ABSTRACT
85 academic libraries from four countries and more than 170 public libraries have participated in the 2008 iteration of the Bibliotheksindex (BIX), a voluntary multi-level strategic benchmarking/ranking hosted and organized by the German Library Foundation.

The start of systematic benchmarking in German libraries dates back into the early 1990s; initial projects were substantially driven by the Bertelsmann Foundation. Findings from these early initiatives resulted in the design of a nationwide statistical benchmarking instrument for public libraries which was established in 1999. Based on evidence from benchmarking and ranking initiatives on an international scale, an instrument for academic libraries was developed in 2004. Following the conceptual principles of the “Balanced Scorecard” approach, the Index currently processes data from – depending on library type – 15 to 17 widely tested and communicable indicators in four strategic perspectives.

After providing an insight into the conceptual framework of the BIX, the paper pinpoints improvements in the set of indicators, discusses the perception and acceptance of the instrument among libraries and highlights perspectives for further development.

DEVELOPMENT

German public libraries have a long tradition of measuring and comparing their performance. As one crucial stimulus for this tradition, Klug (2003) states a paper by Nick Moore in which he stressed the demand for ‘easily applied measures that can be implemented at relatively low cost by busy librarians’.

The first joint effort in testing, implementing and developing performance measures was marked in 1992 when the Bertelsmann Foundation initiated an extensive five year inter-library comparison study with 18 public libraries (Pröhl/Windau 1997a, 1997b). The project was based on the perception that inter-institutional comparisons could substitute the lack of competition in the public sector and be suitable as catalysts for continuous improvement. Based on the outcome of this pilot study, the Bertelsmann Foundation decided to launch, in partnership with the German Library Association (dbv), a consecutive project in order to introduce a nationwide benchmarking instrument for public libraries. The name chosen – BIX, a short form of Bibliotheksindex – bears a reference to DAX, the stock exchange
index that monitors the performance of the top 30 German enterprises. Through this analogy, the name illustrates that the instrument publishes a performance index for participating libraries in regular intervals. In 2002, the Bibliotheksindex was extended to cover academic libraries; their first ranking was published two years later. The project term officially ended in 2005. Managed by the newly founded Competence Network for Libraries (KNB), the Bibliotheksindex is continued as a cooperative activity on the participating libraries’ account. Compared to other benchmarking and ranking initiatives on a national level, the annual publication of all results in print and electronic form remains a unique feature (Poll 2007).

MANAGEMENT AND SUPPORT STRUCTURE

The KNB coordinates a complex network of partners with shared responsibilities in order to perform national and inter-regional tasks and duties for libraries. Regarding BIX, the KNB cooperates with the following partners:

- The Hochschulbibliothekszentrum Nordrhein-Westfalen (hbz) in Cologne, a regional library service centre which hosts the German Library Statistics (DBS) and the BIX database;
- the Institute for Applied Social Sciences (inas) in Bonn, a social research institute which originally constructed and validated the statistical instrument behind the BIX and nowadays compiles and processes the annual index scores;
- the Institute for Library Management, Evaluation and Organizational Development (BEO) at Stuttgart Media University which conducts the measurement of virtual library usage;
- B.I.T. Online, a German Library and Information Science journal whose editors publish the annual BIX magazine and
- the Bertelsmann Foundation in Gütersloh, the originator and driving force behind the BIX and its predecessors who nowadays acts as an affiliated consultant.

The strategic development is being supervised by a steering committee which represents funding bodies, professional associations and experts with a methodological and practical background.

PARTICIPATION

All libraries participate is on a voluntary basis. Public libraries are grouped in five size categories according to population figures. The participation fee is about 180 Euros per year regardless of size.
In 2008, a total of 170 public libraries have taken part in the Bibliotheksindex. Since 2000, more than 300 public libraries have joined – more than half of them used the instrument at least every second year and 52 of them each year (Wimmer 2008). A selectivity analysis performed by infas in 2004 showed that those libraries participating in the Bibliotheksindex tend to perform significantly better than the average public library.

![Figure 1: Frequency of participation (N = 308)](image)

**THE BIX SCORECARD**

The Bibliotheksindex is constructed as a multi-dimensional ranking; it assigns three to five indicators to each of the four target dimensions (see Figure 1):

- The 'Resources/task fulfillment' dimension asks what resources and infrastructure the library has at its disposal to provide services to users;
- the 'Customer focus' dimension shows to what extent the library services are used;
- the 'Efficiency' dimension shows to what degree the library provides its services cost-effectively;
- the 'Development' dimension asks if the library has sufficient potential for development; it replaced the former ‘Employee focus’ in 2008.
The selection of measures for public libraries was based on previous experience from the Bertelsmann projects. A secondary analysis of all statistical data and indicators was conducted by infas in order to identify those indicators which had the highest significance for the defined target dimensions. The choice of indicators was finalized in discussions with stakeholders.

Three constructional elements were regarded as essential:

- The aim was to develop a system which was based upon few measures and remained straightforward and manageable for library professionals and non-professionals alike; in fact, out of the 25 basic data which libraries need to report, only five have to be collected specifically for the Bibliotheksindex;
- the set of performance measures should provide qualitative management information at the strategic level rather than simple in- and output quantities or detailed information on specific services, e.g. compare the collection turnover for children’s literature between several branch libraries. Following the principles of a Balanced Scorecard, the instrument should therefore be limited to a maximum of 15 to 20 core indicators in order to be presentable and communicable to funding institutions;
- The scorecard should be identical for libraries of the same type in order to allow and encourage comparisons, and should be focused on core library functions. While the scorecard was kept open for necessary updates and changes, the indicators should generally represent continuing services.

![Figure 2: The BIX scorecard](image)

The indicator scores of each library are normalized against the mean of the size category, then weighted and transformed into an index score (and rank) for each
dimension. In a second step, the four dimension scores are compiled into one overall index score. Finally, the libraries within each category are ranked against their overall and dimension index scores.

A data collection manual (BIX 2008) in German language has been published on the BIX website in order to support participants in collecting and reporting the data according to BIX standards, and to inform interested parties about the methodology and requirements of participation. Furthermore, as the ranking is highly competitive – it is used as an evidential basis for negotiations and quality management – the quality control of BIX data is carried out in an elaborate procedure involving up to seven steps.

From a statistical perspective, the indicator weights (in squared brackets, absolute values between 0.2 and 1.5) were derived from previous inter-library comparison data. In the first place, however, the weights represent political considerations: Indicators in the dimensions ‘Customer Focus’ and ‘Resources (task fulfilment)’ have been assigned a higher average weight, i.e. they are intended to affect the overall result to a higher extent than indicators in the target dimensions ‘Efficiency’ and ‘Development’. Negative weights indicate an indirect interrelation: in ‘Acquisitions budget per loan’, ‘Operating expenditure per library visit’ and ‘Total staff working hours per opening hour’, a lower score indicates better performance. The interpretation of ‘negative’ results, however, is not always unambiguous in general terms: A comparably low acquisitions budget per loan clearly points at a need for improvement but could also mean that the budget is at a comparably high level but too low to meet the high demand for the library’s collection.

In many cases, dimension ranks are very useful to highlight relative strengths and weaknesses. They always need to be interpreted in the overall context, however: A good efficiency rank might have its origins in below par resources which in turn might result in a poor customer focus rank. Reversely, a high rank in ‘Resources/Task fulfillment’ and ‘Customer focus’ is typically connected to a lower rank in ‘Efficiency’. For detailed comparisons, the actual scores are recommended because ranks may suggest differences that are not statistically significant and even improved indicator scores can result in a lower rank if the library cluster has changed its composition from one year to another.

Definitions and counting procedures are optimized and adjusted against relevant standards (e.g. ISO 2008) in routine intervals. Major revisions of the instrument are generally decided upon the results of a trial run. A few measures have not been integrated in the instrument yet due to persistent methodological issues – for example, financial indicators like a revenue-to-cost ratio or a measure on funds self-generated by the library are kept in ‘hold’ status because many libraries still have limited insight into their budgeting, and not all forms of fiscal accounting in libraries can be harmonized with each other.

Two performance indicators meet the increasing demand to measure the provision of virtual library services: The number of PC workstation hours per capita indicates the supply of technical infrastructure while the summation score ‘Internet
services’ counts the existence of defined web-based services functions, e.g. a homepage, a Web OPAC and several other informative and interactive functions on a 7 point scale. For a new indicator ‘virtual library visits per member of the population’, a standardized pixel count is placed on representative pages of the participating libraries’ websites. In lack of an overall measure for the use of the electronic collection, this measure indicates the usage of a library’s web-based services. It has been introduced for academic libraries in 2007 and is currently being tested for public libraries. Furthermore, in order to meet the request for a customer satisfaction measure, a standardized, straightforward user survey is in the planning stage.

PUBLICITY

The most visible and tangible result of the Bibliotheksindex is the BIX Magazine, a full colour periodical publication of 80+ pages with a circulation of 4,000 copies which is issued once a year in June. A substantial part of the circulation is deliberately sent or handed out to politicians, administrative bodies, the media and other target groups with assumed interest in the results in order to attract their attention for libraries and their work. The magazine contents and layout is tailored to attract the attention of these stakeholders: Each year, a person of public interest – including ministers, popular TV newpersons or writers – is interviewed for the cover feature. The complete ranking and the scores of all participating libraries inside are enriched with explanatory texts, winning libraries’ profiles, articles and stories on best practice and other innovative and newsworthy topics in order to create a rich and vivid image of libraries. In addition to the magazine, the BIX website provides access to all results in an interactive online-database which allows to display detailed profiles and comparative analyses between libraries across all data and years the library has delivered data for.

QUALITY MANAGEMENT

The Bibliotheksindex has increased the awareness and application of quality management methods in public and academic libraries. The Bibliotheksindex does neither interpret and communicate a library’s results nor define standards, deliver a mission statement, strategic vision or management objectives by itself – they have to be developed by library staff. To support and encourage activities, workshops for participants are held at regular intervals.

Over nine respectively five years, a high number of formal and informal initiatives have evolved among BIX participants where BIX data provided a basis for more detailed comparisons (e.g. Staatliche Fachstelle für das öffentliche Büchereiwesen 2001). In a number of cases, BIX participants launched systematic quality
management initiatives. Public libraries in the administrative district of Düsseldorf in North Rhine Westphalia, for example, the most populous German state, have a history of setting up the first regional Inter-library comparison cluster in 1998. Four years later, 16 of these libraries – small, medium and large sized – set up a Quality Management Working Group. In the course of this project, the libraries developed a customer focused process model which integrated the use of inter-library comparisons into their basic quality strategy. Seven of the libraries finally decided to become certified against the ISO 9000 standard. They received an ISO 9001 matrix certificate in 2006. While preparing to renew their award in 2009, the libraries are currently extending the model to feature quality criteria for cooperation with their suppliers and public administration bodies (Bün ing/Klein 2006).

PERSPECTIVES FOR FURTHER DEVELOPMENT

Most of the active participants primarily use the BIX results to communicate their strengths and weaknesses to their funding institutions: Libraries with high scores use them to legitimate their achievements; libraries with less positive results use them to pinpoint deficits. Generally, participation and strategic use of the BIX results include no guarantee for success: Reactions from funding institutions include ignorance, the interdiction to use the results for public relations, general approval but also additional funding and the consent to a new library building (Klug 2003).

After nine years as an instrument and institution, the Bibliotheksindex for public libraries has proven success in putting „libraries on the agenda“, and in encouraging quality initiatives and benchmarking among public and academic libraries. The BIX has become increasingly self-dynamic in that libraries, decision makers and funding institutions impose a strong demand to develop a functioning instrument further and introduce measures on process quality, value, impact and outcome. Despite the demand for progress and innovation, there is clear evidence that „better“ libraries are more likely to take part in the Bibliotheksindex. Furthermore, a study on the application of management instruments in German libraries (Mundt/Vonhof 2007) indicated that 30% of public libraries and 50% of academic libraries claimed that they do not intend to practice any form of institutional comparison in the foreseeable future. The BIX of the future will therefore need to combine methodological progress with a convincing service proposal for future participants; focus groups on this topic are currently being held.

REFERENCES
