Academic library resource management: strategies for the present and future

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ACADEMIC LIBRARY RESOURCE MANAGEMENT:
Strategies for the present and future

by

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Published works submitted in partial fulfilment
of the requirements for the award of
the Doctor of Philosophy degree of
Loughborough University of Technology.

May 1989

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INTRODUCTION

Title: Academic Library Resource Management: Strategies for the present and future.

Background

The effective management of academic library resources is of paramount importance, especially at a time when budgets are under ever increasing pressure. Correspondingly, there is a continuing requirement for methodologies and information to assist in the formulation of strategies which will at least facilitate the defence of budgets, at best justify differing or improved service, and generally maximise the existing resource base.

The work selects and examines examples of existing procedures within academic libraries; the practicality and feasibility of differing approaches within the library services; the potential for sharing and maximising resources with other autonomous libraries; and information which could assist managers in the support of the continued development of the service. In doing so the work develops new frameworks and methodologies which could be used in further research.

Within these parameters the thesis has concentrated on an analysis of the alternative provision of resources in the area of serials management and the decision making principles associated with purchase and retention; a regional approach to cooperation via a study of cost effectiveness and benefit concerning collection management, staff, buildings and technology; staffing as related to cooperative training; and the provision and availability of published statistical series as an aid to the management decision making process.

This introductory chapter therefore summarises and synthesises the various aspects and potential values of the research findings to the academic library manager; strategies for the future are suggested and prioritised in the context of possible external factors and constraints. The major findings of other research studies are not summarised here since these have been discussed at some length within each of the sections of the thesis.

Serials Management

In academic libraries, and in particular universities, the escalating costs of serial subscriptions caused, inter alia, by the combined effect of inflation and the vagaries of exchange rates, have resulted in the cost of serials subscriptions accounting for an ever increasing proportion of the budget. In many academic libraries the increases have been
absorbed by the transfer of money from other heads such as the monograph budget, until eventually the only option left is to cut the number of subscriptions. At some stage, sooner or later, the librarian is inevitably faced with the decision to reduce the number of titles. This is often seen as a last resort: no systematic planned review having been implemented.

In such circumstances two major questions can be posed. Firstly, "Can any fundamental or radical reappraisal of serials strategy be realistically considered, and if so, what could be the possible implications?" and secondly "How could librarians come to more effective decision making about what to cancel or retain, given that a radical rethink, for whatever reason, is deemed inappropriate?". The research study in this thesis (Item C1) considered the hypothesis that the present pattern of serial provision is sub-optimal because many journals which are acquired (and usually bound and stored) are never used, while articles in journals that are not acquired have to be obtained elsewhere; and that a collection of articles (or combination of relevant journals and articles) could meet demand at a lower cost. The possibilities and opportunities offered by the electronic transmission of journal articles were also considered. The research proposed and analysed various models of acquisition policy and associated costs. A survey of serial usage at Loughborough University was also carried out which confirmed the hypothesis that the Library was apparently buying a high proportion of waste paper. The findings demonstrate that the price of an electronic journal article would have to be very low, under £1.00 at 1986 prices, to satisfy the known demand, and that browsing which formed the main use of the collection would be lost. The research through its modelling application established that a complete switch to electronic journal article transmission in the present state of technological development and costings would leave the librarian and the user at a severe disadvantage. The study further highlighted that if publishers move to a strategy of publication of electronic journal articles, librarians could respond by establishing a core collection of serials accounting for some 25% of the present total serials budget. This would satisfy 75% of the demand. Such a model would take account of 80% of known browsing demand. The immediate value to the librarian of this strategy therefore is somewhat limited. It indicates that, even if one could identify core material, it would be impossible to meet the currently identified demand. This approach then, could be viewed as a particularly defensive strategy, its adoption being viewed as a damage limitation option. It is far from ideal and raises the problem of not being able to satisfy a proportion of browsing.

Since this radical approach offers no immediate panacea, attention was turned to the second question of how librarians might come to the most effective decision making process by trying to optimise the existing serials collection (Item C3). In this context survey information obtained in the previously discussed study was used. Chemistry and
Economics serials were chosen for further analysis. Chemistry serials form a bibliographically discrete and traditional scholarly collection of core journals, while Economic serials form a relatively small number of core titles within a larger collection which includes 'grey' material.

How then could an academic librarian make the most effective use of serial resources given the nature of the collection, the pressure of financial constraints and academic reluctance to entertain the cancellation of material? The collection of relevant management information about the serials could be a time consuming and costly exercise and one which librarians are increasingly reluctant to undertake given the limitations mentioned above. Librarians carrying out retention and cancellation exercises frequently concentrate on high cost subscriptions and selectors are often loath to add new high cost subscription titles to the collection. The research took into account the total cost associated with the acquisition of each serial subscription i.e. cost of subscription, processing, binding, storage and overheads. This totality of approach is rarely considered by librarians. The figures revealed that subscription cost alone do not convey the whole picture since there is no direct correlation between cost of subscription and cost of the other overheads. Cancellation of high cost titles, in the absence of knowledge of related costs could be a false economy. Other methods of assessment were analysed, for example cost per issue, cost per article, and cost per use. It was shown that cost per issue by itself was not of particular value, however it could yield useful information when compared with the cost of interlibrary loan application. Thus in Economics where there was evidence of cost per issue of under £1.00, and the total cost of an inter-library loan was £2.52 (1986) then only one use would make its acquisition cost effective. In the absence of use statistics, the librarian would have to make the judgement of potential use. It should be emphasised that this is judged on the basis of one year's subscription and one year's use. Further modelling would be required for any retrospective consideration of an optimal collection. Similarly, cost per article could be used in the same way as cost per issue and judgement about use but the time involved in counting number of articles, some have over 1000 articles per annum, was not the most cost effective method of examining optimal provision and thus does not lend itself to further serious consideration.

Above all, the research indicated the major factor in establishing an optimal collection is information about actual use. Even a title with a low cost and low overheads of processing, binding etc. is relatively expensive if it has no use. For the purpose of the study a 10% sample of use was undertaken over a period of one year. This is an expensive and time consuming approach and cannot be afforded by libraries in the normal course of events and, indeed, a 10% sample of use can present problems of estimation of error when
grossing up on relative small numbers. Further a study of present demand cannot guarantee future use patterns, it does however, especially if carried out over more than one year, indicate some possible trends. The research revealed that 47% of Chemistry titles and 55% of Economics titles were not consulted.

The findings suggest the employment of use studies as a constructive way forward, but this is to be tempered by the practical considerations of cost of surveys and the reliability of the information. The findings furthered analysed the true cost associated with so called "free subscriptions". It is suggested these should be called "zero subscriptions" and caution is urged in their acceptance unless there is some likelihood of use.

The work also identified that the additional cost of processing, storage, binding etc. did not significantly alter the overall cost of high subscriptions (Chemistry over £300 p.a.) but in the case of titles costing around £40 p.a., expensive for Economics serial titles, it added significantly to the overall cost. Binding cost (at £10 approx. per volume and processing) did add significantly to cost. It would appear that library managers would benefit from a reassessment of their binding policy.

The findings suggest the need for further research associated with use studies, especially longitudinal approaches, and for indepth studies of browsing habits and the associated cost benefit.

Co-operation

Turning from consideration of individual library activity to a regional approach, cooperation has been the subject of lengthy debate and discussion in the professional press. Assertion and counter association about the extent, value, and benefit to be obtained have been promulgated.

Claims vary from the opinion that cooperation would increase the resource base at a lower cost than presently incurred by each individual library, to the view that significant return from cooperative ventures could only be obtained by an increase in overall expenditure. The professional literature is of little, if any practical value to librarians when trying to substantiate some of the claims made about the benefit of local library cooperation-detailed studies which examine cost benefit and cost effectiveness are practically unknown. Consequently how could the hard pressed librarian establish the benefits, disbenefits and value, or, indeed analyse the implications associated with a desire to regard the entire resource of a geographical area as a common pool?
The regional study of cooperation across the binary divide (Item A1) addresses the above points and provides answers which are relevant to the East Midlands of England. In coming to its conclusions it gives some indication of various aspects which need to be borne in mind in any such study and therefore offers a methodology which could be employed. The study was carried out through an examination of the areas of document supply, transport, access, acquisitions and storage and application of new technology.

The analysis revealed that successful cooperative endeavour in the East Midlands region requiring the user to travel to other libraries to obtain material, would involve additional financial expenditure to support the necessary infrastructure and maximise the resource basis. Cooperation within the East Midlands academic libraries would have to involve inter alia agreed access and appropriate borrowing policy, a monitoring of any access, creation of machine readable records (retrospective conversion), reliable cataloguing information to establish holdings and current availability, some guarantee of communication access to bibliographic records and transport. Hence on a regional basis, to ensure at least some basic level of efficiency and improvement of access to the resource base, there would need to be some form of infrastructure which would vary according to local circumstances. In the instance of the East Midlands this could amount to several hundreds of thousands of pounds of expenditure (including retrospective conversion). The need for an infrastructure could be reduced by the confinement of cooperation to local rather than a regional area (i.e. within walking distance). In such cases providing there is motivation from, and incentive for, the individual to use these additional facilities, then there might not be any need for transport, networking, remote information on catalogue records and availability. However, problem of access assume obvious importance, and the possible consequential use of each other's library assumes even greater importance. Action research on implications and of costs such an open door policy would need to be carried out.

As well as viewing cooperation from the standpoint of 'user to the material', the study examined 'material to the user'. In this instance the reader would remain in their home library and receive the material supplied, wherever possible, by one of the other cooperative libraries. Thus, would there be any possibility of providing the material required by readers from within the resources of the libraries in a more cost effective manner than the present pattern of loan from the British Library Document Supply Centre (BLDSC)? The study revealed that it is more cost effective to obtain material from BLDSC, despite the knowledge that upto 26% of the material in demand, could have been supplied by one of the cooperative libraries. Modelling suggested a range of prices at which, if BLDSC moved towards fuller cost recover, the regional group would have to
reconsider the possibility of supplying a percentage of material from within their own resources. This could also involve detailed examination of the possible cost-effective considerations of cooperative acquisition and storage.

The study provides a framework and methodology which other groups of libraries could adopt.

A national review and assessment of the training and cooperation was also undertaken as a separate study (Items B1-B6). An appraisal of the growth and development of cooperative training suggests that the majority of cooperative training schemes emerged in Great Britain during the 1970s, the rate of growth slowing in recent years with at least two being formed as late as 1986.

What value can be placed on the work of cooperative training groups? So far it has proved difficult to quantify the effect of cooperative training. The recurring sentiments are that it is a good thing yet evaluation in quantitative and particularly qualitative terms is lacking. The review in this thesis examined the perceived claims of success of cooperatives. No common theme could be identified which guarantees success. It is interesting to note that the South West Association of County Libraries (SWACL) Training Officers Group appears to have been carrying out a number of successful ventures and perceived itself successful yet it has been suspended by its chief officers who deemed it not to be so.

The plateau stage has been reached in the case of most cooperative training groups, the strategy now required is to strive for the summit, otherwise the SWACL experience might become commonplace. The strategy would embrace reassessment, innovation and ability to marshal arguments to promote and defend their activities.

Management Statistics

The research in the thesis (Item D1) addresses itself to the current provision and future policy of statistical series in library and information services. The present situation was found to be confusing, uncoordinated and unsystematic. The research further identified the different, and disparate needs of those who require and contribute to the present situation. At a local level meaningful information is required to support and defend, by means of comparison and contrast with libraries of a similar kind. At a national and international level, the information is required for an overview of developments of particular types of library and as a means of quantification and assessment of the profession as a whole.
Since government is unable or unwilling to fund such comprehensive and systematic collection of statistics, the programme for successful implementation of a systematic and coordinated approach is not so readily apparent. Strategies are suggested for a self help programme which includes the creation of a manual of guidance for libraries together with the need to research performance measures. Options to facilitate progress, for example, a national forum, statistical centre and coordinating committee are all suggested.

Conclusion

Various strategies and their value for academic library managers have been discussed with specific reference to cooperation, serials management and management statistics. It is now apposite to consider those strategies in terms of their relative importance, their relation to each other and in the context of the external influence which might impinge upon their implementation.

There is a demonstrable need for a more rigorous examination of library operations which should include costs, effectiveness, benefits and value which can be obtained from both existing and possible future practice. The work has highlighted that there is the possibility of distinct and direct return to be obtained from the application of strategies associated with serial optimisation. The planning and implementation being largely within the control of the library manager although it may take courage to translate the findings into practice. In some respects the catalyst is likely to be a formidable financial crisis. Vickery's prediction, six years ago, that the continuing increase in the cost of journals, the growing bibliographical awareness of users and increase cost of lending will make university libraries as presently constituted and managed operation non viable still has yet to be witnessed and one suspects it will not happen in the immediate future. But if changes of policy are forced upon the library then the more radical strategies of serials management discussed in this thesis could be employed to limit the severest effects. The research indicates that, whatever the future, there is a requirement for the librarian to be more systematic in the collection of management information, more responsive to change, and more cost consciousness in their deliberations. Librarians will need to carry out studies of the use of their collection, not necessarily complete reviews, but perhaps, analysis of particular titles with a view to identifying a core collection, even if this were to involve a "bottom up" approach or zero based budget strategy. The cost of surveys can be an expensive proposition but simple expedients such as removing titles from public access and then monitoring use of inter library loan requests over a defined period is worth consideration. The strategy of tying serials and interlibrary budgets closer together needs to be considered. The serial strategies have involved not only potential damage limitation
but also the management of the effective use of the existing stock - the desirability of the continuance of the purchase and maintenance of long perfectly bound runs of serials may not be relevant if the material is suboptimal. Immediate savings could be made from a re-examination of binding policy.

There is, and has been, a ready acceptance from those involved in cooperative training that it is "a good thing" and indeed this may be true. The strict economic considerations suggest this has yet to be proved satisfactorily. The effectiveness of cooperation and its tangible success is hard to quantify. At present, in the training area, there is little hard evaluation of its value; there has however been some querying of its role. In the present climate, management may not be so ready to accept its unsubstantiated continuance when their pressure for resources demand prioritising of various activities. There is a need for library managers to reappraise the work and benefits of the training which should include some investigation of performance measures or indicators. The relative political importance of Library and Information Plans (LIPs) may make it desirable to incorporate some dimension of cooperative training within its aspirations.

The work on regional cooperation highlights the complexity and interlinking of the various aspects which could readily be embraced within its ambit. The finding suggests that sharing without charges could present imbalances of supply and demand and that some sort of framework and monitoring will have to be devised to provide the necessary checks and successful implementation of any agreement. In particular, at the initial stage, a strategy which incorporates an access and borrowing policy needs to be considered, and upon implementation, an analysis of its effects on each of the library services.

The work related to document supply has proved that within the existing framework no overall economies could be made in the East Midlands by organising a regional interlending scheme for cooperative supply of material, however, the present concern that BLDSC will have to move towards fuller cost recovery will give added importance to the desire to keep methodology and price structure of a local scheme under review. The importance of this potential development has already been recognised by the commissioning of the consultants, Coopers and Lybrand, to carry out a study of the various elements of cost associated with interlibrary procedures; the methodologies employed in the East Midlands study have been incorporated into that research. In addition a strategy which recognises the possibility of a courier service, alternatively expressed as contracting out, would need to be addressed as a cost effective alternative given increasing financial pressures.
The requirement for, and importance of management statistics, has been recognised within certain sectors of the academic library community *viz* universities and polytechnics, demonstrated by their continued development and refinement of their collection and dissemination of statistics. A national strategy appears to be unattainable without financial support at a national level. As a consequence individual initiatives need to be encouraged, although the information collected in the university and polytechnics will not be strictly comparable with other sectors, it does have importance and meaning within its interest group. A strategy of concentrating on development of performance indicators will contribute directly to the management of academic library resource. It is to be regretted that there is hardly any statistical information specifically related to library resources in the colleges of further and higher education. A strategy of self help within that grouping appears to be the best means of developing the required information.

Overall this thesis has sought to demonstrate various ways of developing and challenging aspects of academic library resource management and has suggested ways in which the busy librarian could promote or make use of strategies. If the manager is solely concerned with reducing costs, while preserving a standard of service, then the strategy associated with serials management offer a possibility of real returns consistent with effort expended. For those who are more concerned with overall resources, for example making or defending any particular case, then the development of improved statistics and relevant performance indicators assumes a higher priority; it can be argued that is the most important and central strategy to be followed, since without the ability to organise support and defend, then the seemingly more parochial consideration of serials management will become largely irrelevant since failure to command appropriate overall resources, could in the extreme, see the disappearance of finance for the maintenance of any serials collection.

If the desire is to widen the resource base then cooperation offers distinct possibilities, but it is conceivable that effort expended at a regional level could involve considerable financial expenditure, unless an appropriate infrastructure is already in place. However this approach may be considered somewhat paradoxical since although cooperation might be encouraged at a national level by government, at local level academic institutions are beginning to have to compete fiercely with each other for students and finance. In such circumstances the desirability of, and working towards cooperation might need to be replaced by hard headed strategies which embrace a more insular and single minded approach whereby commercial charges are devised for use of resources, whether it be for the loan of material, or, for the on site use of various services as expressed through turnstile admissions!
LIST OF WORK SUBMITTED

GROUP A - CO-OPERATION - Regional Approach

Item A1 MACDOUGALL, A.F., WHEELHOUSE, H and WILSON, J.M.
A study of various aspects of cooperation between the East Midlands University and Polytechnic Libraries.

Item A2 MACDOUGALL, A.F.
Academic library cooperation in the East Midlands: the serials and interlibrary loan dimension.

Item A3 MACDOUGALL, A.F., WHEELHOUSE, H. and WILSON, J.M.
Academic library cooperation and document supply: possibilities and considerations of cost effectiveness.

GROUP B - COOPERATION - Training

Item B1 MACDOUGALL, A.F.
Library Education and Training.

Item B2 MACDOUGALL, A.F.
Training provision in academic libraries.

Item B3 MACDOUGALL, A.F.
The Establishment of Local Cooperative Training Schemes.
(Guidelines for Training in Libraries).

Item B4 MACDOUGALL, A.F.
Cooperative training.
Item B5  MACDOUGALL, A.F.
Cooperative training: current provision.

Item B6  MACDOUGALL, A.F.
Cooperative training: the present and the future.

GROUP C - COLLECTION MANAGEMENT: Optimization, serials and electronic articles.

Item C1  MACDOUGALL, A.F., WILSON, J.M. and WOODWARD, H.M.

Item C2  MACDOUGALL, A.F., WILSON, J.M. and WOODWARD, H.M.

Item C3  MACDOUGALL, A.F. AND WOODWARD, H.M.

GROUP D - MANAGEMENT INFORMATION - Statistics

Item D1  MACDOUGALL, A.F.

Item D2  MACDOUGALL, A.F.
Statistics in library management.
Outlook on research libraries, 6(9), 1984, 5-8.
MACDOUGALL, A.F.
Library managers - are you getting the statistics you need?
*Outlook on research libraries*, 7(1), 1985, 6-7.
STATEMENT OF INVOLVEMENT IN AND RESPONSIBILITY FOR PUBLISHED WORKS.

In accordance with the University requirements to stipulate precise involvement and responsibility for jointly authored works, the following information is given:

(i) GROUP A - Cooperation - regional

Item A1: The formulation and writing of the proposal on regional cooperative research (see Item 1, Appendix A), which culminated in the research report, was the author's sole responsibility; the proposal was subsequently endorsed by the 5 Chief Librarians, and submitted by them to the British Library for funding purposes. I assumed responsibility as the project leader. The actual day-to-day collection of information for the major survey was carried out by Helen Wheelhouse, the research associate, under my general direction and supervision. The framework for the final report and the majority of the draft was written by me, including the recommendations and conclusions. Helen Wheelhouse carried out the literature review and the writing associated with cooperative acquisition section. John Wilson was associated with the handling of formal statistical areas particularly regarding the document supply section.

Item A2: Sole author.

Item A3: Wrote draft which Wheelhouse and Wilson amended as appropriate.

GROUP B - Cooperation - Training

Items B1 - B6: All work in this section is entirely my own.

GROUP C - Collection Management

Item C1: The feasibility study on journal versus article acquisition, which established the need and way forward for the subsequent research project, was my responsibility. I was the project leader of the research team. The investigation, analysis and research report was a joint effort in which the authors take joint credit.

Item C2: The draft was written by J.M. Wilson but embraces the work of all three authors; it was then revised in the light of my and the co-authors' suggestions.
Item C3: The proposal for the serials optimization work was my responsibility. The investigation was a joint effort with the co-author; the report was drafted by me with subsequent comment and amendment from the co-author.

GROUP D

Items D1 - D3: All work in this section is entirely my own.

ii) The co-authors have been consulted about the specific wording in respect of joint authorship and have agreed the relevant wording as stated above.

iii) None of the publications contained herein has been previously submitted for a higher degree.