



Benchmarking with quality indicators: national projects

Benchmarking
with quality
indicators

Roswitha Poll

University and Regional Library Münster, Münster, Germany

41

Abstract

Purpose – The purpose of this paper is to show the effectiveness of using performance indicators on a national scale

Design/methodology/approach – The paper gives an overview of national projects and compares the methods used.

Findings – The paper finds that groups of libraries have tried to find consensus on a common set of performance indicators for benchmarking purposes. The indicators chosen for such projects differ between countries and types of libraries. The paper shows examples where sets of indicators are used on a national or regional scale on a regular basis and compares the indicators used and the methods of benchmarking.

Practical implications – The paper shows the difficulties of reaching an agreement when starting a common project and points to results and success of the projects and to problems that occurred in the benchmarking process.

Originality/value – The paper acquaints libraries with existing projects and helps to find adequate methods for different purposes.

Keywords Libraries, Performance measures, Quality indicators, Benchmarking

Paper type Research paper

Quality or performance measures have been used for a long time in libraries and have been described in handbooks and ISO standards. From being applied in individual libraries, the development has gone to sets of such indicators being used by groups of libraries on a regional or even national scale, often for benchmarking purposes. Such projects have been started in the last years by public libraries as well as academic libraries.

There is no lack today of performance indicators for libraries. The revised International Standard for library performance measures (ISO DIS 11620, 2006) will contain 44 indicators with description of methods. The revised edition of the IFLA handbook will show 40 indicators with descriptions and practical examples (Poll *et al.*, 2007).

The problem for benchmarking projects is to find consensus on a common set of indicators.

The search for the right indicators

An individual library evaluating the quality of its services by using the same performance indicators repeatedly will be able to recognize problems and monitor the success of measures taken for achieving better quality. But in many cases it will be difficult to rate the own scores in performance measurement. If, e.g. the indicator “shelving accuracy” shows that only 85 percent of books in the collection are in their right place, the library will of course know that this is not the best result possible. But are ten loans per year per member of the population good enough? Is it efficient if a staff member in the book-processing department handles 2000 media per year? In such



cases, the comparison with other libraries of similar structure and clientele illustrates the results and helps to rate the own scores. In order to make such comparison possible, it is necessary that the same procedures of measuring are used.

Benchmarking is crucial not only for rating the results of performance measurement, but also for showing such results to the funding institutions and the public, that probably will find statistics and quality measures of their library more convincing if seen in the context of other libraries. In several cases, funding institutions have made the first move in library benchmarking projects.

At the beginning of a benchmarking project, it seems easy to find an adequate selection of indicators. Ian Winkworth describes the situation when starting the search for indicators in SCONUL: "There was initial expectation and enthusiasm that we could rapidly agree on a small set of indicators that would support and fine-tune subjective judgements about the quality of libraries. By the early 1990s, after several years' efforts, the Advisory Committee faced the common truth that the exercise would be more technically complex and politically difficult than expected" (Winkworth, 1999). After all, it took five years for a consensus to be reached on just six indicators – one year per indicator?

Literature shows that at the start of a benchmarking project the same criteria for indicators are almost always specified. The selected set of indicators should:

- Mirror the full extent of library services.
- Consider electronic as well as traditional services.
- Help to demonstrate the importance and impact of libraries.
- Further comparison between the participating libraries.
- Avoid unfair treatment of individual libraries.
- Allow for special conditions in the libraries (every library seems to be unique!).
- Yield results that are easily understandable, even for politicians.
- In spite of all that, consist of only a few measures that should preferably be collected from the normal library statistics.

In sum, it should be an all-in-one device, suitable for every purpose. It is astonishing that several projects have actually managed to find common sets of indicators for continuous use.

Comparison of projects

Benchmarking projects worldwide differ not only in the sets of indicators they apply, but also in the final use of the results. Some projects publish the results for open access, others disclose them only to the participants of the project, only a few show an overall ranking of the participating libraries.

The following criteria were applied for including projects in the comparison:

- Projects should use combined performance indicators like "loans per capita" or "collection use per year", not only statistical data like "number of loans" or "collection size".
- Projects should offer an obligatory set of indicators, not just a list to pick from.
- The indicators should be chosen by or in collaboration with libraries, not exclusively by funding institutions.

Using these criteria left only a few projects for comparison. These are:

- (1) *BIX. Library Index* (BIX. Der Bibliotheksindex).
 - *Library type*: German public and academic libraries (separate sets of indicators).
 - *Time*: Public libraries 1999 ff., academic libraries 2002 ff.
 - *Participants*: Over 260 libraries (not all continuously).
 - *Organized by*: Bertelsmann Foundation (start); German Library Association (DBV).
 - *Indicators public libraries*: 17.
 - *Indicators academic libraries*: 17.
 - *Published*: Annual print publication (BIX. Der Bibliotheksindex, 2006), BIX web site.
 - *Ranking*: Yes.
 - *Specialities*: The public library indicators are structured in four dimensions: resources, customer focus, efficiency, employee-focus.
The academic library indicators are structured according to the Balanced Scorecard (Kaplan and Norton, 1996): resources/infrastructure, usage, efficiency, development/potentials. Although the Balanced Scorecard has been used by individual libraries (e.g. Krarup, 2004; McKnight, 2002; Pienaar and Penzhorn, 2000; University of Virginia Library), its use in benchmarking projects is unique to BIX.
- (2) *CASL. Council of Australian State Libraries* (Australian Public Libraries Comparative Report, 1998-2004, 2005).
 - *Library type*: Public libraries.
 - *Time*: 1998 ff.
 - *Participants*: All public libraries.
 - *Organized by*: Data are collected by the individual state or territory authorities.
 - *Indicators*: eight (only three of those included in this comparison).
 - *Published*: Printed Report by CASL, but only with accumulated data for the states or territories
 - *Ranking*: not for the individual libraries.
- (3) *Swedish Quality Handbook* (Edgren *et al.*, 2005).
 - *Library type*: All types of libraries.
 - *Time*: three-years project 2001-2004; continuation not decided.
 - *Participants*: nearly 60 libraries.
 - *Organized by*: Swedish Library Association.
 - *Indicators*: 12.
 - *Published*: The results for 2002/04 were published at the project website (Svensk biblioteksförnings specialgrupp för kvalitetsarbete och statistic).
 - *Ranking*: no.

- (4) *HELMS* (UK Higher Education Management Statistics 2003-2004, 2005).
- *Library type*: Academic libraries.
 - *Time*: 1997/98 ff.
 - *Participants*: 174 libraries of SCONUL (Society of College, National and University Libraries).
 - *Organized by*: LISU, Loughborough University.
 - *Indicators*: six (+ background data).
 - *Published*: two-years print publication by SCONUL.
 - *Ranking*: no.
- (5) *Benchmarking of the University Libraries Netherlands (UKB)*.
- *Library type*: University libraries.
 - *Time*: 1999 ff.
 - *Participants*: 13 libraries.
 - *Organized by*: UKB (Dutch Association of the 13 university libraries and the National Library of the Netherlands).
 - *Indicators*: 24 (additional user surveys).
 - *Published*: The results are only accessible for participants.
 - *Ranking*: no.
 - *Specialities*: The indicators are structured in four dimensions: resources, products and services, efficiency of processes, usage.

Indicators used in the projects

For the purpose of comparison, the indicators used in the six projects (BIX is treated as two separate projects) have been classified in the four perspectives of the Balanced Scorecard with further subdivisions for resources and services. In addition, they are compared to the ISO Standard 11620 to see whether standardized measures have been used. Not all indicators in the projects have been included in the comparison, as some were only statistics, and others very special questions related to the specific library group.

Altogether there are 54 indicators, of which 20 appear in several projects (13 in two projects, seven in three projects), though “almost corresponding” indicators were counted as the same. The individuality of libraries is apparent here. A typical example is that of staff training:

- The ISO standard counts the hours of training attendance per staff member.
- BIX for public libraries counts the time spent on training of all available staff time.
- The UKB project counts the training costs per staff member.

The terminology shows a similar variety. When the HELMS measures count “per user” they do not mean active users but potential users, the members of the population to be served.

However, 24 of the 54 indicators are more or less identical to those of the ISO standard. That means that using internationally standardized methods results can be compared between projects.

The perspective “Resources/infrastructure” shows 16 indicators, six of them used by several projects. The library’s role as place for learning and research is defined by the size of the user area, the availability of study places and workstations and of course by the opening hours. Indicators for the quality of information provision are expenditure and media per capita, the renewal rate of the collection and the availability of media. There is only one indicator for the library’s teaching role (training lessons per capita) and one for staff resources (staff per capita) (see Table I).

For the perspective “Usage”, there are 16 indicators, seven of them used by more than one project. Market penetration (percentage of active users of the population), user satisfaction and the number of visits are used as general indicators for user oriented services. The quality of the collection is assessed by loans and the number of interlibrary loans compared to total loans. Three indicators measure the use of electronic services (sessions on e-media and online catalogue, downloads per electronic journal). BIX intends to use an additional indicator for electronic services: “web site visits per capita”. The data collection method for this indicator is in the test phase.

The use of the library’s information services is evaluated as to attendances at user trainings and information requests per capita. Only one project (Sweden) evaluates the library’s cultural role by counting attendances at cultural events per capita (see Table II).

There are 14 indicators for the perspective “Efficiency”, which shows the importance of demonstrating “value for money” to the funding institutions. Two indicators are used twice, one (“cost per user”) even thrice. “Costs” in most cases mean the total annual operating expenditure of the library.

The expenditure for information provision is compared with staff costs and to total expenditure in order to assess whether a sufficient part of the budget is spent on the collection. Staff hours are set in comparison to opening hours, staff costs to users, and the allocation of staff resources to background and user services is meant to show whether user services have priority.

The efficiency of processes is evaluated in terms of speed (of acquisition, media processing, and interlibrary loan) and correctness (of shelving and interlibrary loan delivery). BIX and the UKB project use the example of media processing to assess employee productivity (media processed per year per full-time equivalent staff involved in processing) (see Table III).

The perspective “Development/potentials“ was introduced in quality assessment by the Balanced Scorecard. It is certainly important in times of constant change, as it assesses the library’s capability to cope with such change. It has not been easy to find performance indicators for this perspective, as is shown by the small number in the projects (only eight). Most of the indicators in this perspective were developed in a German project based on three academic libraries (Ceynowa and Coners, 2002) and taken up by the benchmarking project BIX.

The potential for development is assessed on the one hand via electronic services (expenditure on the electronic collection, percentage of staff in electronic services), on the other hand via staff development and motivation (time and money spent on staff training, availability and fluctuation rate of staff). The library’s success in gaining

Table I.
Resources, infrastructure:
what services does the
library offer?

	BIX AL	BIX PL	CASL	SQH	SCONUL	UKB	ISO 11620
Library as physical place							
User area in m ² per capita	×	×					×
Study place hours per week per user					×		
Workstation hours per capita		×					×
Opening hours per week	×	×				×	
Opening hours compared to demand				×			
Expenditure on information provision per capita	×					×	
Expenditure on information provision per user					×		
Expenditure on information provision to total expenditure						×	
Expenditure on serials to total expenditure on information provision						×	
Materials (media) per capita		×	×				
Books added per year per capita						×	×
Serial subscriptions per capita						×	×
Renewal rate of the collection		×					
Immediate media availability	×						
Training lessons per capita	×					×	
Staff per capita	×	×					×
User training Staff							

	BIX AL	BIX PL	CASL	SQH	SCONUL	UKB	ISO 11620
General							
Market penetration	×		×	×			×
Market penetration by remote e-services				×			
User satisfaction	×			×			×
Visits per capita	×	×		×			×
Visits per opening hour		×					
Collection use/turnover		×		×			×
Loans in the past year/acquisitions over the past five years						×	
Loans per capita		×	×			×	×
Loans per user					×		
Sessions on each electronic service per capita				×			
OPAC sessions per capita						×	
Downloads (average) per e-journal						×	
Proportion of ILL loans to total loans				×		×	
Attendances at training lessons per capita				×		×	×
				(training + events)			
Information requests per capita				×			
Attendances at events per capita				×			×
				(training + events)			

Table II.
Usage: how are the
services used/accepted?

funding from its institution and other sources is also seen as important for coping with future (see Table IV).

No indicators for the impact or outcome of libraries on users or on society are as yet used in the projects. Such indicators are still in the testing phase and therefore not ready for benchmarking with standardized data collection methods.

User surveys in benchmarking projects

In most benchmarking projects the participating libraries tend to doubt the informative content of one or more indicators, especially when they feel that a certain indicator has an unfavourable influence on their own score. It is quite understandable that every library wants to be in the top group of the benchmarking results.

Arguments against indicators are:

- Some scores might be influenced by special procedures in the libraries and therefore would not be comparable.
- *Example:* Short loan periods or highly efficient claiming routines for overdue loans can lead to a higher number of loans and influence all indicators concerned with loans.
- The scores are affected by conditions outside the library's influence.
- *Example:* Political decisions can affect the funding; new library buildings can result in higher use.
- Libraries may have special tasks with special funding that affect comparability.
- *Example:* Legal deposit right; special collections with extra funding.
- Some indicators are questioned because they interpret a high amount of effort for electronic services as better quality.
- *Example:* Percentage of expenditure or staff time used for electronic services.

Such problems might give rise to the idea of replacing the scores of performance measurement by the results of user satisfaction surveys, as good performance should in any case be user-oriented. But it seems questionable to apply user surveys as the only method of evaluation:

- Previous experience can affect the users' perception of quality. Good experience will lead to higher expectation, bad experience to low expectation and therewith higher rating of a service.
- Users may be satisfied without any tangible benefits.
- The answers may be influenced by loyalty to the library. Aspects like "friendliness of staff" will in most cases get good scores.
- The opinion expressed may be momentary (a "snapshot"), affected by external conditions like weather or traffic noise.

User surveys reflect the users' feelings, and objective measuring might come to differing results. If 30 percent of items requested for loan are not available at the moment, users will probably rate this as "very frequently", though 70 percent of their requests were immediately successful.

Table IV.
Development/potentials:
are there sufficient
potentials for future
development?

	BIX AL	BIX PL	CASL	SQM	SCONUL	UKB	11620
Electronic services							
Percentage of expenditure on information provision spent on the electronic collection	×					×	×
Percentage of library staff providing electronic services	×						×
Hours/days of training per staff member	×	×					×
Staff development and motivation							
Expenditure for training per staff member						×	
Rate of employee availability		×					
Employee fluctuation rate		×					
Percentage of library means received by special grants or income generated	×	×				×	×
Budget							
Percentage of institutional means allocated to the library	×					×	×
						(only income generated)	
						×	
						(expenditure instead of means)	

BIX (for academic libraries) and the Swedish project have a user satisfaction survey in their indicators' list. The UKB project has conducted user surveys in addition to the benchmarking. BIX is testing on online survey that could be used by all participants.

But it is difficult to include the results of user surveys in the benchmarking. The ranking would probably rate only one result, the overall satisfaction with the library's services. It could not consider the detailed answers about specific services such as satisfaction with the existing opening times. Yet such specific answers could be of high value for each library in evaluating the results of performance measurement.

Is benchmarking worth the effort?

Benchmarking in a group of libraries, using a common set of performance indicators and comparing the results, can have various advantages for the participants.

Positive results for the internal library management are:

- The possibility to rate the own results by comparison.
- Help in finding problems in processes and organization.
- The possibility of sharing experience with "best practice" libraries.
- Higher awareness and acceptance of evaluation and controlling procedures in the library.

Advantages for the external presentation of the library can be:

- Transparency of resources spent and quality achieved.
- Higher attention to the library and its services by the presentation of results.
- Higher credibility of the library's reports, the common project giving a kind of guarantee for neutrality.

But experience shows, that there can also be disadvantages for the participants:

- If the data are not checked and controlled by a central collecting institution, wrong input or data caused by unique situations (e.g. an unusually high number of acquired books because of a donation) may impair the comparability of results.
- The publication of the benchmarking results can be harmful to libraries with bad results, but it might – as experience shows – also be damaging to the library with the best results. Funding institutions might think that the library apparently has too many resources already.
- When trying to achieve better results in the next benchmarking process, libraries might postpone other important changes.
- Voluntary participation in the benchmarking is problematic, as a frequent change in participants will affect the comparability of results over years.

Benchmarking projects cannot offer ready-made solutions for each library. They can point to problems and shortcomings, show possible actions to be taken and monitor improvements over time. Specific management decisions will need additional information about each special problem.

After three years of the Dutch benchmarking project, the experience was summarized thus (Laeven and Smit, 2003):

We conclude by saying that the development of a benchmarking system is no small undertaking and that the set of instruments used by the Dutch libraries is still far from perfect, but that, in our view, the value of benchmarking as a proven tool to achieve quality management should be rated very highly indeed.

Looking at the effort of achieving reliable and helpful data in a group of benchmarking libraries, it seems a brilliant idea to use just one indicator or measure for evaluating and comparing library quality. At a late hour in a meeting of quality experts, such a unique measure was suggested:

Percentage of users smiling when they leave the library (observed by a camera).

But the counter argument was convincing:

This indicator would very susceptible to the outside weather conditions.

The search for an ultimate measure of benefit may be illusory (Revill, 1990, p. 319).

References

- Australian Public Libraries Comparative Report, 1998-2004* (2005), presented to CASL meeting Sydney, July, available at: www.casl.org.au/papers.and.publications.cfm
- BIX. Der Bibliotheksindex (2006), *BIX. Der Bibliotheksindex*, BIT online, Sonderheft.
- Ceynowa, K. and Coners, A. (2002), *Balanced Scorecard für wissenschaftliche Bibliotheken*, Klostermann, Frankfurt a.M., Zeitschrift für Bibliothekswesen und Bibliographie, Sonderheft 82.
- Edgren, J. et al. (2005), *Quality Handbook, Performance Indicators for Library Activities*, The Swedish Library Association's Special Interest Group for Quality Management and Statistics, available at: www.biblioteksforeningen.org/sg/kvalitet/handbook_eng.html
- ISO DIS 11620 (2006), *Information and Documentation – Library Performance Indicators*.
- Kaplan, R.S. and Norton, D.P. (1996), *The Balanced Scorecard: Translating Strategy into Action*, Harvard Business School Press, Boston, MA.
- Krarup, K. (2004), "Balanced scorecard at the Royal Library, Copenhagen", *LIBER Quarterly*, Vol. 14 No. 1, pp. 37-57, available at: <http://liber.library.uu.nl/>
- Laeven, H. and Smit, A. (2003), "A project to benchmark university libraries in The Netherlands", *Library Management*, Vol. 24, pp. 291-304, available at: www.ukb.nl/benchmark.htm
- McKnight, S. (2002), "Managing cultural change: the challenge of merging library services, curriculum development and academic professional development", paper presented at the 68th IFLA Council and General Conference Glasgow, available at: www.ifla.org/IV/ifla68/papers/123-106e.pdf
- Pienaar, H. and Penzhorn, C. (2000), "Using the balanced scorecard to facilitate strategic management at an academic information service", *Libri*, Vol. 50, pp. 202-9, available at: www.librijournal.org/pdf/2000-3pp202-209.pdf
- Poll, R., te Boekhorst, P. and Mundt, S. (2007), *Measuring Quality: Performance Measurement in Libraries*, Saur, München (forthcoming).
- Revill, D. (1990), "Performance measures for academic libraries", in Kent, E. (Ed.), *Encyclopedia of Library and Information Science*, 45, Dekker, New York, NY and Basel.
- UK Higher Education Management Statistics 2003-2004* (2005), SCONUL.

Winkworth, I. (1999), "Performance measurement of UK university libraries", *ARL Bimonthly Report*, Vol. 207, available at: www.arl.org/resources/pubs/br/1999br.shtml

Further reading

BLX. Der Bibliotheksindex (n.d.), available at: www.bix-bibliotheksindex.de/

Svensk biblioteksförerings specialgrupp för kvalitetsarbete och statistik (n.d.), *Prestationsindikatorer – resultat*, available at: www.biblioteksforeningen.org/

UKB (n.d.), "Samenwerkingsverband van de Nederlandse universiteitsbibliotheken en de Koninklijke Bibliotheek", *Benchmarking*, available at: www.ukb.nl/benchmark.htm

University of Virginia Library (n.d.), *Balanced Scorecard at UVA Library*, available at: www.lib.virginia.edu/bsc/index.html

Corresponding author

Roswitha Poll can be contacted at: pollr@uni-muenster.de