CENL Working Group *Performance evaluation* 2007

Performance indicators for national libraries

As mentioned at the last CENL-meeting (St. Petersburg, 2006), ISO TC 46, SC Information and documentation Statistics and Performance Evaluation decided in June 2006 to propose as new work item (*a Technical Report on performance indicators for National Libraries*°.
As chair of the CENL working group on performance indicators for national libraries I have been invited to participate in the ISO Working Group on Quality measures for national libraries (ISO/TC46/SC8/WG7)

Structure of ISO/TC 046 "Information and documentation"

ISO/TC 046/SC 08 "Quality - Statistics and performance evaluation"
    ISO/TC 046/SC 08/WG 02 "International library statistics"
    ISO/TC 046/SC 08/WG 04 "Performance indicators for libraries"
    ISO/TC 046/SC 08/WG 05 "Price indexes"
    ISO/TC 046/SC 08/WG 06 "Statistics on production of books, etc."
    ISO/TC 046/SC 08/WG 07 "Quality measures for national libraries"

WGO7, chaired by Dr. Roswitha Poll, former chief librarian of Münster Regional and University Library, Germany will develop a Technical Report
The Working group consists of 12 members from 11 countries :
Belgium
Canada
Finland
France
Germany
Japan
South Africa
Spain
Sweden
Switzerland
UK

The members from Belgium, Finland, Germany, Japan, Sweden en Switzerland are staff members of national libraries.
The working group met in January 2007 (Berlin) and in May 2007 (Santiago de Compostella). The first meeting discussed the proposal of Roswitha Poll and Christina Jönsson-Adrial (cf. report 2006). After the discussion, the participants of the meeting were asked to draw up the indicators that were discussed according to their expertise.
At the second meeting the drafts of indicators were discussed. The revised and new indicators will be discussed at the third meeting (München, November 2007).

At the IFLA Conference this year in Durban, Roswitha Poll reported about the project at the meeting of the National Libraries. Some reactions were :

- to show background data of National Libraires (staff, budget, population of the country, legal background) ;
- to say something in the introduction about possible other tasks of national libraries, e.g. being at the same time a public library
- to differentiate rare materials and events as to types ;
- possiby to add an indicator for national libraries that are already collecting websites : how many websites of a domain are collected.

In annex you find an overview of the performance indicators proposed at the last meeting (Santiago de C.) (annex 1), an example of a handout of the indicator *Direct access from the homepage (C5)* (annex 2), a draft about the possible missions of national libraries (annex 3). For each of the indicators the handout will contain :
- Background
- Definition of the indicator
- Aims of the indicator
- Method
- Interpretation and use of results
- Examples and further reading

At the Helsinki meeting I propose to have a brief discussion about the indicators and the handouts. After the third meeting (November 2007), I propose a discussion with the Cenl-Working group, based on the results of that meeting.

Willy Vanderpijpen
20 September 2007.

ANNEX 1

List of performance indicators for National Libraries (draft)

Service, activity or aspect measured	Performance indicator	ISO 11620 (adapted)
A. Building the national collection	A.1. Percentage of national publications acquired by the National Library	
	A.2. Percentage of required national imprint titles in the collection	B.1.1.2
B. Making the collection accessible: Cataloguing	B.1. Percentage of new entries in the national bibliography that refer to publications of the last 2 years	
	B.2 Percentage of rare materials catalogued - of those in web catalogues	
C. Making the collection accessible: Quick and easy access	C.1 Median time of document processing	B.3.2.2
	C.2 Shelving accuracy	B.1.2.1
	C.3 Median time of document retrieval from closed stacks	B.1.2.2
	C.4 Speed of interlibrary lending	B.1.2.3
	C.5 Direct access from the homepage	
D. Making the collection accessible: Usage	D.1 Usage of foreign publications acquired during the last 3 years	
	D.2 Cost per download per database	B.3.1.3
	D.3 Public seating occupancy rate	B.2.3.1
	D.4 Number of attendances per cultural event	B.2.2.5
	D.5 User satisfaction	B.2.4.2
E. Making the collection accessible: Digitization	E.1 Percentage of documents digitized per year per 1000 titles in the collection	
	E.2 Percentage of documents digitised per special collection	
	E.3 Number of content units downloaded per document digitized by the library	
F. Offering reference services	F.1 Correct answer fill rate	B.3.3.2
	F.2 Speed of reference transactions	
	F.3 Percentage of information requests submitted electronically	B.2.2.2
G. Building potentials for development	G.1 Percentage of library staff providing electronic services	B.4.2.1
	G.2 Number of attendance hours at formal training lessons per staff member	B.4.2.2

	G.3 Percentage of library means received by special grant or income generated	B.4.3.1
	G.4 Percentage of staff in national and international cooperation and projects	
H. Preserving the collection	H.1 Percentage of the collection in stable condition	
	H.2 Percentage of all materials needing preservation treatment that received preservation treatment	
	H.3 Percentage of all materials needing mass preservation treatment that received mass preservation treatment	
	H.4 Percentage of the collection in appropriate environmental conditions	
I. Managing efficiently	I.1 Staff costs per title catalogued	
	I.2 Staff costs per loan	B.3.1.1
	I.3 Employee productivity in media processing	B.3.3.4
	I.4 Employee productivity in lending and delivery services	

32 indicators

C. 5 Direct access from the homepage

Background
Most libraries today offer information about their services and access to their electronic resources and services via their website. This is especially important for national libraries, as primarily they do not serve a local, but a national and international clientele, and therefore remote access to their services will be a crucial issue.
The quality of a library website is determined by its fitness for use. Contents and structure, language and design, navigation tools and accessibility should reflect the needs and information seeking behaviour of the library's population to be served. All these issues taken together constitute the "usability" of the website. Usability is generally defined as "the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use" (ISO 9241-11, 1998).
The usability of a website can be evaluated with different methods:
1. Evaluation without user participation:
    In a "heuristic evaluation" a small group of experts evaluates the website, based on the principles of usability. A list of 10 such "heuristics" is shown by Nielsen (Nielsen, 1994). In a "cognitive walk-through" experts construct a "user scenario" and perform tasks of an imaginary user.
2. Evaluation with user participation:
    Web surveys and focus groups try to assess user satisfaction and problems in using the website. For national libraries, online surveys sent to special user groups (e.g. libraries or publishers) might be most effective. It would be more difficult for national libraries to use tests or observation methods, as their website visitors will mainly consist of remote users. Transaction logs could help to identify most-used pages, ways of searching, etc.

In national libraries it is more difficult than in academic or public libraries to assess user needs, as they do not serve a specified homogeneous population, but have to consider the interests of considerably different client groups: the general public, researchers, libraries, publishers, and visitors of the library premises. These groups will have different interests and purposes when accessing the library website. While visitors might seek first for opening hours, ways to the library, and registration options, researchers will want to access the catalogues and electronic resources or the reference service, librarians might seek for central bibliographic services or document delivery, and publishers will probably be most interested in legal deposit regulations and services like standard numbers or cataloguing in publication.
Websites of national libraries should therefore offer a "sign-posting" for the main user groups. This should consider at least researchers, visitors, librarians/professionals, and publishers, but could also include groups like the media (press), business firms, friends and supporters of the library, or disabled persons.
If English is not the native language of the country, it will be essential to offer an English version of the website, as the tasks of national libraries include the international presentation of the cultural heritage and international cooperation.
The homepage is the most important part of the website, the virtual entrance to the library. The design and contents of the homepage will be decisive for the success of the website visit. High-priority issues should be either visible directly on the homepage or accessible with at best only one click or key stroke. Therefore, quick access to the most-used services and resources via the homepage was chosen as indicator for website quality. It is an indicator that

is applicable for every library homepage, easy to use, and with an informative content that enables the library to directly take steps for ameliorating access via the homepage.

Definition of the indicator
The availability of the most-used resources and services via the homepage of the library's website, measured by the number of clicks necessary and the comprehensibility of the terms used.
The home page is the page which serves as the visual unit that is displayed when accessing the library's website. It may appear after the redirection through an entry page.

Aims of the indicator
To assess whether the homepage leads directly or very quickly, with adequate terminology, to the most frequently needed information and the most-used services and thus serves as a virtual entrance to the library. Speed is measured by the number of clicks necessary to find the services.
Comparison will only be possible between libraries of similar mission and clientele, if a standardized set of resources and services is evaluated.
The indicator does not evaluate the design or navigation of the website or the overall contents of the website

Method
The method used is a kind of cognitive walk-through. A small group of experts simulates user behaviour when seeking for specified information via the homepage.
The first step is to define the services and resources that are most important for the library's clientele. This includes the decision what terms would be adequate and comprehensible to users when describing the services and resources on the homepage
National libraries are unique institutions whose mission and goals are influenced by national political issues. Their tasks and user groups may differ. But there are certain main tasks for national libraries (see the mission statement…) and certain services and resources that will be offered by most national libraries.
The set of main issues for the homepage of national libraries described here should be seen as a prototype that could be adapted to the special situation of a library. Information has been added as to the user groups that would be most interested in each of the issues.
The list was defined after searching 30 websites of national libraries. The survey showed that most national libraries group their information on the homepage as to:
- about the library
- collections
- catalogues
- services/use

But most libraries show more differentiated information directly on the homepage or when clicking on the broader group. "Catalogues" for instance might be differentiated into general catalogue, special catalogues, national bibliography, and external catalogues.
Methods for searching the website like search functions, FAQ (frequently asked questions), sitemap, or A – Z have not been included in the list, as the question is whether the most-used resources and services can be found directly, not via search functions.

15 main issues	Possible other terms	Possible general headings	Interested user group
Mission and legal bases	mandate, main commitments, role of the library, organization and policy, collection policy, legal acts, statutes, duties of the library	about the library	all; especially publishers and libraries
Way to the library	address, location, visit us, how to reach us, map to library	about the library, contacts, directions	visitors
Opening times	opening times, library hours	visit us	visitors
Online catalogue/s	catalogue/s, OPAC, search (with explanation)	how to find…, finding information, research aids	all
National bibliography		central bibliographic services, catalogue/s, how to find…, finding information, research aids	all
Lending services	circulation, loan service, borrowing, how to get a book	use, services	local users, visitors
Reference service	e-reference, reference questions, enquiries, ask a librarian, ask the library	information services	researchers, librarians
Registration for use	user card, library card, registering, membership, how to join	conditions for access, use, services	local and remote users
Interlibrary lending and document delivery	ILL, document supply, electronic delivery	how to get a book, how to get an article, services	local and remote users, libraries
Reproduction services	copying services, photographic service, digitization service, microfilming service	use, services	local and remote users, libraries
Electronic collection	electronic library, electronic resources, digital resources, online resources, documents available online	collection/s, find a journal or article, electronic services, online services	remote users, librarians
Subject areas	subject guides, subject resources, browse by subject, information resources by theme	collection/s, how to find…, finding information, research aids	researchers
Standards	standard numbers, ISSN, ISBN …	services	publishers, librarians
User education	user training, courses, teaching, library tours, library instruction	help, services	visitors, researchers
Projects	cooperation	Expertise and development	libraries
News	events, forum, exhibitions		all

As a second step, the experts test the homepage as to the speed of finding the services/resources and as to the adequateness of the terminology to users. The rating could be like this:

Service/resource		Clicks	Points
	Direct information on the homepage, e.g. address, opening times, search box for the catalogue	0	10
	unmistakable term on the homepage	1	8
	unmistakable term on the homepage	2	6
	unmistakable term on the homepage	3	4
	unmistakable term on the homepage	> 3	0
	ambiguous term on the homepage	1	2
	ambiguous term on the homepage	> 1	0

Only part of the "main issues" will appear directly on the homepage, but they should be only "one click away". It is irrelevant for the rating whether the topics appear on the homepage in systematic order or in a "quick links" list.
Terms named "possible general heading" in the lists above and leading to the requested information are rated as adequate language, but the necessary clicks from the general headings should be counted..
The availability of the most-used services/information is then calculated by dividing the total number of points by the number of main issues on the list

Interpretation and use of results
A high score would be considered as good. The following actions could be taken in order to achieve a better score:
- Put a link to the most-used services directly on the homepage.
- Change library jargon into user-friendly language: Task-based links like "find books" or "find articles" have proved to be easier to understand than terms like "databases" or "e-journals" (Kupersmith, 2006a). Users probably would not click on a link if they do not know what to make of the term.
- Avoid abbreviations the users are not familiar with, e.g. "ILL".
- Use a consistent set of terms, e.g. not "periodicals" beside "e-journals".
- Evaluate frequently asked questions and place the topics on the homepage. If a question occurs frequently (e.g. "How can I become a user" or "Where can I find articles"), it may be more effective to have a link on the homepage than to refer the user to "FAQ".

If the library sees that it takes too many clicks to find the main services, or that the services are not clearly labelled, the indicator could be followed up by a user survey in order to find more details about the usability of the homepage.
The problem in offering quick access to the main services via the homepage for all user groups will be that the homepage must on the one side offer all relevant information, on the other side must not be overloaded and confusing. This can be a tightrope walk between conflicting wishes. Information on the homepage should be limited to the necessary.

Examples and further reading

Literature on library website design and usability tests is extensive, and several projects in academic libraries have concentrated on the effort and time needed to find specified topics via the homepage.

The number of clicks necessary to find an information, starting from the homepage, was counted in a project at the State University of New Jersey, US (Jeng, 2005, p.104). Students were given specified tasks, and the study measured as well the time needed as the number of keystrokes, clicks, or movements necessary for completing the task. As the tasks included finding certain journal or encyclopaedia articles, students on average needed between 2 to 4 minutes and between 7 to 13 clicks.

The "minimum number of moves" to complete a task was also counted in a usability study at Louisiana State University Libraries (Robins and Kelsey, 2002). The study differentiated between "correct" and "incorrect" moves, where 65% were rated as correct moves. An interesting result was that for most of the assigned tasks the project staff identified more than one way to navigate to the desired information. "In some cases, it was possible to navigate various paths from the libraries' home page to the desired page and still complete the task in the minimum number of moves."

A usability test in the University of Hull, UK, graded the test results by the number of attempts made to find a specific resource or information (Holland, 2005). 49% of the participants found the information at the first attempt. Library jargon was found to be the main barrier.

A study at the University of Calgary Library, Canada, using the "think aloud" method with 10 test questions, asked also for users' comments on the usability of the website (Hayden et al., 2004). One of the results was that the participants wanted "the most important and most commonly used resources accessible with one click from the first page, ideally from a page that is tailored to their subject needs".

Hayden, A. et al., (2004), University library website usability study report, University of Calgary Library website usability study team, available at: http://hdl.handle.net/1880/43524

Holland, D. (2005), Practical experiences of using formal usability testing as a tool to support website redesign, *SCONUL Focus* 36 Winter, pp.31-35

ISO 9241 (1998), Ergonomic requirements for office work with visual display terminals (VDTs) -- Part 11: Guidance on usability

Jeng, J. (2005), Usability assessment of academic digital libraries: Effectiveness, satisfaction, and learnability, *Libri* 55, pp. 96 – 121

Kupersmith, J. (2006), Library terms that users understand, available at: http://www.jkup.net/terms.html

Nielsen, J. (1994), 10 usability heuristics, available at: http://www.useit.com/papers/heuristic/heuristic_list.html

Robins, D, and S. Kelsey (2002), Analysis of web-based information architecture in a university library: Navigating for known items, *Information Technology and Libraries* 21,4, pp.159-170, available at: http://www.ala.org/ala/lita/litapublications/ital/2104robins.htm

ANNEX 3

Mission and Goals of National Libraries (draft)

1. **Collection**
   1.1 To collect the national imprint (both print and electronic), generally via legal deposit
   1.2 To collect the national documentary heritage in the form of manuscripts, archival materials, cartographic material, printed music documents, pictures, photographs and audiovisual documents in conventional or electronic format
   1.3 To collect foreign publications in the national language and/or about the country
   1.4 To maintain a broad collection of foreign publications[1]

2. **Access**
   2.1 To create the national bibliographic record
   2.2 To provide quick and effective access to the collections for research, learning, and personal development
   2.3 To provide remote access to the collection by digitizing relevant materials
   2.4 To provide central services (e.g. reference, bibliography, lending, and document delivery) to users both directly and through other library and information centres

3. **Marketing**
   3.1 To promote the national documentary heritage by exhibitions and other cultural events

4. **Preservation**
   3.1 To preserve the national documentary heritage in all formats and thus ensure the long-term access to the collections

5. **Cooperation**
   4.1 To engage in library and information affairs on a national and international basis
   4.2 To join in library and information research
   4.3 To cooperate nationally and internationally with libraries and other institutions like museums and archives

6. **Management**
   5.1 To ensure effectiveness and cost-efficiency by innovative technology and adequate management methods
   5.2 To provide for staff development

Additional tasks
1. To provide a centre for library education
2. To serve as national forum for international programmes and projects
3. To provide central services for libraries like the national union catalogue or a national centre for digitization

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[1] The collection of foreign literature may be universal or restricted to subjects, e.g. humanities.