

**Executive Summary of Business
for Information Services Committee**



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| Title | New model for the management of the Library Resources (LR) budget |
| Author | Adrian Hale, Head of Technical Services, Library |
| Type | Plan |
| Date | 29 January 2007 |
| Strategic context | Planning for allocation of Library resources for 2007/08 and beyond |
| Summary | This paper recommends changes to the management of the Library Resources budget. These involve replacing the current formula-based budget to a needs-based budget, a means of managing sustainable funding for the journal and electronic resources collections, and a move from the allocation of journals to departments to the identification of a core collection of journals to serve the needs of all departments |
| Essential reading | Attention is drawn to the recommendations on page1 |
| Effective date of introduction | Changes need to be agreed by April/May 2007 to begin planning the Library resources allocation for 2007/08 |
| Recommendation | <ol style="list-style-type: none"> 1. The allocation of funds from the Library Resources budget to departments for spending on books, audio visual materials, journals and electronic information should move from the current formula based approach to a needs based approach using concepts derived from Zero-Base Budgeting. 2. A level of sustainable funding to cover journal and electronic information subscriptions should be agreed and the Library should be guaranteed that the Library Resources budget will not be allowed to fall below this level. 3. All subscriptions to journals and electronic resources should be top-sliced rather than assigned to departments 4. A 'core collection' of journals required to meet teaching and research needs of the University should be defined |

Further summary information is provided overleaf...

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| Consultation | These recommendations have been developed in consultation with other members of the Library Management Team, the Learning & Teaching Support Manager and Research Liaison Manager |
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New model for the management of the Library Resources (LR) budget

Summary

This paper recommends changes to the model by which funds are allocated from the Library Resources budget to departmental spending on books, Audio Visual materials (AV), journals and electronic resources. It is recommended that the current formula-based budget should be replaced by a needs-based model, that a means of managing sustainable funding for the journal and electronic resources collections should be determined, that this should include top slicing expenditure on journals and electronic resources rather than allocating subscriptions for journals and electronic resources to individual departments, and that a core collection of journals should be identified which would serve the needs of all departments.

Introduction

The management of the Library Resources budget should support the Library's mission of "delivering high quality, innovative information services, which contribute to the successful learning, teaching and research of the University and the community" (Library Strategic Plan 2007-2009, Mission Statement). To do this effectively the management of the Resources budget has to ensure that both learning/teaching and research are supported in an equitable manner and that the needs of all departments are considered and reflected in an equitable distribution of funds. The management of the resources budget has also to be responsive to changing priorities and needs within the University and to changes in the ways in which information resources can be most effectively and efficiently delivered.

While having many advantages, the current formula-based model for the Library Resources budget is proving to be inflexible in responding to the changing and variable needs of departments and will become unworkable for most of the Science departments in 2007/08 without a modification of the formula, cuts in their journal or e-resource subscriptions, or additional funding. There are particularly acute challenges to be met in the management of the journal collection where the current formula-based distribution of many journal subscriptions across departments is raising concern about the Library's ability to maintain an effective collection of core journals to support the teaching and research needs of the University. A new model for the LR budget and for managing the journal collection and electronic resources is recommended.

Recommendations for a new model

1. The allocation of funds from the Library Resources budget to departments for spending on books, audio visual materials, journals and electronic information should move from the current formula-based approach to a needs-based approach using concepts derived from Zero-Base Budgeting
2. A level of sustainable funding to cover journal and electronic information subscriptions should be agreed and the Library should be guaranteed that the Library Resources budget will not be allowed to fall below this level
3. All subscriptions to journals and electronic resources should be top sliced rather than assigned to departments
4. A 'core collection' of journals required to meet teaching and research needs of the University should be defined

These recommendations are not totally dependent on each other and each could be looked at on its own merits. For instance, top-slicing subscriptions to journal and electronic resources does not require a needs-based budget approach. The following sections of this paper set out the need for change and the reasoning behind these recommendations for a new model.

Current formula-based model for Library Resources Budget

The LR budget is subject to a top slice and the residue is allocated to individual departments in the schools on a formula basis.

LR Budget 2005/06: £1,582,786

LR Budget 2006/07: £1,667,700

Top slice to fund:

- Inter Library Requests
- Binding
- Journals and electronic resources not assigned to individual departments
- Book purchases not assigned to departments
- Official publications
- Standing orders

Top Slice provision for 2005/06: £672,258

Top Slice provision for 2006/07: £701,451

Formula-based allocation to departments:

- A Teaching weighting is calculated using the Teaching load
- A Research weighting is calculated using staff and PG FTE attributed to research
- A Teaching/Research ratio of 37.5/62.5 is applied to the combined Teaching/Research weighting for each Department
- This combined weighting is then multiplied by the amount remaining in the LR budget after top slice
- Viring takes place within schools to fund IDPs or re-allocate funds across departments on the basis of need

The total amount available for departments (including SPRU and an allocation to IDS and BSMS):

2005/06 £910,528

2006/07 £966,249

Advantages of formula-based model:

- There is a degree of equity in distribution of funds across subjects not possible in a purely demand driven system
- Transparency in the resource allocation
- Reflects each department's contribution to teaching and research in the University

Disadvantages of formula-based model:

- Inflexible
- A department's need for resources varies from year to year
- Science departments will have a greater proportion of their budget committed to ongoing journal subscriptions and so their budget is more vulnerable to journal inflation (see Table 1 at Appendix 2 for comparison at school level)
- Departments cannot always cancel print journals to release funds for other resources such as books if journals are within electronic journal bundles
- Departments with high commitments to journals may have proportionately less to spend on books than other departments regardless of their needs
- There is an imbalance in costs across disciplines, with resources in the Sciences often costing more than those in the Humanities and Social Sciences (see Table 1a and 1b at Appendix 1)

- In the first quarter of the financial year spending on reading lists may have to be capped in some departments if they have insufficient money available in their book allocation although money may later be found to be available later in the year elsewhere in the Resources budget that could have been used
- Some departments may have more than they need available for books
- The Library has to restrict commitments to journal and electronic resource subscriptions because
 - Current Library budget model sets allocations for books, journal subscriptions etc.
 - Risk of making long term commitments to funding when there is no guarantee that the Library will be able to afford this in future years
- Inflation on large journal subscriptions will incrementally squeeze the amount available for books/AV (see Table 1 at Appendix 2 for relative expenditure on journals, e-resources, books/AV by school)

2007-08

The current budget model cannot be sustained for 2007/08 without some modification:

- On the current formula Science departments would need to cut subscriptions to journals or electronic subscriptions to have viable budgets unless other sources of funding were provided outside the Library Resources budget
- There is increasing demand for the Library to take out subscriptions to journals when there is no guarantee that the departments involved can sustain these subscriptions
- It is probable that an increasing proportion of the resources which academics really need will be subscription-based

However, it is unlikely the current formula can be modified in a way that does not disadvantage some schools in relation to others.

A new needs-based model for the Library Resources budget using concepts derived from Zero-Base Budgeting

This paper recommends a needs-based model for the Library Resources budget which uses concepts derived from Zero-Base Budgeting (ZBB). A brief description of ZBB is contained in Appendix 3. This new approach would mean that:

- Allocations to departments would not be based on previous year's figure or on a formula, but would instead be based on the needs of the departments
- A department's needs would be determined by the requirements for supporting its teaching and research activities:
 - Library resources required to support taught courses (resourcing reading lists)
 - Library resources required to support research
- Resources to meet these needs could be divided into
 - Those without which the activity could not take place
 - Those highly desirable to enhance the quality of the activity
 - Those desirable if funds available
- Different types of resources should be compared to see which would meet the needs of the department in the most cost-effective way

How a needs-based approach could be implemented for books/AV:

- Initially base book/AV allocation to departments on average of reading list spending for previous 2 years plus list price inflation for books
- Move towards a full needs based budget over a period of 3 years
- Put remaining amount agreed for books/AV into general pot to be allocated on the basis of needs-based bids
 - Priority to be given to new courses or courses for which reading lists have not been received before (a provision for supporting new courses is currently made in the top slice)

- Set a maximum limit to the proportion of the general funds available for books/AV to be spent each quarter in order to keep an appropriate level of funds available throughout the year

See Table 2 at Appendix 2 for an example of how this could work for 2006/07. Based on spending in 2005/06 and allowing for inflation, the amount required to support purchases for reading lists would be in the region of £139,256 (this is core and recommended reading but does not include background reading). For 2006/07 the book allocation is £373,800. Of this, £121,255 is included in the top slice for categories of book expenditure such as official publications and standing orders and to support new courses. There would be in the region of £113,289 additional available to bid for.

Under the current formula-based model IDS, SPRU, and BSMS are allocated funds because of the teaching and/or research contribution they make to the University. Further discussion would be required to decide how or whether this should continue. The recommendations of the Information Services Review concerning library services on campus would also need to be taken into account.

Sustainable and non-sustainable resource requirements

Given the increasing demand for subscriptions to journals and electronic resources, a key requirement for future budget planning is a guarantee that there would be a level of sustainable funding to cover journal and electronic information subscriptions below which the Library Resources budget would not be allowed to fall. The distinction between meeting needs through sustainable funding or non-sustainable funding is really more significant for planning purposes than the division of the Resources budget into spending on books, journals or electronic resources.

Top slicing the budget for journals and electronic resources

Under a needs-based model the subscriptions to journals and electronic resources could continue to be assigned to department budgets, with some being top sliced. However, although there are advantages to this model, it does raise problems that could be resolved by top slicing all journal subscriptions.

Advantages of assigning subscriptions to department budgets:

- Departments are made aware of the costs in their subject
- Easier to ensure specific departments do not extract an unfair proportion of the total budget

Disadvantages of assigning subscriptions to department budgets:

- Lack of continuity of provision - journal titles are sometimes cancelled by a department in one year and then, after a gap, taken up by another a few years later
- There is often insufficient time to assess publisher's deals between the announcement of the deal and setting departments' budgets for the new financial year
- The effect of the difficulty in providing accurate estimates of subscription costs is exacerbated at department level budgets
- Illusory transparency for journal subscriptions - non-cancellation clauses in bundle deals, subscriptions being sometimes shared with other departments, means a department may not actually be free to cancel a subscription
- 'Big deal' electronic bundles covering many subjects are difficult and often impossible to divide across departments and so are often top sliced

Advantages of top slicing all subscriptions:

- Make more effective use of bundled deals for journals
 - Bundled deals often multi-disciplinary
 - Bundled deals may have non-cancellation clauses which means departments cannot cancel journals which they may want to in order to save their budget
- Make it easier to cope with above RPI inflation for journals in predicting budgets, especially for high cost STM journals
- A centralised budget would allow greater flexibility for the purchase of e-journal bundles
- Make it easier to support move to e-only for journals
- Make it easier to feed subscriptions into Library Resource budget requirements for sustainable funding
- Facilitate the creation of a 'core collection' of journals that would meet the teaching and research needs of the University in a holistic manner

See Table 3 in Appendix 2 for the effect top slicing journal and e-resources would have had for the 2005/06 LR budget.

A 'core collection' for journals A top sliced journal collection could be managed on a needs based model by establishing a core collection of journals to which journals would be assigned if they met certain criteria. The value of journal bundles and databases would be assessed according to the number of 'core' journals they contained and the added value of their additional 'non-subscribed' titles.

Criteria for classifying a journal as core:

- Statement from tutor that journal is used in teaching
- Significant frequency of citation on reading lists
- Statement from Department endorsed by Dean that journal is essential for research
- Significant frequency of requests via ILR
- Titles used by Sussex academics for RAE assessment
- Title identified as a 'gold standard' title in its subject
- High use electronic journal
- High Impact Factor
- Benchmarking against collections in other 94 Group Universities
- Each criterion needs to be given a weighting according to its importance
- Each journal gets a score based the number of criteria met and the combined weighting of these criteria
- Use a scale to rank scores for each journal:
 - Must be funded to meet essential teaching/research goals and objectives
 - Highly desirable
 - Desirable if funds available

In order to establish a core journal collection it would be necessary to agree a proportion of the LR budget to be allocated to journal subscriptions and subscriptions to e-journal packages and journal databases. Initially this would have to be based on current spend but could move towards a needs-based budget using the above criteria. It would probably take a period of 3 years to establish a core collection.

Appendix 1: book and journal costs across disciplines

Table 1a: UK Academic Book Prices (LISU, *Average prices of British academic books, July-December 2005*)

| | 2005 average price (£) |
|-----------------------------|------------------------|
| All Humanities | 39.64 |
| All Social Sciences | 49.73 |
| All Applied Social Sciences | 44.66 |
| All Biological Sciences | 56.02 |
| All Pure Sciences | 55.23 |
| Computer Science | 42.05 |
| All technology | 67.65 |
| All Medicine | 48.19 |
| All books | 43.85 |

Table 1b: Journal prices 2007 published by Swets

| Publisher region | Subject | Average price | Currency |
|------------------|-----------------|---------------|----------|
| UK | Humanities | 120.87 | GBP |
| Uk | Medicine | 501.14 | GBP |
| UK | Science | 969.40 | GBP |
| UK | Social Sciences | 496.86 | GBP |
| UK | Technology | 597.45 | GBP |
| USA | General | 325.53 | GBP |
| USA | Humanities | 188.32 | USD |
| USA | Medicine | 793.05 | USD |
| USA | Science | 2,333.83 | USD |
| USA | Social Sciences | 590.10 | USD |
| USA | Technology | 905.41 | USD |
| USA | General | 276.92 | USD |

Appendix 2: Library Resources Budget

Table 1: relative expenditure on Journals, e-Resources, Books/AV by School (figures for e-resources include journal packages and databases containing journal articles)

2005/06

| School | Budget | Journal subscriptions | Journal subscriptions as % of budget | E-resources subscriptions | E-resources subscriptions as % of budget | Available for books/AV (Adjustments in parentheses)* | Books/AV as % of budget |
|---------|----------|-----------------------|--------------------------------------|---------------------------|--|--|-------------------------|
| Hums | £199,855 | £52,568 | 26% | £40,329 | 20% | £106,959 (117,141) | 54% |
| LifeSci | £204,555 | £161,295 | 79% | £40,718 | 20% | £2,542 (10,702) | 1% |
| SciTech | £157,084 | £87,655 | 56% | £50,989 | 32% | £18,441 (19,080) | 12% |
| SI | £120,170 | £61,940 | 52% | £16,693 | 14% | £41,536 (61,934) | 35% |
| SocCul | £154,891 | £57,166 | 37% | £19,737 | 13% | £77,988 (94,893) | 50% |

2006/07

| School | Budget | Journal subscriptions | Journal subscriptions as % of budget | E-resources subscriptions | E-resources subscriptions as % of budget | Available for books/AV (Adjustments in parentheses)* | Books/AV as % of budget |
|---------|----------|-----------------------|--------------------------------------|---------------------------|--|--|-------------------------|
| Hums | £208,185 | £57,453 | 28% | £43,965 | 21% | £106,767 (110,759) | 51% |
| LifeSci | £217,033 | £175,776 | 81% | £40,794 | 19% | £463 (14,893)** | 0%** |
| SciTech | £161,778 | £95,513 | 59% | £42,163 | 26% | £24,102 (24,177) | 15% |
| SI | £130,602 | £69,504 | 53% | £25,292 | 19% | £35,806 (55,806) | 27% |
| SocCul | £165,477 | £60,336 | 36% | £24,080 | 15% | £81,061 (94,512) | 49% |

*Actual amount available may be supplemented from New Courses fund in top slice. In 2005/06 adjustments made to journal subs from top slice

**Additional funds available to support book spend if required for 2006/07

Table 2: Estimates for reading list expenditure for 2006/07

| | 2005/06 reading list expenditure £ | +5% inflation £ |
|---------|---------------------------------------|--------------------|
| Hums | 45,652 | 47,935 |
| LifeSci | 7,621 | 8,002 |
| SciTech | 16,684 | 17,518 |
| SI | 15,511 | 16,287 |
| SocCul | 46,870 | 49,214 |
| Total | 132,338 | 139,256 |

(Reading list expenditure covers core and recommended reading but does not include background reading).

Table 3: potential effect that top slicing journals and e-resources would have had in 2005/06

| | |
|--|------------|
| Total LR budget: | £1,582,768 |
| Original top slice estimate | £672,258 |
| Journal estimate for Schools | £424,897 |
| E-resources estimate for schools | £198,643 |
| Revised top slice: | £1,295,798 |
| Remaining for Schools to spend on books/AV | £286,970 |
| Note that some of the top slice is allocated to books/AV, e.g standing orders, official publications and support for new courses | |

Appendix 3: Zero-Base Budgeting and needs based budgets

Zero-Base Budgeting

- “a planning and budgeting process which requires justification of an entire budget request in detail without reference to what has happened in the past.” Chen, Chung-Chih. (1980) *Zero-based budgeting in library management*. Ch. 2, p.12. London, Mansell
- Funding based on requirements of specific activities
- Activities analysed in relation to achieving strategic goals and objectives
- For each activity ask:
 - What does it cost?
 - Could it be done for less?
 - Could the goal or objective to which it relates be achieved in a different way?
- Activities which share a common purpose are grouped together to form ‘Decisions Units’
- For each Decision Unit calculate the costs of resources and other associated costs
- Decision Units are then ranked according to their cost-benefit for the organisation
- Decision Units grouped into
 - Those whose funding should be guaranteed
 - Those which should be funded if money available
 - Those unlikely to be funded
- ZBB has been applied in some libraries in the USA
- Aston University Library conducted a ZBB exercise in 1985/86
- The British Library conducted a ZBB exercise in 2000
- Examples of Decision Units used in Library ZBB exercises
 - Director
 - Acquisitions
 - Cataloguing
 - Enquiries
 - Inter Library Requests

ZBB tends to be used as a tool when undertaking a strategic review rather than as a regular process for allocating budgets. A major constraint against using it regularly is that it is highly staff intensive and time consuming. It does not seem a suitable tool for allocating resources on a year by year basis. It is doubtful that it could be integrated into the timetable for an

annual planning round. The examples I have looked at apply it to services rather than subject budgets. I have found no examples of ZBB being applied to the way in which a Library Resources budget is allocated to specific subject areas. However, the philosophy behind it could inform a new model for managing the Library Resources budget.

In practical terms, the nearest equivalent to ZBB for a Library Resource's budget is to adopt a needs based approach. There is an example of this approach at the University of Teesside Library. For each department the Library prepares an annual Needs Proposal. The proposal analyses any issues concerning the department arising from reviews, looks at student numbers, reviews any specific training provided by the Library, reviews current electronic resources and journal subscriptions and the proposals for spending on books and AV. Resource requirements are costed. Deans review the needs proposals before they are sent to the Directory of Library and Information Services. If the total cost of requirements exceeds the library resources budget the Director negotiates with the Departments to reduce their requirements. This system has been working successfully for 5 years. Needs proposals would not have to be as comprehensive as they are at the University of Teesside. Further discussion would be required to decide how this approach could work at Sussex. However, much work on determining means of obtaining information about teaching and research needs has been undertaken by the Library with the support of the departments over the past year and this provides a firm foundation on which a needs based approach could be developed.

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