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ABSTRACT
        Glasgow Caledonian University Library (Scotland)
conducted a pilot study to design a set of user chosen performance
measures which can be used in British academic libraries for data
collection. Members of 8 stakeholder groups were identified and given
an 103-question survey, with each question to be rated on a 1-5 scale
of importance. Stakeholder groups included: SPARC (Strategic Planning
and Resources Committee); senior library staff; other library staff;
academic staff; research students; postgraduate students; full-time
undergraduates; and part-time undergraduates. Results from the pilot
study indicate: the higher the academic status of the respondent, the
more importance is attached to quality of staff and their management
performance; and non-library staff respondents rated highly
indicators which related to service provision, but rated technical
and management issues lower. The final study will compile a
meaningful list of stakeholders; identify a small number of generally
applicable "parsimonious" measures; identify performance measures
appropriate to specific stakeholder groups; allow decision-making
librarians to concentrate on a defensible, validated set of measures;
help non- librarians participate usefully in library performance
measurement; and design both general and stakeholder-specific
questionnaire skeletons which can be applied in all British
university libraries. An appendix includes the pilot study
questionnaire. (SWC)

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The Stakeholder Approach to the Construction of Performance Measures

by John C. Crawford

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The Stakeholder Approach to the Construction of Performance Measures

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Background

Glasgow Caledonian University is one of Britain's new universities and was created in 1993 out of the former Glasgow Polytechnic and Queen's College, Glasgow. The Library is spread over three campuses which, in order of size are: City Campus with 9,435 students (80%); Park Campus with 1,342 students (11%) and Southbrae with 1,082 students (9%). There are about 566 teaching staff and 435 support staff. The model of administration is a centralised one, the university being administered by a University Management Group (UMG) consisting of the Principal, vice principals, assistant principals and secretary to the University Court. With the addition of the three deans of faculty this becomes the Strategic Planning and Resources Committee (SPARC).

Glasgow Caledonian University Library has a policy of evaluating its services by a range of methods and if the issue examined is of general concern we sometimes seek external funding to research it more widely. In recent years the library has conducted surveys on such issues as the needs of part-time students, research students and OPAC satisfaction. An annual general satisfaction survey was introduced in January 1994, using, on this first occasion, the survey model recommended by Van House (1990).

The stakeholder project originated as part of the continuing programme of activity and interest in qualitative evaluation at Glasgow Caledonian University Library. A review of the work undertaken, in 1993, showed that although it was useful an overall framework of performance issues, linking specific concerns, was needed. Previous experience suggested that these performance issues should spring from the needs and experiences of different categories of users and be used to facilitate data collection and decision-making (user orientated evaluation). This focused attention on the multiple constituencies model which defines effectiveness as the extent to which the needs of key constituencies are met. This originated with the work of Van House and Childers who split public library users into key constituencies, ie. groups of people who would be expected to influence decisions about the public library directly or indirectly. Questionnaires which contained a list of 61 items were administered to representatives of constituent groups and constituent members were asked to rate these 61 items or performance indicators on a scale of 1 (low) to 5 (high) importance (Childers and Van House, 1989).

These methodologies have been adopted by Philip Calvert and Rowena Cullen in their work on library effectiveness in New Zealand. This related initially to the public library sector (Calvert and Cullen, 1992) but, more recently, has been applied to academic library management (the published results are still to appear).

They identified six constituent or stakeholder groups:

1. The resource allocators (vice-chancellors, deputy vice-chancellors and members of key planning and resource allocation committees)

2. The decision makers - senior library staff

3. The service deliverers - library staff

4. Graduate students

5. Undergraduate students

6. Faculty (academic staff)

The questionnaire was formed using 99 performance indicators and again each issue was rated on a 1-5 scale.

The Pilot Study and its Methodologies

Contact was established with Philip Calvert and Rowena Cullen who readily agreed to their methods being adapted for use by Glasgow Caledonian University. Their questionnaire was circulated around the professional library staff for their comments and criticisms and the questionnaire was modified and extended slightly as a result. There were now 103 questions to be rated on a 1-5 scale.

For the purposes of the study at Glasgow Caledonian University eight stakeholder groups were identified which reflected the experience of the university.

1. SPARC (Strategic Planning and Resources Committee, 10 members)

2. Senior library staff

3. Other library staff

4. Teaching (academic staff)

5. Research students

6. postgraduate students

7. Full-time undergraduates

8. Part-time undergraduates

Administrative/support staff were not included because they do not make much use of library services or impact significantly on their provision. The need to break down students into four categories reflected past experience. In Glasgow Caledonian University, for example, part-time students comprise about a third of the total.

The actual administration and analysis of the questionnaire became the subject of a mathematics honours project and was undertaken by Siobhan Friel, a BSc Mathematics for Business Analysis 4th year Honours student. Before going to university she had worked as a university library assistant. The groups she sampled were as follows: The populations of the first three constituencies ie. SPARC, senior and other library staff were so small (9, 8 and 35) that all members were sampled, giving response rates of 55.56%, 62.5% and 74.29% respectively. Academic staff were surveyed by stratified sampling. The staff list in the internal telephone directory was used as a population list. The population was stratified by department and then simple random sampling was performed within each strata to get an overall sample of 176 staff from 22 departments. This generated a response rate of 28.41%. Research students were sampled systematically. Every second student received a questionnaire through the internal mail, giving a sample of 108 with a response rate of 19.46%.

Postgraduate, full-time undergraduate and part-time students were quota sampled on the basis of faculty: Business, Health and Science and Technology. Full-time undergraduates were further subdivided by year of study. Postgraduate and part-time students were surveyed to give samples of 40 each. Some 216 full-time undergraduates were sampled.

The total sample size was 632. The data was analysed using Microsoft Excel.

Results

Ranked outputs were produced, both generally, and for specific stakeholder groups. There were eight indicators contained in the 'Top 20' of each constituency:

1. Helpfulness, courtesy of staff

2. Quietness of study environment

3. Availability of sought material on shelf

4. Expert staff assistance to users available when needed

5. Expertise of reference staff

6. Provision made for disabled users

7. Total amount of library budget

8. Equipment (eg. photocopiers) kept in service by good maintenance

The word 'staff' appears three times. This list has been used to devise a new general satisfaction survey questionnaire which was administered in January-February 1995 and proved easier to analyse and interpret than that based on Van House.

There were, however, important variations between stakeholder groups. Detailed comparative rankings of these were not produced and this will have to be addressed in the main study. Senior and other library staff agreed about what was most important: themselves. They identified *Helpfulness, courtesy of staff* as the most important indicator.

Four categories: academic staff, postgraduate students, undergraduate students and part-time students selected *Quietness of study environment* as being the most important. SPARC selected 'Match of opening hours to user needs' as its most important indicator, while the indicator ranked highest by research students was *Reciprocal access to other university libraries.*

The indicator *Competence of library management* was considered important by all stakeholder groups, except full-time and part-time students. Part-time students was the only stakeholder group which did not rate *Provision of multiple copies of items in high use* as important enough to be in their 'top 20', perhaps an indication of their ability to obtain key texts by other means (Friel, 1994). Figure 1 lists the top five indicators (as identified by all categories) and shows how each category valued them. For satisfactory indicator evaluation more detailed work will be necessary.

Even a cursory glance at a small number of indicators shows interesting variations. The senior library staff rate the noise issue lower than any other

Figure 1

The Top Five Issues (Indicators)									
Issues	All	Sparc	FTU	PTU	PG	RES	Acad	SLS	OLS
Quiet	1	5	1	1	1	12	1	14	5
Help	2	2	3	9	8	16	8	1	2
Multi	3	43	2	35	22	5	4	5	18
Assist	4	14	8	10	5	9	5	32	4
Avail	5	3	5	17	11	7	7	16	27

Keys to the table

Stakeholders

All - *all categories combined*
Sparc - *SPARC*
FTU - *full-time undergraduates*
PTU - *part-time undergraduates*
PG - *postgraduate students*
RES - *research students*
Acad - *academic staff*
SLS - *senior library staff*
OLS - *other library staff*

Issues

Quiet - *quietness of study environment*
Help - *helpfulness, courtesy of staff*
Multi - *provision of multiple copies of items in high use*
Assist - *expert staff assistance to users available when needed*
Avail - *availability of sought materials on shelf*

category, despite its obvious importance, perhaps a reflection of the limited success in combating it over many years. Research students also do not rate it highly but research students have their own office accommodation. Academics rate it the most important issue which, presumably, shows them identifying with their undergraduate students. *Provision of multiple copies of items in high use* shows the academics (and senior library staff) identifying with full-time students while SPARC, from a remoter perspective, consider it relatively unimportant.

Overall, two general points seemed to emerge:

1. The higher the academic status of the respondent in the university, the more importance is attached to quality of staff and their management performance.

2. Non-library staff respondents, on the whole, rated highly indicators which related to service provision. Technical and management issues they rated lower, presumably taking the view that technical or purely professional librarianship issues were of less concern to them.

Methodological Conclusions

1. Clearly the questionnaire, with its 103 performance issues was too long. Some measures were given a low rating by all stakeholder groups.

2. The terminology of some of the measures was clumsy. Poor terminology needed to be improved and clumsy wording needed to be re-examined to see if the measure itself is inappropriate.

3. Some measures appeared to overlap or duplicate themselves.

4. Service based measures may be more appropriate than technical ones.

5. The measures are somewhat dated and take little account of electronic networking and electronic information services.

6. Recent work such as *The effective academic library* (Joint . . , 1995) and the current research work summarised in it need to be taken into account.

7. Detailed comparative analysis of the different stakeholder groups is needed.

8. The random order arrangement was perceived by some to be unhelpful.

The Main Project

On the basis of the pilot study an application for research funding was made to the British Library Research & Development Department in July 1994 to employ a research assistant for a year to administer a modified version of the questionnaire, both at Glasgow Caledonian University and other universities.

The overall aim of the project is to design a set of user chosen performance measures which can be used in British academic libraries for data collection and decision-making

The specific aims are:

1. to identify a set of user chosen performance measures

2. to compile a meaningful list of stakeholders

3. to identify a small number of generally applicable 'parsimonious' measures

4. to identify performance measures appropriate to specific stakeholder groups

5. to allow decision-making librarians to concentrate their attention on a defensible, validated set of measures

6. to help non-librarians to participate usefully in library performance measurement

7. to design questionnaire skeletons which can be applied in all British university libraries for
a) a short, general satisfaction questionnaire, using the set of parsimonious measures arrived at
b) specific stakeholder groups.

The project was approved at the end of January 1995 and partners were immediately sought with considerable success. The research assistant, Helen Pickering, who had previously worked at LISU, was appointed in June and began work at the beginning of July. The project is in three main phases

1. July-September: formalising contacts with participants, redesigning questionnaires in conjunction with participants and planning operational methodologies.

2. October-December 1995: Questionnaire administration will take place and data input will begin.

3. January-June 1996: Data input will be completed, analysis and writing up and questionnaire design will be done.

Progress to Date

1. We now have 15 participants, mainly in universities founded after 1960.

2. There has been surprisingly little argument about stakeholder groups. The only needed additional category seems to be 'research fellow' or equivalent (ie. someone not pursuing a higher degree, but mostly working on research).

3. The main concern among partners seems to be about sample sizes and the labour costs associated with administering the questionnaire. This reflects a common paradoxical attitude among library managers. They are anxious to collect, both quantitative and qualitative data about their services, but fear the costs involved. In planning sampling, which is being done with the help of the university's Departments of Economics and Mathematics, we hope to learn some lessons which will allow reliable and realistic sampling at an acceptable cost. Undergraduate populations are the main problem and here, systematic random sampling seems the only solution.

Redesigning the Questionnaire

Following criticisms about the random structure of the questionnaire the measures have been categorised into six groups into which they appeared naturally to fit. The groupings proposed in *The effective academic library* (JFC, 1995) were considered but were found to be inappropriate. The six groups are as follows

1. Management and administration

2. Equipment / computer hardware

3. Staff

4. Stock maintenance and provision

5. Physical library features/environment

6. Users, services to users and service usage.

Overall analysis of each group will be possible and it will be possible to relate stakeholder groups to specific categories.

Outcomes

The main outcomes of the project will be

1. a report to BLR&DD

2. sets of performance measures, both general and those appropriate to particular stakeholder groups

3. a set of questionnaires ie. a general one and questionnaires appropriate to each stakeholder group

4. advice on methodologies for questionnaire administration and costing in British university libraries

5. every effort will be made to report on the work at conferences and other fora.

The overall impression seems to be that a standardisation of concerns is taking place in British university libraries and, if this is the case, then the implications are very wide.

References

Calvert, Philip and Cullen, Rowena (1992)
'Performance measurement in New Zealand public
libraries: a research project'. *Australasian public
libraries and information services.* 5(1) 3-12
The published results of this study are still to
appear.

Childers, Thomas and Van House, Nancy A. (1989)
'Dimensions of public library effectiveness'.
Library and information science research. 11(3)
273-301

Friel, Siobhan (1994) *A study of performance mea-
surement within Glasgow Caledonian University
Library.* Glasgow Caledonian University Honours
Project (unpublished)

Joint Funding Councils' Ad-Hoc Group on
Performance Indicators for Libraries. (March,
1995) *The effective academic library.*

Van House, Nancy et al. (1990) *Measuring academic
library performance.* American Library
Association

Appendix 1

Pilot Study Questionnaire

GLASGOW CALEDONIAN UNIVERSITY

PERFORMANCE MEASUREMENT PILOT STUDY

This is a list of criteria which might be used to judge the performance of a university library. Which of these seem, from your point of view, more important and which least important in judging the performance of a university library?

Put a circle around one number on each line. Circle 5 if you think the item is most important. Circle 4 if it is not quite so important, and so on. Circle 1 for the items you think have the least importance.

Please remember, **you are not judging the performance of your own university library**, but saying what criteria you would like to see used to measure the performance of a university library.

	MOST IMPORTANT				LEAST IMPORTANT
Regular evaluation of building	5	4	3	2	1
Facility for users to recommend items for purchase	5	4	3	2	1
Access to library catalogues via networks throughout campus	5	4	3	2	1
Expert staff assistance to users available when needed	5	4	3	2	1
Frequent stock editing procedures	5	4	3	2	1
Competence of library management	5	4	3	2	1
Proportion of staff professionally qualified	5	4	3	2	1
Regular communication with user groups	5	4	3	2	1
Level of staff workload	5	4	3	2	1
Speed of acquisition of new materials	5	4	3	2	1
Availability of library catalogues throughout the library	5	4	3	2	1
Conservation principles used in housing library materials	5	4	3	2	1
Match of goals and objectives to user group needs	5	4	3	2	1
Provision made for disabled users	5	4	3	2	1
Expertise of reference staff	5	4	3	2	1
Number of library staff per full-time equivalent academic staff	5	4	3	2	1
Provision of personal computers for users' own work	5	4	3	2	1
Availability of sought material on shelf	5	4	3	2	1
Speed of provision of items through inter-library loans	5	4	3	2	1

	MOST IMPORTANT			LEAST IMPORTANT	
Openness of management procedures and documents to users	5	4	3	2	1
Equitable allocation of materials budget amongst subjects taught	5	4	3	2	1
Availability of reference staff when needed	5	4	3	2	1
State of repair of materials (books, journals etc.)	5	4	3	2	1
Use of collection development policies	5	4	3	2	1
Proportion of library budget spent on materials	5	4	3	2	1
Distance of library from teaching areas	5	4	3	2	1
Division of library materials expenditure between books and periodicals	5	4	3	2	1
Arrangement of library collection	5	4	3	2	1
Facility to reserve items on short loan	5	4	3	2	1
Provision of adequate number of photocopiers	5	4	3	2	1
Proportion of materials budget spent on research materials	5	4	3	2	1
Adequate and pleasant workspace for staff	5	4	3	2	1
Feedback to users who request items for purchase	5	4	3	2	1
Total number of registered borrowers	5	4	3	2	1
Match of open hours to user needs	5	4	3	2	1
Total number of items held by library	5	4	3	2	1
Extent to which services are free	5	4	3	2	1
Total number of items borrowed per year	5	4	3	2	1
Range of types of material (videos, computer software etc.)	5	4	3	2	1
Number of seats per full-time student equivalent	5	4	3	2	1
Quietness of study environment	5	4	3	2	1
Proximity of refreshment service during library open hours	5	4	3	2	1
Provision of multiple copies of items in high use	5	4	3	2	1
Provision of microfilm and microfiche readers	5	4	3	2	1
Library staff involvement in organisational life of university	5	4	3	2	1
Provision of group study rooms	5	4	3	2	1
Equitable and effective fines policy	5	4	3	2	1
Provision of photocopiers in all areas of the library	5	4	3	2	1
Equipment (e.g. photocopiers) kept in service by good maintenance	5	4	3	2	1
Access to CD-Roms and databases via networks throughout the campus	5	4	3	2	1
Use of planning procedures (short and long term)	5	4	3	2	1
Number of seats occupied at peak hours	5	4	3	2	1

	MOST IMPORTANT			LEAST IMPORTANT	
Proportion of library materials listed on computer catalogue	5	4	3	2	1
Amount of use of materials in library without being borrowed	5	4	3	2	1
Total amount of library budget	5	4	3	2	1
Display of new books and periodical issues	5	4	3	2	1
Availability of printed periodical indexes	5	4	3	2	1
Currency of library materials	5	4	3	2	1
Safeguards against mutilation and theft	5	4	3	2	1
Equitable allocation of materials budget between groups of users (staff/students)	5	4	3	2	1
Speed of recall of items out on loan requested by other users	5	4	3	2	1
Proportion of journals bound as opposed to unbound	5	4	3	2	1
Efficiency / cost effectiveness of library	5	4	3	2	1
Availability on shelf of items listed in catalogue	5	4	3	2	1
Library expenditure per full-time equivalent student	5	4	3	2	1
Percentage of collection borrowed each year	5	4	3	2	1
Number of library staff per full-time equivalent student	5	4	3	2	1
Success rate in answering reference questions	5	4	3	2	1
Provision of personal study carrels	5	4	3	2	1
Amount of total library budget as proportion of university expenditure	5	4	3	2	1
Availability of all library collections for browsing	5	4	3	2	1
Extent to which library achieves goals and objectives	5	4	3	2	1
Adequacy of library collection compared with other institutions	5	4	3	2	1
Speed of recall of reserved items	5	4	3	2	1
Amount of user education (i.e. teaching use of library and materials)	5	4	3	2	1
Extent of involvement of user groups in decision making	5	4	3	2	1
Ease of use of public catalogues	5	4	3	2	1
Proportion of total stock restricted to short term loan	5	4	3	2	1
Provision of teaching facilities within library	5	4	3	2	1
Comfort, appeal of building	5	4	3	2	1
Flexibility of budget to respond to new subject areas	5	4	3	2	1
Regular notification of users of new materials added to stock	5	4	3	2	1
Proportion of library budget spent on staff	5	4	3	2	1
Extent to which users are made aware of services available	5	4	3	2	1
Availability of user seating near reference collection	5	4	3	2	1

	MOST IMPORTANT				LEAST IMPORTANT
Speed and accuracy of re-shelving of materials	5	4	3	2	1
Cost per item (books) added to stock	5	4	3	2	1
Percentage of stock not used in past five years	5	4	3	2	1
Amount of time journals are out of circulation for binding	5	4	3	2	1
Rate at which collection is growing	5	4	3	2	1
Number and quality of signs for direction / guidance	5	4	3	2	1
Range of library services available whenever library is open	5	4	3	2	1
Number and quality of written management policies	5	4	3	2	1
Availability of periodical indexes on CD-Rom	5	4	3	2	1
Percentage of potential users actively using the library	5	4	3	2	1
Availability of user-pays online searching of periodical indexes	5	4	3	2	1
Helpfulness, courtesy of staff	5	4	3	2	1
Proportion of items wanted by user finally obtained	5	4	3	2	1
Flexibility of loan periods	5	4	3	2	1
Staff training and development	5	4	3	2	1
Number of items borrowable at one time	5	4	3	2	1
Reciprocal access to other university libraries	5	4	3	2	1
Cost of photocopying	5	4	3	2	1

Thank you for participating in this pilot research project.

Please return this completed questionnaire to any site Library, put in the internal mail, or post to either undernoted address:

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