

BIX – the Library Index

Basic information in English – Working Paper

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1 Background

Libraries operate in an environment characterized by rapid technological, social and political change, growing customer needs and financial challenges. Under these conditions, they need flexible and sensitive management tools that allow measurement and evaluation of library services and report changes in the provision and use of library services. They should also promote a constructive, strategic dialog among decision-makers within the libraries, the administration and government, as the new methods of public and university management, that provide more flexibility for library management, also mean more responsibility, transparency and accountability for the resources spent in libraries.

„BIX- the library index“, a benchmarking project to measure the performance of public libraries, was launched in October 1999 by the Bertelsmann Foundation and the German Library Association (DBV). Over 260 libraries of all sizes have decided to participate in the project over the last eleven years. After a successful run for public libraries during the first three years, the project was expanded to include academic libraries in 2002. The Project was funded and organized by the Bertelsmann Foundation from 1999 to 2005, when the developing phase was considered accomplished and the BIX was transferred to the responsibility of the German Library Association.

Note: the name “BIX” is a play on the word “DAX”, which is the name of the index for German industry shares at the stock exchange.

The BIX-project for public libraries was preceded by a similar project dating back to the early 1990s that provided an elaborate and intensive study of library performance data on a smaller scale. The BIX-methodology strongly relied on the results of this project, but delivers a more condensed benchmarking tool, which serves public libraries both as a basis for external discussion – with administrative and political decision-makers and with the general public – and as an aid for setting internal goals.

2 Project Goals

The goal of the BIX Library index is to effectively describe the performance of both public and academic libraries and to contribute to improving communication among libraries, their funders and the policymakers through transparency of services. Several core indicators are accumulated into a ranked index that represents the performance of the participating libraries.

Though cumulating into a very condensed result – the ranking itself -, the BIX offers participating libraries a broad basis for comparison. A benchmarking-type orientation based on the principle of best practice makes it possible to initiate discussion and decision-making processes and thereby improve the communication between libraries and their funders through a transparent presentation of performance.

3 Scope of membership

All German libraries, regardless of their size, can take part in the annual library comparison. In the field of academic libraries, the focus is on universities and universities for applied sciences. They are ranked separately by type (one- or two-layered university libraries and libraries of universities of applied sciences). Public libraries are divided into categories of size (by inhabitants of their municipality) and ranked separately within these categories in order to preserve comparability.

It is voluntary for libraries to participate in the BIX. This is important for the acceptance of the project within the library community and ensures reliable data and persistent interest in the results. The BIX is the only project that allows comparisons of performance on a nationwide level.

4 Administration and Funding

Since July 2005, the BIX is organized by a network of partners within the Library Network of Expertise (KNB). Funding is provided by the participating libraries via an annual fee of 170 Euros per library. This is only possible because the developing work was funded by the Bertelsmann Foundation. To develop a similar instrument from scrap will not be possible without basic funding by an institution. However, the annual fee, which was imposed from the very beginning, proved to be the basis for continuing the project after the basic funding had terminated.

In the initial phase of the project, two steering committees were responsible for the strategic development of the BIX for Public and academic libraries respectively. These

two groups have now been merged into one committee that is assisted by smaller working groups that deal with methodological details.

5 Publication of Results

The Publication of the results is an important feature of the BIX. The BIX-results are at the core of the "BIX-magazine", an attractive, colourful publication that includes interviews with well-known German personalities, articles on current issues in librarianship and portraits of the "winner"-libraries. The target audience of the BIX-magazine are, apart from librarians, politicians, the press and other decision-makers and non-librarians, who are, or should be, interested in libraries. The aim is to raise awareness of libraries and to give a more sensual, verbal and anecdotal context to the pure BIX-data.

The results are also available online via the BIX-website, which not only offers general information on the BIX and technical information for participating libraries, but also an interactive database of the current BIX-data and results (www.bix-bibliotheksindex.de).

6 Methodology

Data gathered in the preceding project „Comparative Study of Public Libraries“ was used for a secondary analysis by infas (institute for applied social research, one of the oldest social research institutions in Germany) and taken as the basis both for the selection of statistically relevant indicators and the mathematical weighting of these indicators in the BIX. Infas also developed the statistical and mathematical tools that generate the ranking itself. It is strongly recommended to consult experts on statistics and mathematics when developing the mathematical routines for calculating the index. Further information is available on request.

The BIX methodology is related to the concept of the „Balanced Scorecard“, i.e. it provides data on four different "dimensions" and thus allows an in-depth view on the performance of each library (see dimensions and indicators below).

All data delivered by the libraries is being tested and verified both mathematically and intellectually by experts for library data and performance measurement. This is a vital part of the BIX, as mistakes and misunderstandings can happen everywhere, and the plausibility of the data is crucial to the results and the acceptance of the index. It is recommended to employ different experts for the different types of libraries (public and academic), as experience in the field proves to be the best aid for plausibility testing.

Libraries input their data directly into a database via an online-tool. No hardcopy questionnaires are being issued and sent back. The majority of data necessary for the BIX is also required for the national library statistics, which reduces additional workload for the libraries. The transfer of data between databases, plausibility check, administration and the editors of the BIX-magazine requires some consideration and work.

7 Schedule

The timeframe for the BIX is scheduled as follows:

- January – 15th of February: data input by public libraries
- January – 31st of March: data input by academic libraries
- February – April: Plausibility checks, communication and corrections
- End of April: Index-calculation: first run – checked by libraries
- Middle of May: Index-calculation: second run with revised data. Final results to libraries, for them to prepare press releases and argumentation
- End of June: Publication of BIX-magazine

8 BIX-Indicators for public libraries

The target dimensions for public libraries are:

<p>Resources (Task Fulfillment) (Quantity)</p> <ul style="list-style-type: none"> ▪ Collection units per capita ▪ User area in sqm per 1,000 capita ▪ Employees per 1,000 capita ▪ Computer services in hours per capita ▪ Internet services ▪ events per 1,000 capita 	<p>Customer Focus (Quality)</p> <ul style="list-style-type: none"> ▪ Number of visits per capita ▪ Loans per capita ▪ Turnover rate ▪ Total Opening hours per year per 1,000 capita
<p>Efficiency</p> <ul style="list-style-type: none"> ▪ Acquisitions budget per loan ▪ Employee hours per opening hour ▪ Visits per opening hour ▪ Current Expenditure per visit 	<p>Development Focus</p> <ul style="list-style-type: none"> ▪ Renewal rate ▪ Advanced training per employee ▪ Capital investment per capita

Note: the indicators are listed in exactly the same order in which they appear in the tables of results in the BIX-magazine. This allows to match the translation with the tables and to “understand” the results although they are not available in English.

Note: the exact definitions and complete explanatory notes of the BIX-data for public libraries are currently only available in German.

Note: Indicators are weighted according to their importance for customers by factors given in brackets.

8.1. Target dimension: Resources (task fulfilment)

Collection units per capita (1,0): includes all items in the library including periodicals and reference stock. Not included are closed stock items and special collections. The number of residents is derived from the official statistics of 31.12. each year.
Number of items in stock (excluding closed stocks) / capita

User floor space in sqm per 1000 capita (0,5): this includes all spaces accessible by the public, including halls, stairways, lobbies and functional rooms.
*user floor space / capita *1000*

Employees per 1000 capita (1,0): this includes not only permanent employees, but also temporary staff, volunteers, internships etc. Employees are counted in Full Time Equivalents.

*Number of employees in FTE / capita *1000*

Computer services in hours per capita (0,5): this accumulates the total number of hours per year, during which computers are at the disposal of the public. This includes OPACs, Internet-PCs, workstations etc.

*Actual opening hours in all service points * number of computers available during these hours / capita*

Internet services (0,5): this index sums up various services the library offers via the internet: own homepage, OPAC accessible via the internet, interactive account management, electronic reference services (e.g. via e-mail), electronic materials and pro-active information services (e.g. newsletter)

Number of these services available

Events per 1000 capita (0,5): this index points at the various types of events that are an important part of the cultural and educational work of libraries, e.g. guided tours, public readings, exhibitions, library soirees etc.

*Number of events per year / capita * 1000*

8.2 Target dimension: Customer Focus

Library Visits per capita (1,5): counts the number of visits for borrowing materials, use library services or take part in activities and guided tours

Total library visits / capita

Loans per capita (1,0): this counts all materials borrowed, including renewals.

Variations in lending time are not taken into account

Loans and renewals / capita

Stock turnover rate (1,5): counts the amount of loans per item per year

Number of loans and renewals / number of stock (excluding closed stocks)

Total Opening hours per year per 1000 capita (1,0): this states the actual number of opening hours in the current year of the library system including all branches.

Total Number of (planned) opening hours per week / number of service points

Number of Service-Points: This number is not included in the index but given as additional information

8.3 Target dimension: Efficiency

Acquisitions budget per loan (in Euros) (-0,5): this includes the budget actually spent on new materials, including binding, cataloguing data or licences. This indicator shows the relation between the expenditure on stock and the usage of stock.

Acquisitions budget / no. of loans incl. renewals

Employee hours per opening hour (-0,5): states the relation between the total amount of employee time available (including sick leave and holidays) and the total amount of opening hours per year. All types of employees are included (full-, and part time staff, temporary and permanent staff, volunteers, professional and non-professional staff). Not included are staff working for property management (janitors, cleaners etc.)

*Total no. of employee hours/year / total number of **actual** opening hours in all service points during one year*

Visits per opening hour (0,5): shows the average number of visits during one opening hour and how many visitor make use of the library.

Total no of visits / total number of actual opening hours in all service points during one year

Current expenditure per visit (-0,5): shows the relation between the current expenditure spent on the library (without one-off capital investments), and library use in total. Includes actual expenditure on staff, materials and other current costs. Not included are imputed costs, rents, and expenditure for staff working for property management (janitors, cleaners etc.)

Current library expenditure / total no of visits

8.4 Target Dimension: Development Focus

Renewal rate (1,5): the rate of stock exchanged by acquisitions and weeding.

(Number of items in stock – items removed + items added) / number of items in stock

Advanced training per employee (0,2): states the rate of employee time spent on training, education both in and outside the library, and conference visits

Total no. of hours spent on training / Total no. of employee hours/year

Capital investment per capita (0,2): expenditure on building, furniture, maintenance, technical equipment etc. *(capital investment / capital)*

9 BIX-Indicators for academic libraries

Note: the indicators are listed below in exactly the same order in which they appear in the tables of results in the BIX-magazine. This allows to match the translation with the tables and to “understand” the results although they are not available in English.

Note: Full details and explanatory notes are available in English

Note: Indicators for academic libraries are NOT weighted.

<p>Resources/Infrastructure</p> <ul style="list-style-type: none"> ▪ User area in sqm per 1,000 members of the primary user group ▪ Employees per 1,000 members of the primary user group ▪ Expenditures on literature and information per 1,000 members of the primary user group ▪ Percentage of Expenditure for Information Provision spent on the electronic Collection ▪ Opening hours per week 	<p>Usage</p> <ul style="list-style-type: none"> ▪ Library visits per capita of the primary user group <ul style="list-style-type: none"> a: physical b: virtual (COUNTER-based, centralized measurement) ▪ User training participants per 1,000 members of the primary user group ▪ Immediate media availability (immediate loans as a percentage of total loans, including reservations/loans) ▪ User satisfaction rate (not yet used)
<p>Efficiency</p> <ul style="list-style-type: none"> ▪ Library expenditure per Capita (= active borrowers) ▪ Ratio of acquisition expenditures to staff costs ▪ Workflow productivity (sample: media processing) ▪ Workflow productivity (sample: loans and interlibrary loans) 	<p>Development</p> <ul style="list-style-type: none"> ▪ Staff training (days) ▪ Percentage of university means allocated to the library ▪ Percentage of library means received through third-party funds and special funds ▪ Percentage of library staff providing and developing electronic services

Indicators for BIX - Academic Libraries

- translated by Dr. Roswitha Poll

1. Aspect: Resources / Infrastructure

Which infrastructure does the library offer for its usage?

Indicators	Data	Explanatory note
1.1 Sqm of User Area per 1000 Members of the Primary User Group	a = user area in sqm b = members of primary user group *1,000	Includes reading and working area for users, floor space for reference and user training services, open shelves area, area for PC working places; office area for staff involved in user services; exhibition area members of the university = enrolled students and FTE of academic staff
1.2 Library Employees per 1000 Members of the Primary User Group	a = number of employees (FTE) b = identical to indicator 1.1 (b)	Includes student assistants and project-related employees
1.3 Expenditure on Literature and Information per 1000 Members of the Primary User Group	a = acquisition expenditure, including licenses, binding and pay-per-view costs b = identical to indicator 1.1 (b)	All expenses during the reporting year in full €. If databases or electronic serials are financed within a consortium or partially by central funding, only the library's own expenditure should be counted.
1.4 Percentage of Expenditure for Information Provision Spent on the Electronic Collection	a = expenditure on the acquisition of electronic media (including licenses and pay-per-view costs) b = total acquisition expenditure, including licenses and pay-per-view costs (without binding)	If databases or electronic serials are financed within a consortium or partially by central funding, only the library's own expenditure should be counted Expenditure for binding is excluded.
1.5 Opening Hours per Week	a = number of regular opening hours per week in the central library	If the library has departments with different opening times, the longest time is counted. If opening times have been changed during the reporting year, the opening times at the end of the year are counted.

2. Aspect: Usage

How are the offered services used?

Indicators	Data	Explanatory notes
<p>2.1 A. Library Visits per Capita (Primary User Group)</p> <p>2.1. B. Virtual visits per Capita</p>	<p>a = physical visits (entering the library premises)</p> <p>b = virtual visits (visits to the library website)</p> <p>c = members of the primary user group</p>	<p>Number of visits made by persons to the library premises annually. This may be counted at either entrance or exit by turnstile count, electronic counter, or manual count.</p> <p>Any of these methods, but particularly the manual count, may be used for one or more sample time periods and grossed up to give an annual estimate.</p> <p>b:) The method used for the first time in 2007 is a modified version of COUNTER, counting the deliveries of a transparent GIF that is placed on specified pages.</p>
<p>2.2 User Training Participations per 1000 Members of the Primary User Group</p>	<p>a = number of user training participants</p> <p>b = identical to indicator 1.1 (b)</p>	<p>Number of hours where library staff have conducted formal training or guided tours for users.</p>
<p>2.3 Immediate Availability (Immediate Loans as a Percentage of the Total Number of Loans, including Reservations and ILL)</p>	<p>a = number of loans (without renewals) minus the number of reservations</p> <p>b = total number of loans (without renewals) plus borrowing ILL *100</p>	
<p>2.4 User Satisfaction Rate</p>	<p>a = satisfaction with the library services</p>	<p>Not yet used</p>

3. Aspect: Efficiency

Are services offered cost-effectively?

Indicators	Data	Explanatory note
3.1 Library Expenditure per active user	<p>a = overall expenditure of the library without capital expenditure</p> <p>b = number of registered active borrowers</p>	<p>This includes expenditure on employees, rent, acquisitions and licensing, binding, computer network (operations and maintenance), telecommunication, building maintenance, repair or replacement of existing furnishings and equipment, etc.</p> <p>Capital expenditure - expenditure on building sites, new buildings and extensions, furnishings and equipment for new and expanded buildings, computer systems (hardware and software), etc - is excluded.</p> <p>Only active borrowers of the primary population</p>
3.2 Ratio of Acquisition Expenditure to Staff Costs	<p>a = expenditure on literature and information (identical to indicator 1.3 (a))</p> <p>b = expenditure on regular staff (staff in the position chart *100)</p>	<p>Staff paid by special grants and student helps are excluded. If the actual expenditure cannot be calculated, average rates can be used.</p>
3.3 Workflow Productivity (Example: Media Processing)	<p>a = number of acquired media (all types)</p> <p>b = number of employees (FTE) involved in media processing</p>	<p>For electronic periodicals and newspapers, an annual subscription is counted as one volume.</p> <p>FTE of staff involved in acquisition and cataloguing (including periodicals, but excluding retrospective cataloguing). Consider temporary and permanent staff, as well as project staff. Because employees are sometimes involved in several tasks, the time they spend on each task should be logged during a representative period. If time logging is not possible, this proportion can, instead, be estimated.</p>

<p>3.4 Workflow Productivity (Example: Loans and Interlibrary Loans)</p>	<p>a = number of loans, number of interlibrary loans (active and passive)</p> <p>b = number of employees (FTE) involved in loan, interlibrary loan and document supply (without document supplies within the campus)</p>	<p>FTE of staff involved in loan and interlibrary loan (excluding document supplies within the campus). Consider temporary and permanent staff, as well as project staff. Because employees are sometimes involved in several tasks, the time they spend on each task should be logged during a representative period. If time logging is not possible, this proportion can, instead, be estimated.</p>
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4. Aspect: Development

Is sufficient potential available for the necessary developments?

Indicators	Data	Explanatory note
4.1 Days of Staff Training	<p>a = number of days, in which employees in the position chart attended preplanned group trainings</p> <p>b = number of employees (FTE) in the position chart</p>	<p>Training can be inside or outside the library premises. Count the hours of duration of the training lessons and calculate the days.</p> <p>3 staff members attending a 1 hour training would then be 3 hours = 3/7,7 or 3/8 days according to regular working time.</p>
4.2 Percentage of University Means allocated to the Library	<p>a = means of the library allocated by the funding institution</p> <p>b = means of the university, excluding third-party funds *100</p>	<p>All funds received from the university or the responsible ministry, including acquisition, material, and staff costs, capital expenditure, and one-time funds. Third-party funds, special grants, and income generated by the library are excluded.</p> <p>The whole budget of the university of one year, but without third party funds and without remainder of the previous year.</p>
4.3 Percentage of Library Means Received through Third-Party Funds and Special Funds	<p>a = income generated by the library, third-party funds, and special grants, including those means for capital expenditure that were not paid by the university or responsible ministry</p> <p>b = overall means of the library, including means for capital expenditure *100</p>	<p>Income generated includes income from fees, document delivery services, sales, advertisements, sponsoring, donations etc. that is available to the library for expenditure.</p>
4.4 Percentage of Library Staff Providing and Developing Electronic Services	<p>a = number of library staff (FTE) planning, developing, providing, and maintaining electronic services</p> <p>b = total number of library staff (FTE) *100</p>	<p>library staff (FTE) planning, maintaining, providing and developing IT services and technically developing and improving the library's electronic services.</p> <p>Staff in information and help services, in user training dealing with electronic library services, and in content-related work on the library's Internet services is excluded.</p>