

Usage data analysis for supporting decisions in LIS management

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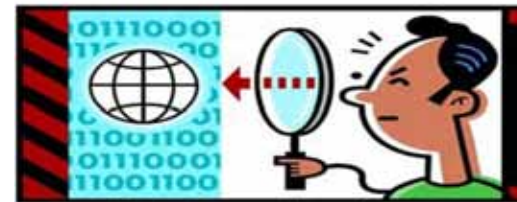
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Library Information Services

- Library and Information Services (LIS) budget is almost totally absorbed by the cost of journals and books, and databases access
- Users have the unreasonable expectation that almost every thing is free online.
- To meet the budget, new journals, books or databases purchase requires the cancellation of other currently received titles or decrease and cancel accesses to databases in use.
- **To face this economic trend and make a better decision, LIS need to know very well their users’:**
 - needs
 - habits
 - preferred titles and databases
 - ways to interact with information.



The methods of usage analysis

- **Reshelving Statistics**
 - Recorded count of journals and books placed back in the shelves
- **Descriptive Statistics**
 - Survey or interview to analyse preferences of users
- **Local Citation Analysis**
 - The journals are ranked by citation counts
- **Impact Factor**
 - It is considered also a tool to evaluate journal use
- **Access Use**
 - Measure of local online journal use derived from transaction log counts (ex. IP address)
- **Publisher reports**
 - Use of e-journals to retrieve, read, and/or download. In case of the e-books the reports give the number of downloaded chapters, whereas for databases reports give users sessions or searches run, viewed pages, alerts and other data (abstract, full text, etc).
- **Reading Factor**
 - Defined as the ratio between the number of electronic consultations of an individual journal and the mean number of electronic consultations of all journals considered.



The methods that analyse costs

- ***The cost-benefit analysis***
 - It assesses journal values, considering several benefit factors including coverage, impact factor, use, location, and inter-library loan requests, as well as subscription cost.
- ***Return of Investment (ROI)***
 - Quantitative measurements include time saved by library users; the money users save by using the library instead of alternative sources; and revenue generated with the assistance of the library.
 - Qualitative measures include the reliance of users on library-supplied content and services for decision-making; another key qualitative value metric revolves around the importance of information provided by the library that the user would not have found or had access to without the library's intermediation.



The tools to analyse use

- **ERM (Electronic Resource Management)**
 - It is a service, powered by SwetsWise. It gives the possibility to analyse the cost per use of subscriptions, pay-per-view and document delivery analysis.
- **EBSCONET Usage Consolidation**
 - It is an EBSCONET tool that allows combining usage from content providers with other statistics. It is possible to leverage cost and other data to further analyse collection.
- **JUR (Journal Use Reports)**
 - It is a Thomson Reuters product. It analyses usage by citations, usage or both. It integrates user activity with researcher output to see how their library collection is contributing to academic output.
- **JURO (Journal Usage Report Online)**
 - It is an open source software that enables libraries to capture journal usage from different sources: usage reports of vendors and in-house journal statistics, or imported from any other system. It generates different usage reports based on the user preferences.
- **360 Counter**
 - It is a Serials Solutions product. 360 Counter analyses usage data received from reports. It gives automated cost-per-use calculation and support SUSHI.
- **Scholarly IQ**
 - It provides solutions to improve the quality of online usage reporting for librarians and publishers.



The analysis of the use

- All the methods described in the literature to analyse usage have advantages and disadvantages.
 - LIS have to choose the appropriate method that better fits their information sources and user behaviors to help them to make the best decisions.



Pros and Cons of methods that analyse usage

| | Pros | Cons |
|--------------------------------|---|--|
| <i>Reshelving Statistics</i> | Easy to implement | Only print sources Time consuming and inaccurate |
| <i>Descriptive Statistics</i> | Easy to implement Print and online sources | Too subjective Sometime the interest showed does not correspond to the real use |
| <i>Local Citation Analysis</i> | Print and online sources | Time consuming Online journal availability was found to significantly increase local citations |
| <i>Impact Factor</i> | Easy to implement Print and online sources | Changes of IF values depending on the format (print, online or print+online) Open Access Journals significantly affects journal use and citations |



Pros and Cons of methods that analyse usage

| | Pros | Cons |
|------------------------------|---|---|
| <i>Access Use</i> | Useful when you have to track the usage of a consortium or a network of libraries | Only online sources Access does not means real use |
| <i>Publisher reports</i> | Useful and easy to access | Only online sources No consistency between publisher reports Data Counter and non-Counter compliants |
| <i>Reading Factor</i> | Helpful in revealing differences on the use of journals of equivalent Impact Factor | Only online sources No way to determine whether this factor corresponds to a partial or a complete reading |
| <i>Return of Investments</i> | Very useful | Not easy to have all the parameters/values needed to calculate the ROI |
| <i>Commercial tools</i> | Time saving | Only online sources Costs |



Usage analysis in Italy

- To identify if usage analysis is widely used in Italy, beginning 2010, we have invited the members of GIDIF, RBM (the Italian librarians and documentalists of pharmaceutical industries and biochemical research institutes association), to participate in a survey asking which methods they use to obtain statistic and to analyze the use of information resources.



The Survey

- The survey was carried out among 70 of the members of Gidif, RBM
 - 30 Pharmaceutical Industries,
 - 23 Universities and Biomedical Institutes
 - 17 Hospitals and IRCCS (Institutes for Clinical and Research area).

The survey refers to the most well-known qualitative and quantitative methods and tools available



The questions

- Questions asked to members:
 - methods they used to analyse the usage of print and electronic sources
 - ex. reshelving, survey, publisher reports, commercial tools
 - parameters that in their opinion was the most representative
 - ex. number of access, downloaded TOC, abstracts, full texts
 - how they analysed the usage
 - ex. the most used journals, cost-benefit, return of investment analysis...
 - if the library gave access to non-subscribed journals through
 - pay per view agreements
 - document delivery



The answers

- Received 37 completed questionnaires (53% of answer)

The percentages of answer per members were

- 50% Pharmaceutical Industries
- 35% Universities and Biomedical Institutes
- 82% Hospitals and IRCCS

89% of respondents verify statistics of use

11% does not do any control



Usage Analysis

- The usage statistics are surveyed especially for electronic resources



| | Electronic %of answer | Print %of answer |
|-----------|--------------------------|---------------------|
| journals | 84 | 41 |
| books | 22 | 11 |
| databases | 57 | - |



Method used to analyse usage

- The use of print sources is verified through qualitative methods
 - reshelving, registration of loans and circulation lists (69%)
 - survey, interviews, opinions (42%).



Method used to analyse usage

- The use of electronic resources are verified by
 - Most of all through quantitative methods (76%)
 - log counts, IP address (38%)
 - publisher's reports (36%)
 - A minority verifies use through qualitative methods
 - interviews, surveys, opinion (7%)
 - Impact Factor (12%)
 - No one use citation analysis
 - No one use commercial tools (SwetsWise, Ebsconet, JUR, etc)



The representative parameters

- the most representative parameter to monitor
 - e-journals and e-books use
 - downloads of full texts (52%)
 - the number of on-line access (28%)
 - databases use
 - number of searches run (95%)



The decisions to renew or cancel subscriptions

- Decisions to renew or cancel subscriptions to e-journals, e-books and databases are made on
 - usage statistics (73%),
 - cost-benefit analysis (48%)
 - other parameters (21%)
 - users' opinion or internal policy

Only 6% use ROI (Return of Investment) analysis



The Pay Per View and Document Delivery Services

- To give access to e-journals not subscribed,
 - pay per view (PPV) contracts with the publishers (22%)
 - document delivery services (DDS) or exchange of articles (92%)

| DDS/exchange Italian services | % of answer |
|--------------------------------|-------------|
| Gidif, RBM | 82 |
| SBBL | 35 |
| Bibliosan | 24 |
| Other (Nilde, ACPN, Corporate) | 44 |

| DDS Foreign services | % of answer |
|---|-------------|
| British Library | 65 |
| Insit | 15 |
| Subito | 15 |
| Infotrieve | 6 |
| Simid | 6 |
| Reprint Desk | 0 |
| Other (NLM, Publishers, Corporate, Authors) | 24 |



Conclusions

- Information can be considered only a cost until it is not used.
- Usage analysis is an emerging area of bibliometric research that helps focus the need to standardize the collections and select the information sources.
- It could help not only in making decision and choosing a more tailored journal collection and database selection, but also in gaining support of top management in deciding budget allocations.



Conclusions

- In Italy the majority of members of Gidif, Rbm monitor the use of information resources.
- The methods used for print resources are qualitative (descriptive methods) whereas for electronic resources are quantitative , mainly log counts and publisher's report.
 - The tools developed and commercialized are not yet in use.
- Decisions to renew or cancel subscription to e-journals, e-books and databases are made mainly on usage statistics.
 - Cost-benefit analyses and ROI are not yet used to a great extent.
- To give access to articles published in journals not subscribed, the majority of members use document delivery services or exchange of articles
 - Only 22% has pay per view agreements.

