

# **BENCHMARKING IN THE FORM OF PERFORMANCE INDICATORS AND BALANCED SCORECARD**

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## **ABSTRACT**

*Quality measures like performance indicators and user satisfaction surveys are in widespread use in libraries and have been described in handbooks and ISO standards. Libraries using the same measures repeatedly can identify gaps and failures in their service delivery. But in many cases it will be difficult to interpret the measurement results in an individual library without a background of results in other libraries. Therefore, groups of libraries have tried to find consensus on measuring instruments like performance indicators or user surveys that can be used for benchmarking on a national or regional scale. Such projects have been started in the last decade by public libraries as well as academic libraries.*

*In several of these projects, the performance indicators are organised according to the Balanced Scorecard, a concept originally developed for the commercial sector*

*The Balanced Scorecard ,translates' the planning concept of an institution (mission, strategic vision and goals) into a system of quality indicators that covers all important perspectives of performance: finances, users, internal processes, learning and growth.*

*The paper describes benchmarking projects and the influence of the Balanced Scorecard concept and – by examples – tries to prove the usefulness of benchmarking data for quality management.*

## **EVALUATION OF QUALITY IN LIBRARIES**

Quality in libraries can have many aspects, and these aspects can change if seen from the point of view of the various stakeholders: The users (actual and potential users), funding institutions (a university, a community), policy makers, library staff, library managers, and the general public. But there are some basic issues that apply to the overall quality of service delivery in libraries:

- *User-orientation of the services:* This does not mean satisfying every possible demand, but knowing users' needs and wishes and adapting the services accordingly.
- *Accuracy and reliability of the services:* Users should be able to rely on an agreed standard of a service, and the service should be delivered consistently.
- *Speed and currency of the services:* Services (reference answers, loans, document deliveries, processing of new media) should be delivered with adequate speed and should be up-to-date (catalogues, e-journals).

- *Accessibility*: The library building, the print and electronic collections and the other services should be easily accessible, even for inexperienced users. Examples are adequate opening times, efficient sign-posting, usability of the catalogue and website, simple-to-use online services, easily understandable language everywhere.
- *Competence and helpfulness of staff*: Staff should be well trained in traditional and new services, should be friendly and responsive, and should possess communication skills.
- *Effectiveness and efficiency*: All processes in the library (background services as well as direct user services) should be well organised and streamlined, so that good services can be produced with minimum resources.

There are various options for assessing the quality of library services:

- *Performance indicators* measure the effectiveness and cost-efficiency of library services. They produce quantified data and are therefore sometimes called 'objective'.
- *User surveys* measure the perceived quality, users' estimate of library services. They produce qualitative data and have a subjective bias.
- *Outcome assessment* tries to prove the value and benefit of libraries for individual users and society.

This conference deals with quantified data (statistics and performance indicators).

## PERFORMANCE INDICATORS

Performance indicators (performance measures, quality indicators) have been in use in libraries since several decades. They measure on one side the effectiveness in delivering services to users and, on the other side, the cost-effectiveness, the efficient use of existing resources.

Libraries have started to use performance indicators above all for internal management; the goal is to get detailed knowledge about strong or weak points in the services. If the same indicators are used regularly over years, it will be possible to recognise developments and to follow the consequences of measures taken for ameliorating performance. But the results of performance measurement in an individual library can be difficult to interpret, while they may become meaningful if compared to those of other libraries. Comparison of results will be possible, if the following criteria are fulfilled:

- The libraries should have a similar structure and clientele.
- All data to be collected should be defined in the same way.
- The libraries must use the same methods of collecting the data and of calculating the results.

Definitions of libraries and their services are given in the international standard ISO 2789.<sup>1</sup> In order to support uniform procedures in performance measurement, performance indicators have also been standardised within the frame of ISO (International Organisation for Standardization).

- ISO 11620: 2008 (2nd ed.) Information and documentation – Library performance indicators
- ISO TR 28118 (2008) Information and documentation – Performance indicators for national libraries<sup>2</sup>

The standard ISO 11620 describes 45 indicators meant for all types of libraries. Its second edition covers indicators for traditional as well as electronic library services. The Technical Report 28118 aims at national libraries, whose special conditions and tasks were not covered by ISO 11620.

The IFLA handbook *Measuring Quality* that was first published in 1996 came out in a revised edition in 2007 and describes 40 indicators.<sup>3</sup> It differs from the ISO standard in giving more practical details and showing examples where libraries have used the indicators. There is indeed no lack of well documented performance indicators to choose from for the needs of individual libraries.

The data needed for calculating performance indicators are not always easy to find. They have to be collected from:

- The annual library statistics (e.g. number of visits, of user workplaces ...)
- The statistics of the library's institution or community (e.g. number of students, number of inhabitants)
- The automated library system (e.g. number of loans, of active users, of ILL requests ...)

Some data must be collected manually for an indicator (e.g. number of workplaces that are in use at a certain time).

Performance measurement certainly involves extra effort in order to get correct and reliable data. But that effort is in most cases worthwhile, as the results support management decisions and can be used for promoting the library's role to funders, policy makers, and the public.

This conference focuses on new library statistics that are meant to be used on an international basis and for comparison between countries and over time. Though the dataset is but small compared to the ISO standard 2789, yet quite a number of performance indicators can be made up with these data, especially if they are set in comparison to the 'population' of libraries (inhabitants, students).

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<sup>1</sup> ISO 2789 (2006), Information and documentation – International library statistics.

<sup>2</sup> The Technical Report will be published end of 2008

<sup>3</sup> Poll, R. and te Boekhorst, P. (2007), *Measuring quality: Performance measurement in libraries*, Saur, München (IFLA Publications 127)

Examples:

- Number of volumes in public libraries per 1,000 inhabitants
- Average number of loans per student

## JOINT PERFORMANCE MEASUREMENT PROJECTS

There is a long tradition of libraries joining in collecting and publicising their statistics. They do this on a regional or national scale, usually separately as to library types.

Performance measures were first of all used in individual libraries, till the idea of comparing and benchmarking with others led to one-time or even long-time joint projects. There are several examples by now where groups of libraries have found consensus on a set of performance indicators that would suit all of them. It is not at all easy to identify such indicators. The problems are:

- If the indicators are meant to be applied by all libraries in the group, only such indicators can be selected that fit the main tasks of the libraries. Special tasks of individual libraries, such as legal deposit right or rare collections, would not be represented.
- The indicators should be ‘just’, not giving undue advantage to some libraries, e. g. by good marks for large new buildings, which most libraries will not be able to attain.
- And of course every library will prefer indicators that will make it come out at the top.

It can take a year or more from the planning phase to the start of a joint performance measurement project. Some projects have restricted themselves to selecting adequate indicators for the libraries in the group and describing them in a handbook, but without making the use of these indicators in any way compulsory. There is only a recommendation to use specified indicators in the way described.

Examples are:

- *The Swedish Quality Handbook*<sup>4</sup> that was developed in a 3-years project 2001–2004 for all types of libraries
- *The Norwegian indicators*<sup>5</sup> for academic and public libraries that appeared in a 4<sup>th</sup> revision in 2007

In several other projects, a set of performance indicators is used regularly, in some cases already for years. The indicators are either defined by the participating libraries, or they are calculated by authorities, using the regular library statistics.

<sup>4</sup> 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: [http://www.biblioteksforeningen.org/organisation/dokument/pdf/quality\\_handbook.pdf](http://www.biblioteksforeningen.org/organisation/dokument/pdf/quality_handbook.pdf)

<sup>5</sup> *Forslag til indikatorer for fag- og folkebibliotek* (2007), version 4.0, ABM-utvikling, Oslo, available at: <http://www.abm-utvikling.no/bibliotek/statistikk-for-bibliotek/indikatorer-for-fag-og-folkebibliotek>

Examples are:

- *BIX – The Library Index*<sup>6</sup>: The German project has separate indicator sets for public and academic libraries. The results are published yearly, with a ranking of libraries. Participation is voluntary and can vary.
- *The Benchmarking system of the Netherlands University Libraries*<sup>7</sup> that started in 1999 and is used continuously by all university libraries and the national library
- *HELMS (UK Higher Education Library Management Statistics)*<sup>8</sup> started in 1997/98. Six indicators are calculated for all members of SCOUNL (Society of College, National and University Libraries)

There will be special papers about two of these projects during this conference, the German BIX and the benchmarking of the Netherlands university libraries.

It is interesting to see that though the projects differ in the selection of indicators, yet they address the same topics, and most indicators are taken from existing handbooks or from ISO 11620, so that results become comparable between library groups and countries. Using such standardized methods does not only allow benchmarking, but will give the individual library more confidence in its measuring process and will add reliability to the data when reporting to funding institutions.

## THE BALANCED SCORECARD

Libraries can by now choose from a broad selection of performance indicators that have been tested and used by libraries and that are described in standards and handbooks. There have been diligent librarians, who worked through a whole handbook or standard, applying the full range of indicators in their libraries with interesting results – but only once. For regular evaluation and reporting, a library should rely on a selective list of indicators that are adapted to its purposes and problems. But how to choose the right indicators?

In the new edition of the ISO standard 11620 and also in the 2<sup>nd</sup> edition of the IFLA handbook 'Measuring Quality', the performance indicators are presented in the structure of the Balanced Scorecard (in the following called BSC). More and more libraries report about having adopted a BSC for their quality management; the most interesting example is the German benchmarking system BIX.

The BSC was originally developed for the commercial sector.<sup>9</sup> It measures whether the activities of an institution are aligned with its vision and goals. The

<sup>6</sup> BIX. Der Bibliotheksindex, available at: <http://www.bix-bibliotheksindex.de/>

<sup>7</sup> <http://www.ukb.nl/benchmark.htm>; see also Laeven, H. and Smit, A. (2003), A project to benchmark university libraries in The Netherlands, *Library Management* 24, 6/7, pp. 291-304

<sup>8</sup> *UK Higher Education Library Management Statistics 2003-2004* (2005), SCOUNL, London

<sup>9</sup> Kaplan, R.S. and Norton, D.P. (1996), *The Balanced Scorecard: Translating strategy into action*, Boston, Mass., Harvard Business School Press

concept ‘translates’ the planning perspective of an institution (its mission, strategic vision and goals) into a system of objectives and measures, following four ‘balanced’ perspectives:

- Finances
- Customers
- Internal processes
- Learning and growth.

By focusing not only on financial perspective, but also on the human issues (users, staff), the BSC helps to achieve a more comprehensive view of an institution. The system integrates financial and non-financial data, input and output data, the external perspective (funding institutions, users) and the internal perspective (processes, staff), goals and measures taken, causes and results.

Implementing Balanced Scorecards would typically follow this process:

1. Starting with the vision (mission), the strategy is developed: What are the main tasks and goals?
2. Within the four perspectives, ‘critical success factors’ are defined: What is most important for reaching the goals?
3. Based on the critical success factors, ‘key performance indicators’ are selected.

Example:

- The vision is: The library is the main meeting and communication centre in the community or university
- The perspective is: Customers (users).
- The goal is: To attract the population to the library premises.
- Critical success factors could be: opening times, adequate space and equipment for working in the library.
- Key performance indicators:
  - o Square meters of user area per 1,000 capita
  - o Number of workplaces per 1,000 capita
  - o Opening times compared to user demand

The key performance indicators for a library’s BSC should of course be related to the vision, goals and critical success factors. With the help of these indicators, it should be possible to measure the success in reaching the strategic goals. Ideally, there should also be a mutual influence between the indicators of different perspectives.

Examples:

- The indicator counting the amount of training per staff member measures whether staff are well trained and competent. It will probably influence indicators in the perspective ‘processes’ and ‘use’: Competent staff will produce better services and thus influence the amount of usage.

- Indicators showing high use of libraries will influence cost-efficiency in the perspective ‘finances’.

The BSC will function best with only a few well chosen indicators, generally not more than 20. That does not mean that a library (or a group of libraries) cannot use many other indicators beside the ‘key’ ones, if it is necessary in order to evaluate specified services. In a library with greatly differing tasks (e.g. acting both as public library and school library), several scorecards might be used for the different goals.

## BSC FOR LIBRARIES

The four perspectives of the original BSC are no must. They represent the normal view of commercial institutions. The strength of the BSC is that it is flexible and can be adapted to various institutions and organisations. There can be other perspectives than the original ones, e.g. a perspective named ‘cooperation’ or ‘partner management’.

A model with slightly changed perspectives, adapted to libraries, is used in the standard ISO 11620 and in the IFLA handbook. It places not the financial, but the user perspective foremost, as libraries do not strive for maximum gain, but for best service. The structure is:

1. Resources, access and infrastructure (What services does the library offer for use?)
2. Use (How are the services accepted?)
3. Efficiency (Are the services offered cost-effectively, are processes well organised?)
4. Potentials and development (Is the library able to learn and develop?)

Other models used in libraries have no separate perspective for ‘resources’, but two perspectives for finances and internal processes<sup>10</sup>:

1. User perspective (customer service)
2. Internal process perspective
3. Financial perspective
4. Learning and growth

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<sup>10</sup> University of Virginia Library, *Balanced scorecard at UVa Library*, available at: <http://www.lib.virginia.edu/bsc/index.html>; Library Services at the University of Hull, *Balanced scorecard for library services*, available at: [http://www.hull.ac.uk/lib/using\\_our\\_libraries/performance/balanced\\_scorecard/index.html](http://www.hull.ac.uk/lib/using_our_libraries/performance/balanced_scorecard/index.html)

It does perhaps not matter so very much whether processes are merged with finances, or whether resources and use are seen as separate issues. The main point for the 4 (or 5) perspectives is, that they must indeed cover all points of view, and their main advantage is, that they help to get a 'balanced' picture of the institution, where financial, organisational and user-oriented issues are all represented.

The most interesting perspective is certainly the fourth one, whether called 'learning and growth', or 'potentials and development'. Everybody would probably think of the financial and the customer view, but the small number of performance indicators that library projects have as yet found for the development perspective shows, that this was actually quite a new idea for libraries. And yet it seems to be the most important perspective in times of constant change. It looks to the intangible assets of an organisation, especially on internal skills and capabilities that are necessary for development. Effective information management would be counted here, and the overall climate in an organisation.

Libraries have as yet found only one indicator in this perspective on which all agree: The time spent on staff training. Other indicators measure for instance the library's engagement in new electronic services or its success in gaining additional resources for development. More indicators will follow.

The main criticism on the BSC seems to be that it is too simple and not even necessary. Every organisation has to define its vision and goals anyway, so why could they not add adequate performance indicators?

The advantage of using a BSC is that all important perspectives for quality are considered, that each perspective with its goals is evaluated by adequate performance indicators, and that those indicators are related in a systematic way. The BSC is an instrument for an integrated view of the institution's quality and for continuous assessment of how far targets have been reached.

## **BSC FOR THE NEW GLOBAL STATISTICS?**

The new statistics that are presented at this conference include only a limited number of data in order to make them practical and easy to use. But quite a number of performance indicators can be calculated with these data, especially in combination with socio-demographic data collected by UNESCO. 76 indicators were calculated with the existing data during the project, of which 23 were defined as core indicators.

Could such indicators, assessing library quality on a national scale, be presented in the form of a BSC?

The following tables use the core indicators. Some of the other indicators have been added for filling up the perspectives (in italics).



**PUBLIC LIBRARIES**

<b>Resources</b>	<ol style="list-style-type: none"> <li>1. Average number of public libraries per 1,000 inhabitants</li> <li>2. Weighted average opening hours</li> <li>3. Percentage of libraries offering an internet access for users</li> <li>4. Percentage of libraries offering websites</li> <li>5. Average number of volumes in public libraries per 1,000 inhabitants</li> <li>6. Average number of volumes per 1,000 literate inhabitants</li> <li>7. Average number of employees in public libraries</li> </ol>
<b>Usage</b>	<ol style="list-style-type: none"> <li>1. Number of registered users per 1,000 inhabitants</li> <li>2. Number of registered users per 1,000 literate inhabitants</li> <li>3. Average number of loans per 1000 inhabitants</li> <li>4. Average number of loans per 1,000 literate inhabitants</li> <li>5. Number of visits per 1,000 inhabitants</li> <li>6. Number of visits per 1,000 literate inhabitants</li> </ol>
<b>Finances</b>	<ol style="list-style-type: none"> <li>1. Expenditure on literature and information per capita</li> <li>2. <i>Ratio of expenditure on literature and information to staff costs</i></li> <li>3. <i>Cost per visit</i></li> <li>4. <i>Cost per registered user</i></li> </ol>
<b>Learning and development</b>	-----

**ACADEMIC LIBRARIES**

<b>Resources</b>	<ol style="list-style-type: none"> <li>1. Weighted average opening hours</li> <li>2. Average number of volumes in libraries per student</li> <li>3. <i>Average number of workplaces per 1,000 students</i></li> <li>4. <i>Average number of electronic serials (subscriptions)</i></li> <li>5. Average number of employees in libraries</li> </ol>
<b>Usage</b>	<ol style="list-style-type: none"> <li>1. Number of registered users as a percentage of number of students</li> <li>2. Average number of loans per student</li> <li>3. Number of visits per student</li> <li>4. <i>Number of attendances at training sessions per student</i></li> <li>5. <i>Average number of content units downloaded per registered user</i></li> </ol>
<b>Finances</b>	<ol style="list-style-type: none"> <li>1. Expenditure on literature and information per student</li> <li>2. <i>Ratio of expenditure on literature and information to staff costs</i></li> <li>3. <i>Cost per visit</i></li> <li>4. <i>Cost per registered user</i></li> </ol>
<b>Learning and development</b>	-----

The tables show that the last perspective, measuring the libraries' potentials for learning and development, cannot be filled with indicators that are calculated with the new statistics.

But 'learning and development' could be replaced by a new perspective 'impact and outcome', meaning the benefit of libraries for the population. This perspective can be seen as crucial in an international overview of libraries and could, even now, be filled up with performance indicators in the sector of public libraries: Setting data in relation not to the whole population, but to those inhabitants that are literate, may help to identify correlations between library use and literacy.

Examples:

- Average number of volumes per 1,000 literate inhabitants
- Number of registered users per 1,000 literate inhabitants
- Average number of loans per 1,000 literate inhabitants
- Number of visits per 1,000 literate inhabitants

The idea is that a higher number of public libraries, their collections and services, and a high amount of library use may have influenced the percentage of literate inhabitants in a country. But it would be problematic to identify similar indicators for academic libraries within the new statistics.