virtuelle und experientielle Strategie. Im Zentrum dieser Kurse steht dabei das Digital Curriculum Laboratory, ein virtuelles Archivierungs- und Konservierungslabor. Der vorliegende Beitrag bespricht und demonstriert die Beziehung zwischen einem Digital Curriculum - Labor,

der erfolgreichen Bereitstellung eines Digital Curation - Curriculums und seinen breiteren internationalen Auswirkungen.

### **Professional development, values and strategy – the means for building strong libraries for the future!**

#### **Professionelle Entwicklung, Werte und Strategie – Mittel zur Errichtung starker Bibliotheken für die Zukunft!**

Catharina Isberg

IFLA Journal 38 (2012) No. 1 pp. 35–36

Der Bibliotheks- und Informationssektor ist starken Veränderungen unterworfen. In einer sich wandelnden Welt müssen wir Umgebungen schaffen, die einer starken Entwicklung förderlich sind, um ein tragfähiges Zukunftskonzept und ein Bibliothekssystem zu gewährleisten, das für alle unsere Kunden Vorteile mit sich bringt. Die professionelle Entwicklung ist ein wesentlicher Faktor in dieser Umgebung. Sie muss der Strategie und den Werten der Organisation entsprechen. Aufgrund geänderter kundenseitiger Erwartungen, einem anderen Kundenverhalten und der technologischen Entwicklung ist es sogar noch wichtiger, der Bibliothek eine Identität zu verleihen und bei unseren Aktivitäten Prioritäten zu setzen. Die Werte, die Strategie und die professionelle Entwicklung gehen mit dem Entwicklungsprozess Hand in Hand. Die partielle Eigenverantwortung der Mitarbeiter für den Entwicklungsprozess schafft ein kreatives Klima und die Möglichkeit zur Gewährleistung zukünftiger Erfolge. An der Unibibliothek der Swedish University of Agricultural Sciences haben wir mit der professionellen Entwicklung, der Strategie und den Werten sowie den Konzepten der Entscheidungsfreiheit der Mitarbeiter und der Menschenführung gearbeitet. An diesen Bemühungen haben sich alle Mitarbeiter beteiligt und die Ergebnisse waren hervorragend.

### **Developing leadership competencies in librarians**

#### **Die Ausbildung von Führungskompetenzen bei Bibliothekaren und Bibliothekarinnen**

Mary Wilkins Jordan

IFLA Journal 38 (2012) No. 1 pp. 37–46

Was kennzeichnet einen guten Direktor? Woher weiß eine Bibliothekarin, dass sie über die erforderlichen Kompetenzen verfügt, um als effektiver Manager beziehungsweise effektive Führungskraft aufzutreten? Woher weiß die Bibliotheksleitung oder die Community, welche Eigenschaften für einen Direktor

wichtig sind? Auf welche Fähigkeiten sollten die Verantwortlichen in den Bibliotheken bei den neuen Managern achten? Zurzeit lassen sich diese Fragen nicht eindeutig beantworten. Aber die Entwicklung eines Systems aus forschungsbasierten Kompetenzen wird Antworten auf diese Fragen liefern und eine Grundlage für andere forschungsbasierte Ideen bieten, die sich zur Unterstützung der Manager - Führungskräfte in Bibliotheken entwickeln lassen. Das Forschungsziel dieser Studie besteht darin, ein System aus Kompetenzen weiterzuentwickeln, das aus der Literatur hervorgeht und sich auf die Meinungen der heutigen Direktoren öffentlicher Bibliotheken stützt. Die Ausbildung von Managern / Führungskräften im Bibliothekswesen hat eine zu starke Bedeutung, als dass sie dem Zufall überlassen werden könnte. Ein forschungsbasiertes System aus Kompetenzen, die hier als Grundlage dienen, sollte zur Entwicklung von Weiterbildungsangeboten für Bibliothekare beitragen, die in ihren Rollen als Direktoren erfolgreich sein möchten.

#### **Information literacy and engineering design: developing an integrated conceptual model**

#### **Informationskompetenz und Konstruktion: die Entwicklung eines integrierten konzeptionellen Modells**

Michael Fosmire

IFLA Journal 38 (2012) No. 1 pp. 47–52

Die Ingenieurausbildung entwickelt sich mehr und mehr in Richtung einer Pädagogik, die sich auf den handlungsorientierten Unterricht stützt. Während sie sich traditionell auf ein Designprojekt im Rahmen der Diplomarbeit beschränkt hat, gibt es nun mehr und mehr Konstruktionsprojekte, die schon vorher entstehen, teilweise sogar bereits im ersten Jahr des Grundstudiums. Mit zunehmender Häufigkeit derartiger Projekte, bei denen es um Probleme ohne eine einzige „richtige“ Antwort geht, finden Bibliothekare in technischen Bibliotheken mehr Möglichkeiten, schon während des Studiums mit den Studenten zusammenzuarbeiten, statt dies auf einen einzigen Abschlusskurs zu beschränken. Um diese Möglichkeiten jedoch im vollen Umfang nutzen zu können, müssen die Bibliothekare und Bibliothekarinnen ihre eigenen Kenntnisse der Informationskompetenz in die Sprache der Dozenten im Ingenieurwesen übersetzen und sich eigentlich sogar in die Pädagogik dieser Lehrer einarbeiten. Der vorliegende Beitrag versucht, eine solche

Brücke zu schlagen, und konzentriert sich dabei schwerpunktmäßig auf die Informationsquellen und Verfahren, die von den Ingenieuren beim Design benötigt werden. Außerdem bringt er die Literatur der Ingenieurausbildung und der Communities im Bereich der Bibliothekswissenschaft zusammen.

#### **Environmental literacy and the emerging roles of information professionals in developing economies**

#### **Die ökologische Bewusstseinsbildung und die neuen Rollen der Information Professionals (des Bibliothekspersonals) in Schwellenländern**

Oluremi A. Abiolu und Oluchi O. Okere

IFLA Journal 38 (2012) No. 1 pp. 53–59

In den Augen der heutigen Gesellschaft ist die Umweltverschmutzung zu einer ernstesten und besorgniserregenden Gefahr geworden. In diesem Zusammenhang sind entsprechende Schritte in die Wege geleitet worden, beispielsweise Interessenvertretungen, Konferenzen und bewusstseinsbildende Maßnahmen auf unterschiedlichem Niveau. Während sich die Information Professionals in Schwellenländern in einer Position befinden, in der sie zur ökologischen Nachhaltigkeit beitragen können, müssen sie aber auch ihre Kreativität und ihre Innovationsfähigkeit nutzen, um Probleme wie beispielsweise die geringe Lese- und Schreibfähigkeit, die unzureichenden Infrastrukturen sowie die politische Apathie in Bezug auf die ökologischen Informationen bewältigen und das angestrebte Ziel der ökologischen Bewusstseinsbildung erreichen zu können. Dabei zeichnen sich auch neue Rollen für sie ab, die über die simple Informationsweitergabe hinausgehen. In diesem Zusammenhang treten die Information Professionals als Change Agents (Erneuerer), Pädagogen, Elektronikexperten und Partner für andere Change Agents auf. Der vorliegende Artikel argumentiert, dass die Information Professionals eine relevantere Rolle in Bezug auf die Erfordernisse einer nachhaltigen Umwelt spielen können, indem sie ihre Position ganz neu definieren und die Rollen, die sie in ihren einzelnen Communities spielen, aus einer anderen Perspektive betrachten. Dieser Beitrag empfiehlt beispielsweise die Erneuerung der öffentlichen Bibliotheken, Weiterbildungen zur Entwicklung von Kompetenzen in der Informations- und Kommunikationstechnologie und auch die Zusammenarbeit mit den entsprechenden Interessengruppen.

### **The second hand library building: sustainable thinking through recycling old buildings into new libraries**

#### **Das Secondhand-Bibliotheksgebäude: nachhaltiges Denken durch die Umwandlung von Altbauten in neue Bibliotheken**

Petra Hauke und Klaus Ulrich Werner  
IFLA Journal 38 (2012) No. 1 pp. 60–67

Auf der ganzen Welt werden Altbauten in Bibliotheken umgewandelt. Der Vorgang der Umwidmung eines Gebäudes, das vorher für andere Zwecke genutzt wurde, in eine Bibliothek ist natürlich ein Recycling. Die Umgestaltung eines bestehenden Gebäudes, das vorher nicht als Bibliothek gedient hat, in eine Bibliothek stellt zwar eine gewisse Herausforderung dar, bietet aber auch die Chance einer nachhaltigen Vorgehensweise bei der Planung der Bibliothek. Mit der zunehmenden Verknappung der nicht erneuerbaren Ressourcen wird die Wiederverwendung und Rezyklierung in Zukunft immer dringender notwendig sein. Die Rezyklierung von Altbauten beinhaltet die Verringerung des ökologischen Fußabdrucks der Bibliotheksgebäude in rentabler und effizienter Weise. Abgesehen von den „grünen“ Aspekten, wie beispielsweise der Wasserreinhaltung, der Energieeinsparung, der rezyklierten oder nachhaltigen Baumaterialien, der Luftqualität in den Innenräumen und der aus Fotovoltaikplatten gewonnenen Sonnenenergie ist die Planung einer adaptiven Wiederverwertung eine ganz andere Aufgabe als die Planung einer Bibliothek in einem totalen Neubau. In diesem Zusammenhang werden einige Best Practice – Fallstudien aus Deutschland und anderen Ländern Europas präsentiert.

### **The Gov Doc Kids Group and free government information**

#### **Die Gov Doc Kids Group und kostenlose Regierungsinformationen**

Tom Adamich, Martha Childers, Katy Davis, John H. Faria und Antoinette W. Satterfield  
IFLA Journal 38 (2012) No. 1 pp. 68–77

Kostenlose Regierungsinformationen regen die Innovationsfähigkeit von Kindern in aller Welt an und können ihr Leben in jeder Hinsicht verbessern. Die Gov Doc Kids Group in den USA wurde gegründet, um Kinder ab dem Kindergartenalter bis zum Highschool-Abschluss zur Nutzung der verfügbaren

Regierungsinformationen anzuregen. Hier erfahren Sie, wie Mitglieder der Gov Doc Kids Group die Bildung der Gruppe beschreiben, Sie lernen internationale und landesspezifische Websites für Kinder sowie aktuelle, altbewährte und wirksame Mittel kennen, um den Kindern die Regierungsinformationen nahezubringen. Der Artikel untersucht Wege der Webnutzung durch die Gruppe, um den Kindern die Regierungsinformationen nahezubringen und enthält auch eine genaue Beschreibung der Erstellung einer Government Documents Children's Collection. Obwohl sich die hier besprochenen Beispiele auf Projekte mit Schwerpunkt in den USA beziehen, könnten diese Ideen in fast allen Ländern erfolgreich umgesetzt werden.

### **Learning to read before you walk: Portuguese libraries for babies and toddlers**

#### **Lesen lernen, noch bevor man laufen kann: portugiesische Bibliotheken für Babys und Kleinkinder**

Ana Margarida Ramos  
IFLA Journal 38 (2012) No. 1 pp. 78–85

In diesem Beitrag sollen einige Beispiele für öffentliche Bibliotheken in Portugal präsentiert und analysiert werden, die speziell für Babys und Kleinkinder konzipiert worden sind. Im Portugiesischen werden sie als „Bebetecas“ bezeichnet, was die wichtige Rolle der Leseförderung bereits in sehr jungen Jahren in Bezug auf die Entwicklung des Lesenden unterstreicht. Einige Projekte in diesen Bereichen, insbesondere solche, die sich an die ganze Familie richten, in einigen Fällen aber auch für Kindertagesstätten und Kinderkrippen konzipiert sind, stärken das Bewusstsein dafür, welche Rolle die Bibliothek bei der Verbreitung von Kinderbüchern spielt. Außerdem sorgt dieses Vorgehen für dynamische Lesegewohnheiten bereits im frühen Kindesalter. Das wiederum stärkt den Familienzusammenhalt und sorgt für eine gesündere und ausgeglichene Entwicklung des Kindes. Wenn die Familie und die Schule als zwei wichtige Quellen für die Leseentwicklung dient, dann wird die Bibliothek zum privilegierten Raum und zum Mittel, gute Lesegewohnheiten bereits ab einem sehr jungen Alter zu fördern, wobei die Bücher als Kulisse für die Interaktion zwischen kleinen Kindern, ihren Familien und den Pflegekräften dienen können.

## Рефераты статей

### **The state of e-legal deposit in France: looking back at five years of putting new legislation into practice and envisioning the future**

**Электронный обязательный экземпляр во Франции: обзор применения новых законодательных актов за прошедшие пять лет и строительство перспектив на будущее**

Питер Стирлинг, Гилда Ильен, Паскаль Сан и Софи Сепетьян

IFLA Journal 38 (2012) No. 1 pp. 5–24

В статье говорится о текущей ситуации во Франции в плане законодательства, регулирующего передачу обязательного экземпляра электронных документов, а также описывается, как эта система применена на практике в Национальной библиотеке Франции (BnF). Основное внимание сосредоточено на архивировании информации из сети Интернет; в этой области опыт BnF насчитывает почти 10 лет; кроме того обсуждаются и другие аспекты передачи обязательного экземпляра в электронной форме, возможные пути будущего развития данного направления и его главные задачи. Приводятся сравнения с тем, как обстоят дела в данной области в других странах.

### **Out of the classroom and into the laboratory: teaching digital curation virtually and experientially**

**Из класса в лабораторию: виртуальное и экспериментальное обучение цифровому курированию**

Росс Харви и Джанет А. Бастиан

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Поскольку профессиональное обучение по окончании вуза по специальности Библиотековедение и Наука об информации должно соответствовать условиям увеличения плотности потока виртуальной информации и ужесточения условий ее хранения, становится все более очевидной необходимость применения инновационных средств и методик обучения. Эти средства обучения должны дополнять и расширять уникальные учебные проекты по таким предметам, как цифровое курирование. Курсы цифрового курирования, которые проводятся в LIS School колледжа Simmons College в г. Бостон, демонстрируют прогрессивный виртуальный и экспериментальный подход. Ядром этих курсов является Цифровая учебная лаборатория, которая представляет собой виртуальный

архив и лабораторию-хранилище. В данной статье изложены рассуждения и показаны иллюстрации относительно взаимоотношений между цифровой учебной лабораторией, успешной реализацией плана обучения цифровому курированию и его широкого влияния в международном масштабе.

### **Professional development, values and strategy – the means for building strong libraries for the future!**

**Профессиональное развитие, ценности и стратегия – способ строительства надежных библиотек на будущее!**

Катарина Исберг

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Библиотечный и информационный секторы переживают существенные перемены. В условиях изменяющегося мира мы должны создать условия, обеспечивающие уверенное развитие и надежное будущее, и библиотеки, в которых каждый посетитель останется доволен. Неотъемлемой частью такого устройства является профессиональное развитие. Оно должно соответствовать стратегии и ценностям организации. Изменения в ожиданиях и поведении клиента, а также развитие технологий делают еще более важной задачу формирования индивидуальных особенностей библиотеки и концентрации усилий на нашей деятельности. Ценности, стратегия и профессиональное развитие идут рука об руку с процессом такой эволюции. Активное участие персонала в эволюционном процессе способствует созданию атмосферы творчества, гарантирующей успех в будущем. В библиотеке Шведского университета сельского хозяйства мы работаем над профессиональным развитием, стратегией и ценностями, а также над концепциями лидерства и расширения прав и возможностей персонала. Программа касается всех сотрудников и дает отличный результат.

### **Developing leadership competencies in librarians**

**Развитие навыков лидера у библиотекарей**

Мери Уилкинс Джордан

IFLA Journal 38 (2012) No. 1 pp. 37–46

Какими навыками должен обладать компетентный руководитель? Как библиотекарь узнает, что она обладает навыками, необходимыми компетентному руководителю-лидеру? Как правление библиотеки или местная община узнает, по каким критериям выбирать директора? Какие качества

необходимо сызмальства воспитывать в будущих профессионалах библиотечного дела? Сейчас нет однозначного ответа на эти вопросы. Однако развитие навыков, определенных в результате научных исследований, даст ответ на эти вопросы и создаст базу для других научно обоснованных идей, которые необходимо развивать, чтобы они в свою очередь помогли руководителям-лидерам в библиотеках. Целью исследования в рамках настоящей работы является определение точного набора навыков, взятых из литературных источников, на основании мнений современных директоров общественных библиотек. Воспитание руководителей / лидеров в библиотечном мире слишком ответственно, чтобы пускать его на самотек. База в виде набора навыков и компетенций, определенных в результате научных исследований, должна способствовать развитию навыков практического обучения библиотекарей, стремящихся достичь успеха на посту руководителя.

#### **Information literacy and engineering design: developing an integrated conceptual model**

##### **Информационная грамотность и инженерное проектирование: разработка комплексной концептуальной модели**

Майкл Фосмайр

IFLA Journal 38 (2012) No. 1 pp. 47–52

Техническое образование все больше смещается в область педагогики, основанной на активном обучении. Технические проекты, ранее сводимые к единичной работе, выполняемой на последнем курсе обучения, сейчас появляются все чаще и раньше, иногда даже на первом курсе специальных учреждений среднего образования. С увеличением частоты подготовки таких проектов, которые представляют собой проблемы, не имеющие "единственно верного" решения, работники библиотек технической литературы получают более широкие возможности в плане последовательной работы со студентами на протяжении всего их периода обучения вместо привычного знакомства с ними лишь на выпускном курсе. Чтобы в полной мере использовать эти возможности библиотекарям необходимо перевести свое собственное понимание информационной грамотности на язык преподавателей технических дисциплин и в самом деле дополнять знания, преподаваемые этими педагогами. В настоящей работе предпринята попытка построить такой мостик, сконцентрировать внимание на источниках информации и процессах, которые необходимы инженерам, участвующим в разработке

проектов, и свести вместе литературу как из области технического образования, так и из области библиотечного дела.

#### **Environmental literacy and the emerging roles of information professionals in developing economies**

##### **Экологическая грамотность и растущее значение роли профессионалов информационных технологий в экономике развивающихся стран**

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Разрушение окружающей среды стало источником серьезного беспокойства для современного общества, вызывающим противодействие в форме пропагандистской деятельности, проведения конференций и информационных кампаний на различном уровне. Поскольку роль профессионала информационных технологий в развивающихся странах подразумевает его деятельное участие в защите окружающей среды, он должен использовать творческие и новаторские подходы для решения таких вопросов, как низкий уровень грамотности, недостаточно развитая инфраструктура, политическое бездействие в отношении вопросов экологии, для конечного достижения заданной цели - экологической грамотности. Новые роли выходят за привычные рамки простой подачи информации, они делают профессионалов информационных технологий вестниками перемен, учителями, экспертами в области электронных технологий и партнерами других вестников перемен. Речь в документе идет о том, что специалисты в области информационных технологий могли бы делать больше в сфере защиты окружающей среды, если бы пересмотрели свою роль в изменяющихся условиях окружающего мира. В число рекомендаций, приводимых в этой работе, входят оживление работы общедоступных библиотек, проведение тренингов в области информационно-коммуникационных технологий, а также сотрудничество с группами, имеющими схожие интересы.

#### **The second hand library building: sustainable thinking through recycling old buildings into new libraries**

##### **Старое здание под библиотеку: экологически рациональный подход при перedelке старых зданий в новые библиотеки**

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IFLA Journal 38 (2012) No. 1 pp. 60–67

По всему миру старые здания превращаются в библиотеки. Процесс повторного освящения, когда в библиотеку превращается здание, имевшее в прошлом иное назначение, является, что совершенно очевидно, делом утилизации. Переделка в библиотеку существующего здания, выполнявшего в прошлом совсем иную функцию, несет в себе как задачу, так и возможность реализации экологически рационального подхода к планированию библиотеки. Поскольку запасы невозполнимых ресурсов уменьшаются, в будущем будет возрастать необходимость их повторного использования и переработки. Переделка старых зданий означает использование наиболее экономически целесообразных и эффективных способов для уменьшения экологического следа, который оставит здание библиотеки. Помимо "зеленых" аспектов, таких как сохранение водных ресурсов, энергосбережение, использование долговечных строительных материалов, а также материалов, являющихся продуктами вторичной переработки, контроль качества воздуха в помещении, использование солнечной энергии от фотоэлектрических панелей, планирование применения технологий рационального повторного использования является куда более сложной задачей, чем проектирование размещения библиотеки в абсолютно новом здании. Здесь представлен практический анализ некоторых наиболее удачных проектов Германии и других европейских стран.

### **The Gov Doc Kids Group and free government information**

#### **Группа "Gov Doc Kids Group" и бесплатная правительственная информация**

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IFLA Journal 38 (2012) No. 1 pp. 68–77

Бесплатная правительственная информация является источником новаторских решений для детей всего мира и может сделать их жизнь более насыщенной во всех отношениях. Группа "Gov Doc Kids Group", расположенная в Соединенных Штатах, была создана с целью популяризации использования правительственной информации среди детей, от детского сада до старших классов школы. Будьте с нами, пока члены группы "Gov Doc Kids Group" рассказывают о создании группы,

международных и локальных интернет-сайтах с полезной информацией для детей и делятся проверенными и надежными эффективными методами, как сделать правительственную информацию доступной детям. В статье описывается, как группа использует Интернет для того, чтобы заинтересовать детей правительственной информацией, а также подробно рассказывается о том, как была создана Детская Коллекция Правительственных Документов. И хотя обсуждаемые здесь примеры касаются проектов, реализуемых в Соединенных Штатах, эти идеи можно с успехом использовать практически в любой стране.

### **Learning to read before you walk: Portuguese libraries for babies and toddlers**

#### **Учимся читать раньше, чем ходить: библиотеки Португалии для детей грудного и ясельного возраста**

Ана Маргарита Рамос

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В данной статье описываются некоторые примеры, и проводится анализ общественных библиотек, которые создавались в Португалии специально для детей грудного и ясельного возраста, которые по-португальски называют "бебетками". В статье подчеркивается роль, которую играет в развитии читателя популяризация чтения с самого юного возраста. Некоторые реализованные в этих местах проекты, в особенности те, которые рассчитаны на семью, но которые в отдельных случаях предназначены также для детских садов и яслей, формируют более широкое понимание роли библиотеки в распространении детской литературы, а также уже в самом раннем возрасте формируют активное пристрастие к чтению. Это позволяет усилить связь между членами семьи и способствует более здоровому и сбалансированному развитию детей. Используя семью и школу как два важнейших фактора окружения, влияющих на развитие читателя, библиотека становится неким привилегированным пространством и одновременно движущей силой, способствующей формированию здоровых читательских пристрастий с самого раннего возраста, и здесь книги выступают в качестве художественного фона для взаимоотношений маленьких детей, их родителей и воспитателей.

## Resúmenes

### **The state of e-legal deposit in France: looking back at five years of putting new legislation into practice and envisioning the future**

#### **El estado del depósito legal electrónico en Francia: volviendo la vista cinco años atrás de poner en práctica la nueva legislación e imaginar el futuro**

Peter Stirling, Gildas Illien, Pascal Sanz y Sophie Sepetjan

IFLA Journal 38 (2012) No. 1 pp. 5–24

El artículo describe la situación legal en Francia en relación con el depósito legal de material digital y muestra cómo se ha implantado en la práctica en la Biblioteca Nacional de Francia (BnF). Se centra en el archivado web, donde la BnF tiene experiencia que se remonta casi diez años, pero también se discuten otros aspectos del depósito legal digital, con posibles cambios y retos futuros. Se hacen comparaciones completas con la situación en otros países.

### **Out of the classroom and into the laboratory: teaching digital curation virtually and experientially**

#### **Fuera de las aulas y en el laboratorio: enseñanza de conservación digital virtualmente y en la práctica**

Ross Harvey y Jeannette A. Bastian

IFLA Journal 38 (2012) No. 1 pp. 25–34

Como la educación de posgrado en ciencias de la información y biblioteconomía pretende dar respuesta a la intensificación de la información virtual y los entornos de conservación, queda cada vez más claro que se necesitan herramientas y métodos de enseñanza innovadores. Estas herramientas de enseñanza deben complementar y mejorar las ofertas de planes de estudios vanguardistas en temas tales como la conservación digital. Los cursos de conservación digital ofrecidos en la Escuela de ciencias de la información y biblioteconomía del Simmons College (Boston) ilustran un enfoque virtual y experimental innovador. En el núcleo de estos cursos se encuentra el Digital Curriculum Laboratory, un laboratorio virtual de archivado y conservación. Este documento analiza y demuestra la relación entre un laboratorio digital de un plan de estudios, la aplicación exitosa de un plan de estudios de conservación digital y sus implicaciones más amplias a escala internacional.

### **Professional development, values and strategy – the means for building strong libraries for the future!**

#### **Desarrollo profesional, valores y estrategia: los medios para la construcción de bibliotecas resistentes para el futuro!**

Catharina Isberg

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El sector de las bibliotecas y la información está experimentando un cambio masivo. En un mundo cambiante, debemos crear ambientes que promuevan el desarrollo firme para asegurar un futuro viable y una biblioteca que proporcione beneficios a todos nuestros clientes. El desarrollo profesional es un componente esencial de este entorno. Debe estar en consonancia con la estrategia y los valores de la organización. Los cambios en las expectativas, el comportamiento y el desarrollo tecnológico del cliente hacen que sea aún más importante la formación de la identidad de la biblioteca y la priorización de nuestras actividades. Valores, estrategia y desarrollo profesional van de la mano con el proceso de desarrollo. La participación del personal en el proceso de desarrollo crea un clima que es creativo y un medio para asegurar el éxito en el futuro. En la biblioteca universitaria de la Universidad sueca de Ciencias Agrícolas, hemos trabajado el desarrollo, la estrategia y los valores profesionales, así como los conceptos de empoderamiento y liderazgo del personal. Este esfuerzo ha incluido a todos los miembros del personal y los resultados han sido excelentes.

### **Developing leadership competencies in librarians**

#### **El desarrollo de competencias de liderazgo en los bibliotecarios**

Mary Wilkins Jordan

IFLA Journal 38 (2012) No. 1 pp. 37–46

¿Qué hace un buen director? ¿Cómo sabe un bibliotecario que tiene las competencias necesarias para ser un gestor-líder eficaz? ¿Cómo sabe la junta o la comunidad de la biblioteca lo que debe buscar en un director? ¿Qué debe buscar la profesión bibliotecaria en el cada vez mayor número de gestores? No hay respuestas claras a estas preguntas ahora. Pero el desarrollo de un conjunto de competencias basadas en la investigación dará respuesta a estas preguntas y proporcionarán una base para otras ideas basadas en la investigación que se desarrollarán para ayudar a los gestores-líderes en la biblioteca. El objetivo de investigación para este

estudio es perfeccionar un conjunto de competencias, identificadas en el material publicado, a través de las opiniones de los actuales directores de las bibliotecas públicas. El desarrollo de gestores/líderes en el mundo de las bibliotecas es demasiado importante para ser dejado al azar. Utilizar un conjunto de competencias basado en la investigación como base debería contribuir al desarrollo de oportunidades de capacitación para los bibliotecarios que deseen tener éxito en sus cargos de directores.

### **Information literacy and engineering design: developing an integrated conceptual model**

#### **Alfabetización informacional y diseño de ingeniería: desarrollo de un modelo conceptual integrado**

Michael Fosmire

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La educación técnica se está moviendo cada vez más hacia una pedagogía basada en el aprendizaje activo. Tradicionalmente relegados a un proyecto de diseño de último año, cada vez son más los proyectos de diseño de ingeniería que surgen antes, incluso en el primer año de la educación universitaria. Con el aumento de la frecuencia de estos proyectos que son problemas sin una única respuesta "correcta", los bibliotecarios de ingeniería están encontrando más oportunidades de trabajar con los estudiantes a lo largo de sus carreras educativas en lugar de solo en un curso final. Para aprovechar plenamente estas oportunidades, los bibliotecarios tienen que traducir sus propios conocimientos de alfabetización informacional al lenguaje de los educadores de ingeniería y, de hecho, informarse de la pedagogía de dichos educadores. Este documento trata de tender un puente de unión, centrándose en los recursos y los procesos de información que necesitan los ingenieros involucrados en el proceso de diseño y reuniendo el material publicado tanto de las comunidades educativas de ingeniería como de las de biblioteconomía.

### **Environmental literacy and the emerging roles of information professionals in developing economies**

#### **Alfabetización medioambiental y nuevas funciones de los profesionales de la información en las economías en desarrollo**

Oluremi A. Abiolu y Oluchi O. Okere

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La degradación medioambiental se ha convertido en una fuente de gran preocupación para la sociedad contemporánea, dando lugar a esfuerzos en forma de promoción, conferencias y campañas de sensibilización en los diferentes niveles. Aunque los profesionales de la información en las economías en desarrollo están en condiciones de contribuir a la sostenibilidad del medio ambiente, tienen que aplicar la creatividad y la innovación para superar problemas como los bajos niveles de conocimientos, una infraestructura deficiente o la apatía política de la información medioambiental para lograr la meta deseada de la alfabetización medioambiental. Están evolucionando nuevas funciones más allá del mero suministro de información; entre ellas cabe destacar profesionales de la información como agentes de cambio, educadores, expertos en electrónica y socios de otros agentes de cambio. El documento sostiene que los profesionales de la información podrían resultar más útiles para las necesidades de sostenibilidad medioambiental si se reubicasen a sí mismos en términos de las funciones que desempeñan en sus diversas comunidades. Algunas de las recomendaciones formuladas en el documento incluyen la revitalización de las bibliotecas públicas, la formación en habilidades de tecnología de la información y la comunicación, y la colaboración con grupos de interés.

### **The second hand library building: sustainable thinking through recycling old buildings into new libraries**

#### **El edificio de la biblioteca de segunda mano: pensamiento sostenible a través del reciclaje de edificios antiguos en nuevas bibliotecas**

Petra Hauke y Klaus Ulrich Werner

IFLA Journal 38 (2012) No. 1 pp. 60–67

Los edificios antiguos se están reciclando en bibliotecas en todo el mundo. El proceso de reinauguración de un edificio con un uso anterior distinto como una biblioteca es, obviamente, una cuestión de reciclaje. La transformación de un edificio existente con una función anterior diferente en una biblioteca conlleva un reto y la oportunidad de aplicar un pensamiento sostenible en la planificación de la biblioteca. Como los recursos no renovables están disminuyendo, la reutilización y el reciclaje van a ser cada vez más necesarios en el futuro. El reciclaje de edificios antiguos se traduce en la reducción de la huella ecológica de los edificios de la biblioteca de una manera rentable y eficiente. Junto a los aspectos ecológicos como la conservación del agua, la conservación de la energía, los

materiales de construcción reciclados o sostenibles, la calidad del aire interior y la energía solar de los paneles fotovoltaicos, la planificación de una reutilización adaptativa es una tarea muy diferente a la planificación de una biblioteca en un edificio totalmente nuevo. Se presentan algunos estudios de casos prácticos de mejores prácticas de Alemania y otros países de Europa.

### **The Gov Doc Kids Group and free government information**

#### **El Grupo Gov Doc Kids y la información gubernamental gratuita**

Tom Adamich, Martha Childers, Katy Davis, John H. Faria y Antoinette W. Satterfield  
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La información gubernamental gratuita impulsa la innovación entre todos los niños del mundo y tiene el potencial de mejorar todos los aspectos de sus vidas. El Grupo Gov Doc Kids, que se encuentra en los Estados Unidos, se formó para promover el uso de la información gubernamental para los niños, desde preescolar hasta la escuela secundaria. "Únanse a nosotros como miembros del Grupo Gov Doc Kids" describe la formación del grupo y los sitios web internacionales y nacionales útiles para los niños, y presenta métodos contrastados y eficaces para abrir las puertas de la información gubernamental a los niños. El documento explora las formas en que el grupo utiliza la Web para promover la información gubernamental para los niños y proporciona una descripción detallada de cómo se formó una colección de documentos gubernamentales para los niños. Aunque los

ejemplos discutidos aquí son proyectos de los Estados Unidos, estas ideas podrían florecer en casi cualquier país.

### **Learning to read before you walk: Portuguese libraries for babies and toddlers**

#### **Aprender a leer antes que a caminar: bibliotecas portuguesas para bebés y niños pequeños**

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El objetivo de este documento es presentar y analizar algunos ejemplos de bibliotecas públicas que se han diseñado específicamente para bebés y niños pequeños en Portugal -llamadas *bebetecas* en portugués-, destacando el papel que desempeña la promoción de la lectura desde una edad muy temprana en el desarrollo del lector. Algunos proyectos llevados a cabo en estas áreas, en particular los que se dirigen a la familia como público, pero que en algunos casos se destinan también a centros de día y guarderías, crean una mayor concienciación del papel de la biblioteca en la difusión de libros para niños, además de crear hábitos de lectura dinámica a una edad temprana. Esto fortalece los lazos familiares y promueve el desarrollo más sano y equilibrado del niño. Tomando la familia y la escuela como dos contextos importantes para el desarrollo de los lectores, la biblioteca se convierte en un espacio privilegiado y un vehículo para promocionar las buenas prácticas de lectura desde una edad muy temprana, y donde los libros pueden servir como telón de fondo para la interacción entre los niños pequeños, sus familias y los cuidadores.





