

EAHIL Workshop

Implementation of quality systems and certification of biomedical libraries
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THE EVALUATION OF ELECTRONIC RESOURCES AS A STRATEGIC FACTOR IN THE DECISION- MAKING PROCESS: TOOLS, CRITICAL POINTS, FEASIBLE SOLUTIONS

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The progressive evolution of biomedical libraries from a traditional typology towards the new frontiers of a digital and virtual library leads also to a deep change of methods and tools used for the gathering of statistical data, for the analysis of performance results and for the use of electronic resources.

Electronic resources are constantly growing and represent right now the principal (and in some cases) the only way to reach information.

In this scenario measurement and evaluation of library performances and services for users are becoming more and more important in defining the choices to be carried out and the strategies to be followed.

In measurement activity there are many factors that we must consider and also some issues arising from the particular structure and features of surveying tools and of statistical data.

The growth of electronic information has produced a parallel rapid increase in statistical data that can be obtained in an automatic way. Nevertheless this wide availability has not always given rise to a corresponding readability and easiness of interpretation and use of these data. There are some critical points, that we can fundamentally abridge in:

1. A lack of homogeneity and a consequent difficulty in comparing and merging data originated from different sources
2. Difficulty in understanding data due to their excessive quantity and the usage of a non - univocal or standardized terminology

1) The first item emerging from a comparative analysis of statistics originating from different sources is their scant uniformity which can cause the difficulty of overlapping and matching data. The manner of splitting, identifying and aggregating the log files can differ greatly depending on the specific setting carried out on the recording system or the features of platforms that generate them. In practice this means:

- The impossibility to compare data that apply to a specific resource, like e-journals, databases, web sites, but supplied by different publishers or systems
- difficulties in adding statistics concerning the same resource (for example the same journal) reached through different channels, such as publisher web site, consortium mirror site, vendors web site

Moreover, it should be mentioned that not infrequently the statistical data obtained is distorted or not correct because of a bad setting out of survey parameters or lack of corrective filters. A typical case of this sort could be the double click on the "send" key of the keyboard for the same entry counted twice or on the contrary, in a proxy server environment, repeated requests for a document stored in a cache memory that does not reach the server and therefore no statistical entry is recorded in the log file.

2) Often the data involve interpretation difficulties essentially due to:

- the way they are gathered and/or visualized ... but also
- the scant attention given to the use of a controlled terminology that allows to precisely identify the field or the function described.

Often the same item is given a different definition in a number of statistical reports, and therefore not correctly grouped together. In other cases, however, it may occur that the term used to identify an item does not enable a clear limitation of the reference frame, producing a duplication in counting data. Moreover, sometimes the system outputs are very complex and fastidious to read, made more for the computer specialist's use rather

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than the librarian who is the final receiver of the product, and consequently not very useful.

The librarian's need to have tools which are easy to understand and handle at their disposal, has found a corroboration in a desire common to all information vendors (publishers, aggregators, data base producers) to have those same data in order to understand the market trends better and to meet the needs of customers.

On the basis of these remarks, the COUNTER project has been launched, one of the most remarkable and interesting initiatives of recent years. It represents the evolution of results of a working group created in 2000 by representatives of JISCS and several publishing associations (PA – Publisher Association and ALPSP – Association of Learned and Professional Society Publishers) with the brief “to look at developing common standards for the collection and dissemination of vendor-based usage statistics for digital resources”.

COUNTER (**C**ounting **O**nline **U**sage of **N**etworked **E**lectronic **R**esources) was formally launched in March 2002 and became operational in December of the same year with the issuing of the release 1 of a Code of Practice exclusively focused on electronic journals and bibliographic databases and not analyzing other information supports, such as for instance e-books or web sites. Reports have been kept simple and readable in order to facilitate both the understanding of librarians and the data harvesting of publishers, especially of small publishers with limited technical resources.

The highlights of this first release show the important step forward towards clarity, uniformity and simplicity:

- the code contains a controlled list of data elements and used terms; this allows the removal or at least the considerable reduction of the two main risks of statistic surveys already analyzed in point n. 2: i.e. wrong identification and duplicating of data
- only intended usage is recorded and all accidental requests removed as they would spoil a correct data reading (for example all double clicks on a http link within 10 seconds or 30 seconds on a pdf link)
- there are few reports, only 5 in total, 2 for the electronic journals (Journal Report 1: number of successful full-text article requests by month and journal; Journal Report 2: turnaways by month and journal) and 3 for the databases (Database Report 1: total searches and sessions by month and database; Database Report 2: turnaways by month and database; Database Report 3: total searches and sessions by month and service)
- all reports must be delivered at least monthly and provide for a download in an Excel compliant format such as CSV in order to assure an easy process by users.

Evidence of the good quality of this general line is evidenced by the massive support to the code that in 2004 was relied on by more than 30 publishers and aggregators. Up to now Counter compliant statistics may be obtained from all the most important vendors' groups, such as Elsevier, Springer, Wiley, Blackwell, Nature, ACS, Ebsco, Ingenta, Swets and Counter is on the way to becoming a standard “de facto”.

If the Counter project has been an important step towards easy, compatible and credible statistics, this does not mean that all matters have been resolved with the launch of Release 1 of the Code. There are still some critical points such as:

- not all vendors' products or services (of small vendors in particular) are or could be Counter compliant: this has led to assigning the compatibility level to the single product (for example a database) rather than to the vendor/publisher as a whole
- some publishers, even if recognised as Counter compliant, have had problems in adapting statistics to requirements and reliability of achieved results (for example Blackwell in 2004)
- respecting technical requirements is not always sufficient to ensure the full comparability of data and the readability of contents: in some cases (for example Kluwer) an apparent higher data detail does not correspond to a similar accuracy in single items identification.

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The publishing in April 2005 of the draft of the second release of the Code of Practice (the final issue will be in January 2006) has already improved on the first one, especially in the terminology field, thus demonstrating that the project is in continuous development and attentive in following users' advice.

Counter is not the only initiative that can support managing and evaluating activities. We can cite, for example, E-Metrics Project (2003-2004) and the LibQUAL+ programme both of ARL, the Association of Research Libraries, or the Guidelines for statistical measures of usage of web-based resources (2001) of ICOLC, the International Coalition of Library Consortia.

A very important role in achieving level and reliable statistics is carried out by ISO standards. There are two main standards concerning statistics and performance indicators in libraries: n. 2789 of 2003 (Information and Documentation – International Library Statistics) and n. 11620 of 1998 (Information and Documentation – Library Performance Indicators) both by ISO TC46/SC8 – Quality, Statistics and Performance Evaluation. In March 2003 the Technical Report TR 20983 – Performance Indicators for electronic library services was added to these two, which is not a standard but, like any other TR, must be considered a working progress towards a revision and an improvement of existing ISO 11620 and whose contents – 15 new indicators –, where appropriate, will be incorporated in a future version of this standard.

The first standard is a fundamental guide on methods of collecting and reporting library statistics. The third edition was published in 2003, 12 years after the second (1991) and is now already in review phase to identify and overcome problems in its practical application and to adapt it in the light of developments in electronic services. Its goal is “to ensure conformity between countries for those statistical measures that are frequently used” and “to encourage good practice in the use of statistics for the management of library and information services”. The standard is divided in six parts, the most important of which are the third (terms and definitions), where terminology and definitions for each used item are exactly identified and defined, and the sixth (collecting statistical data) that shows fields of application and recommends how each element should be counted. In this last release some annexes were also added, the most relevant concerning “measuring the use of electronic library services”, in which are delineated guidelines and explanations in order to face and solve relevant aspects, such as:

- Issues of measuring the electronic collection
- Issues of measuring use
- Use of electronic services.

Equally important is the 11620 standard on performance indicators that sets criteria for the evaluation of efficiency and effectiveness of library activity and services. The role this standard can carry out in the library management activity is very interesting because in measuring impact and outcomes it allows the analysis of not only the quantity as a mere statistic but also the quality of provided services. There are two basic rules to follow in the application of this standard (see chapter 5.2):

1. “It is important to understand that not all established performance indicators are useful to all libraries” and “the list of indicators... is best seen as a menu of possible performance indicators that could be used in a range of library settings” ... and as a consequence
2. “libraries... will need to decide which indicators are most appropriate to a particular situation. This decision must be made in the light of the mission, goals and objectives of the library”

The standard groups together in a separate list (Annex A) 32 indicators divided into three different categories:

- User Perception (1 indicator)
- Public Services (26 indicators)
- Technical Services (5 indicators)

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Objectives, scopes, definitions and methods of application and computation are illustrated in Annex B for each indicator. An amendment of 2003 has added 5 more indicators.

Here in our short analysis we have underlined how the use of standards and uniform protocols and programmes have a fundamental importance in order to achieve valid and easily comparable results in the automatic statistics field. Nevertheless the single use of these tools is not sufficient to solve the complex issues linked with the surveying and evaluation of library performances and they must be integrated with other supports, such as user surveys, studies on user features, manual gathering of data on paper material and others.

In the same way statistical analysis certainly provides tangible and valid help in decisional processes but they are not the only element to consider in this activity. To verify the use level of a resource, to analyze its cost related to number of users and quantity of log-ins, perhaps are the most relevant elements in benchmarking but they must be supported by other evaluation tools and factors. In this light, other elements beyond the automatic relation cost/benefit will take on importance also, such as:

- the strong interest of the researcher to have at his disposal resources that even if very expensive or of sectorial use are fundamental in developing research in strategic institutional sectors
- the need to maintain library catalogue titles with an historical value and to preserve the integrity of collections
- the duty, if you are partner of a consortium, to maintain or to take responsibility for acquiring information resources of common use.

The general scenario is continuously evolving and new items appear on the horizon, foremost the Open Archives phenomenon, which is bound to produce a deep impact on the way of managing and transmitting scientific information. We are sure that this topic will represent in the very near future an unavoidable landmark for all measuring and evaluating activity and for decision making processes. But that's quite a different story...