
Towards a toolkit for evaluating electronic information services



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The HEFCE-funded eVALUED project is now moving towards setting up its online toolkit which will aim to help managers evaluate their services, most particularly the use of their electronic resources. A survey of library and information services in all UK higher education institutions was completed in May and follow-up interviews with some of the respondents is now also complete. This article reports on the findings of these two exercises, their implications for development of the toolkit and future directions which the project will take.

BACKGROUND

The eVALUED project aims to develop tools for evaluating electronic information services as well as to increase awareness of resources and initiatives already in existence which could help library and information managers in the higher education sector to evaluate their services more efficiently and more effectively.

To date the research team has amalgamated a mass of literature relating to all aspects of this area of evaluation, and this will inform both the final project toolkit and review articles already planned for the professional literature.

A survey of library and information services in all UK higher education institutions was undertaken

in the spring of 2002, and this gave the project a baseline of current evaluation activity as well as eliciting the views of practitioners as to the kind of help that was required in order to carry out effective evaluation of their electronic information services. Follow-up interviews with respondents who a) were willing to be telephoned and b) appeared to be carrying out evaluation of this kind, were undertaken in August and September, and this allowed for more detail to emerge about practices, perceptions and needs.

QUESTIONNAIRE¹

The survey was posted to every head of service, and was also made available online. There were 112 responses from 194 institutions (of these 28 were completed online). The overall response rate was 58%. *Table 1* shows the breakdown of responses by institution.

	HE Colleges	Universities established before 1992	Universities established 1992 or after	Totals
Number sent out	55	92	47	194
Number returned	33	53	26	112
Percentage returned	60%	58%	55%	58%

Table 1: Questionnaire returns by institution type

Information was sought about the following:

- Institutional background
- Evaluation of electronic information services
- Evaluation issues
- Wider evaluation of institutional electronic services.

Of institutions responding to this survey 43% were operating converged services, while 55% were not.

EVALUATION UNDERTAKEN

Almost three-quarters (72%) of responding institutions confirmed that they carry out evaluation of the electronic information services within their library and information service. In all types of institution the proportions were similar, but numbers were consistently higher in non-converged than converged services.

Some institutions (54%) claimed to be using statistics, measures or standards to carry out their evaluation, as against 25% who said they were not and a further 20% who did not respond at all to the question. Of the 54% (61 institutions) who were using measures, the vast majority cited vendor usage statistics as their main or single statistical measure (28) and a further 27 specified usage statistics, which might also have been supplied

by vendors or drawn from in-house data. Nine respondents mentioned some form of benchmarking or cost-benefit-analysis and ten cited specific surveys which had been undertaken. Six noted a specific evaluation exercise other than a survey, and three specified use of internal/MIS data.

The research team was disappointed to find no mention of use of specific measures, for example, the EQUINOX performance indicators.

Considering the anxiety which emerges about the reliability, comparability and adequacy of vendor statistics, the responses show high reliance on these figures, indicating that in the absence of any other measure, institutions are resorting to these data to evaluate their services.

The types of evaluation cited and incidence are listed below:

- MIS data (133)
- Online feedback (general) (115)
- Printed questionnaires (113)
- Observations (105)
- Online questionnaires (87)
- Cost-benefit analysis (72)
- Printed feedback (general) (71)
- Focus groups (41)
- IT performance monitoring (39)
- External monitoring services (35)
- Interviews (32)
- Monitoring workflow (26)
- Impact analysis (22)
- Document analysis (20)
- User profiles (9)
- Other (17)

N.B. Respondents could tick more than one category.

LIBRARY STAFF

Evaluation of electronic information services is mainly being conducted in-house, either by library and information services staff ('LIS staff') (86) or 'technical staff' (15). Data is mainly used by general LIS staff and LIS management, as shown in *Table 2*. Interestingly, no one specifically cited use by staff at directorate level.

Type of staff	Total
General LIS staff	81
LIS management staff	39
Mixed support group	18
Web management group	11
Academic staff	5
General IT staff	4
Academic services	1
IT manager	1
QAA	1
Specialist consultant	1
Total	162

Table 2: Staff using evaluation data

The term 'LIS management staff' was used to denote staff with a senior management function. All other library staff, for example, subject specialists or periodicals librarians were counted in 'general LIS staff'. The term 'mixed support group' was used for any kind of user group, inter-departmental library committee, but not a 'web management group' which was distinctly identified by 11 institutions. Only one mentioned use by an external body, in this case the Quality Assurance Agency for Higher Education (QAA), and one other had supplied data to a specialist consultant.

The main types of data collected are listed below with number of citations:

- Usage statistics (39)
- Survey (36)
- Management information systems data (28)
- Observation (20)
- All evaluation methods (11)
- Online feedback (11).

The types of data being used support information given in other sections of the survey, that is, 'usage statistics' are the most frequently cited evaluation data used in decision-making (39 citations). But this is followed closely by surveys which are cited 36 times. Information obtained from management information systems is cited 28 times, and it is important to note that some respondents may have included usage statistics in this category, thereby increasing that statistic. There are twenty citations of observation as a method of evaluation used to effect changes in electronic information services provision.

However, it should be noted that these are not large numbers when one considers that 112 institutions replied to the survey, but a total of 32 did not answer this question at all. It would be reasonable to note that use of evaluation data in the

area of electronic information services is sparse and inconsistent.

CHANGES BROUGHT ABOUT BY EVALUATION

The main changes effected through analysis of evaluation data are listed with number of citations below:

- Collection management (68)
- Funding changes (13)
- Publicity (10)
- Web display (9).

DRIVING FORCES IN EVALUATION OF EIS

Respondents were offered pre-determined categories to indicate the driving forces behind their need to evaluate electronic information services. They were encouraged to tick as many categories as they liked, so there were 185 responses across the categories including supporting comments from ten respondents, some of whom cited other forces not on the list. The categories (with numbers of citations) were as follows:

- Strategic/ financial planning (75)
- User needs (48)
- Institutional requirements (20)
- Service targets (18)
- Funding source (9)
- External request (5).

EVALUATION ISSUES

Respondents were asked what aspects of electronic information services they would ideally like to evaluate *beyond* their current evaluation work. Responses can be grouped according to the following subjects:

- Usage (35)
- Impact analysis (18)
- Cost-benefit analysis (14)
- General evaluation (14)
- Usability (12)
- Content (8)
- Access (7)
- Comparison (7)
- Collaboration (6)
- Skills (5)
- Retrieval (3)
- Training (3)
- Measures (2)
- Support tools (2).

In some cases, these divisions are blurred.

The important fact to emerge from this is that 83 institutions (out of 112 in total) chose to answer

this question, not only to confirm that they did in fact wish to carry out more evaluation of their electronic information services, but also to comment about their specific needs.

BARRIERS TO EVALUATION OF EIS

Barriers to the conducting of evaluation in the area of electronic information services were perceived as follows:

- Lack of time (45)
- Lack of statistical data (34)
(either not collected, or data inappropriate to needs)
- Lack of staff (23)
- Lack of response (21)
(to requests for feedback from users)
- Lack of staff evaluation skills (13)
- Lack of money (8).

SUPPORT REQUIRED FOR EVALUATION

81 institutions (72%) said they would like support with their evaluation of electronic information services, another 17 (15%) said they would not and 14 (13%) did not respond. Some who did not want support suggested that they did not have time to do such evaluation at the moment.

A resounding 95% (106 institutions) said that they would use a free evaluation toolkit if one were available, and 88% (99 institutions) said they would welcome training opportunities in the evaluation of electronic information services. This serves to support the premise on which the eVALUED project has been built.

INTERVIEWS²

Practitioners in twenty institutions took part in interviews, fourteen by telephone and five in person. One response was sent via e-mail. The selection of interviewees was based on:

- library and information services (LIS) staff who had identified themselves as willing to participate in follow-up from the initial eVALUED questionnaire and
- those who had indicated some level of evaluation activity.

Interviews were intended to cover the following broad aspects:

- summary of evaluation of electronic services carried out
- indication of obstacles, challenges and gaps in evaluation

- awareness of practical tools and identification of areas where help is needed
- influences and issues surrounding the evaluation of electronic information services (EIS).

Responses were given from an individual perspective and interviewees might not have mentioned all activity within an institution. For these reasons, it must be noted that all interviewees did not comment on all themes. The purpose of the interviews was rather to amplify views and experiences latent in the survey responses.

Table 3 indicates the range of interviewees:

Job Title (s)	Count
Head of service	4
Deputy head	5
Electronic resources manager or equivalent	6
Subject librarian	1
Research officer	1
Other (e.g. systems librarian)	3

Table 3: Job titles of interviewees

Fifteen interviewees indicated that they used vendor statistics to some extent. Of these, four made some comparison between use and cost of electronic databases or journals. Four interviewees did not mention vendor statistics. One interviewee used the library's management information systems data (MIS data) in place of vendor statistics.

Of the five interviewees overall who mentioned that they used MIS data, only two said that they apply it to use of electronic services.

Fourteen interviewees indicated that they used some type of questionnaire which had some relevance to the evaluation of electronic information services. Of these, ten referred to a general library and information service questionnaire which mentioned electronic services to some extent. Only four interviewees mentioned a survey that had been specifically applied to electronic information services.

Nine interviewees mentioned that they conduct database trials before considering purchase. Of these nine, four mentioned the use of a checklist to support the evaluation.

Nine interviewees indicated that they had conducted evaluation through focus groups. In some cases, this was combined with questionnaire design. Issues raised in the focus groups were

used to outline topics to be included in questionnaires.

Six respondents said that they had conducted benchmarking in some form within library and information services. This included comparison with other higher education libraries based on SCONUL data. This activity did not specifically include electronic information services (EIS), but some were interested in applying benchmarking to EIS.

Six interviewees mentioned that they actually target academic staff in evaluation about use and preferences of electronic information services.

Six interviewees said that they had conducted some level of analysis of enquiries which related to electronic information services. This involved some totalling and categorising of the enquiries.

Because there had been no mention of EQUINOX measures in responses to the survey, interviewees were asked specifically if they had heard of these and of the Association of Research Libraries' 'e-metrics' project in the US. They were also asked if they had used the measures. The responses confirm little awareness and even less use of these initiatives (Table 4):

Name	Aware	Not aware	Use
EQUINOX	8	12	2
ARL e-metrics	4	15	0

Table 4: Awareness and use of existing EIS evaluation guidelines

OBSTACLES

Interviewees were specifically asked to outline obstacles which they felt hindered their evaluation efforts. These duplicate and supplement the barriers listed by respondents to the questionnaire (above). The main factors are listed below. The number indicates the number of interviewees mentioning the obstacle.

- Vendor statistics (15)
Can't compare like with like.
Lack of statistical base between suppliers.
- Time and/or money (15)
Time (especially for surveys) notably staff time
Money (paying staff or external agency to do evaluation is expensive)
- Poor response from users (7)
Consultation fatigue
Accessing students is problematic

- Low level skills and/or training (5)
Need more skills for evaluation, especially statistical analysis
- SCONUL data (3)
Problems separating out individual titles, e.g. unique electronic journal titles
Difficult to count accurately the number of e-journals held.
- Timing of evaluation (3)
The 'best time' is different for different groups of users
- Lack of baseline or means of comparison (3)
Difficulty of comparing use to number of potential users
Difficulty in developing standard criteria due to rapid changes.

Other problems mentioned by individual respondents included:

- Need to know what evaluation will be useful (i.e. not collecting statistics for the sake of it)
- Access to web (or lack of it)
- Making students and users aware of trade off between service - if demands are met, costs dictate that something else may have to be cut
- Data protection
- Keeping pace with changes
- Duplication of evaluation/research; the need to share good practice.

EVALUATION HELP NEEDED

Interviewees suggested the following areas where they would like help with evaluation of electronic information services:

- benchmarking (12)
- usage information (10)
- evaluation skills (9)
- impact studies (8)
- cost-benefit analysis (5)
- performance indicators (4)
- developing an online survey (3)
- evaluating potential purchases (3)
- integrating EIS evaluation into overall LIS framework (for example linking to the SCONUL framework) (2)
- wider picture of general student experience (can not look at LIS in isolation)
- evaluation for off-campus access
- monitoring quality rather than quantity.

In terms of style of materials presented in a toolkit, the requests are listed below, with the number of instances cited.

- Customisable templates (13)
- Step-by-step or easy to use approach (8)
- Web based preference (5)
- Case studies (5)
- Checklists (4)
- Tracking forms (2)
- Electronic training (2).

'Anything that saves time and effort and provides a consistent evaluation framework would be welcome.' (project interviewee)

KEY ISSUES FOR THE eVALUED TOOLKIT

'It's changing the culture and learning the new approaches that is the challenge.' (project interviewee)

The eVALUED researchers have identified the following issues which emerge from respondents' comments to the survey and in interviews, and these will be incorporated into project developments:

- A mechanism should be sought to encourage vendors/suppliers to supply data promptly and to encourage consistency of approach
- Standard formats for surveys would save practitioners a great deal of work
- The problem of 'survey fatigue' is a real one
- a nationally agreed set of electronic information service performance indicators (perhaps deriving from EQUINOX) would be helpful. Monitoring and collection of data would need to be done by a national agency like SCONUL
- any toolkit must draw on statistical data which is already available or which is 'latent' and can easily be collected
- a toolkit would need to have the backing of academic staff if evaluation is to be effective with students
- electronic information services are expensive, and there is a need to justify costs. Any toolkit must be streamlined to highlight cost benefit and transparent enough to show that the evaluation exercise itself is cost effective.

The team has also determined that the toolkit will be online only, to enable updating and increase accessibility. It will also have the following features:

- Checklist of evaluation criteria, i.e. what to evaluate and the appropriate methodology

- Flowchart – pathways to develop a customised evaluation process
- Aids to research skills, e.g. conducting focus groups, when/how to survey
- links to existing measures such as EQUINOX and initiatives like COUNTER
- key references from literature, including bibliographies
- templates from existing manuals
- survey samples developed by the eVALUED team to use or customise
- good practice case studies
- good practice guidance on electronic information service evaluation.

It is hoped that this will take account of the varying needs of individual libraries/information services in the higher education sector, both in terms of their institutional aims and the library's own evaluation needs and experience.

FUTURE DIRECTIONS

The eVALUED project will be occupied in the coming months in developing the toolkit and piloting it among selected institutions which responded to the survey. Case studies will also be undertaken in a small number of institutions whose evaluation practice could usefully be disseminated to the rest of the sector. The research team will continue to monitor relevant literature and to disseminate findings across the profession. Interviews with 'experts' in the wider evaluation field are continuing as a complement to those conducted with library and information professionals. This includes interviews with members of relevant SCONUL committees. These will continue to inform the project's direction.

The team would be pleased to hear from any readers who work in institutions which did not respond to the survey (or do not know if they did!) in order to be advised of relevant evaluation work of which the team might not otherwise be aware.

FURTHER INFORMATION

Association of Research Libraries
E-metrics project (Available at: <http://www.arl.org/stats/newmeas/emetrics/contract00%2D01.html> [visited 18/10/02])

COUNTER (2001-)
Project COUNTER (Counting Online Usage of Networked Electronic Resources)
(Available at: <http://www.projectcounter.org/index.html> [visited 16/10/02])

EQUINOX (2000)
Library Performance Measurement and Quality
Management System
Performance Indicators for Electronic Library
Services
(Available at: [http://equinox.dcu.ie/reports/
pilist.html](http://equinox.dcu.ie/reports/pilist.html) [visited 16/10/02])

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- 1 The full questionnaire analysis can be found
at: [http://www.cie.uce.ac.uk/evaluated/
Library/FinalAnalysis.pdf](http://www.cie.uce.ac.uk/evaluated/Library/FinalAnalysis.pdf)
 - 2 The full interview analysis can be found at:
[http://www.cie.uce.ac.uk/evaluated/Library/
Paper3_Interviews.pdf](http://www.cie.uce.ac.uk/evaluated/Library/Paper3_Interviews.pdf)