

Activity-based costing as a performance tool for library and information technology services

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Abstract

The Australian government has long signaled its intention to build performance indicators into the resource allocation process for higher education. Through the early 1990s the federal government gave strong indications to the sector that higher education places might in future be allocated on the basis of cost performance. In 1991, the Federal Government commissioned Russell Linke to produce a report on performance indicators in higher education. The present federal government, under Prime Minister Howard, has introduced cuts to higher education funding and the continued pressure for efficiency gains has seen an increased desire on the part of government for scrutiny of costs on a comparative basis. The Relative Funding Model, introduced in 1991, has never been seen as based on "ideal" teaching costs, and since that time the realisation of the potential of information technology in the learning process has suggested it might be time to revisit these and other issues. In 1998 the federal government again sponsored an inquiry into the sector, this time in the application of activity based costing as the basis for comparative assessment, resulting in several pilot studies in 1999-2000. This paper reviews the application of activity based costing to library and information technology services at the University of Newcastle, which was additional to but concurrent with these 1999-2000 studies.

Introduction

During early 2000, the Information and Education Services Division (IESD) of the University of Newcastle undertook an activity based costing (ABC) study of its information technology and library services. The study grew out of a desire for better information to underpin planning and budgeting in the Division, and the opportunity to assess performance in the information technology and library services it provided to the University. The latter included an opportunity to benchmark with other higher education institutions. The outcomes of the study were the development of an ABC model specific to the IT and library functions, and a report of the study which analysed the data and provided recommendations to the Division's management team regarding implications which might be drawn from the study. An edited version of the study report was subsequently made available to the higher educa-

tion sector through the Australian Federal Department of Education, Training and Youth Affairs' (DETYA) website.

This paper outlines some of the issues identified in using an activity based costing methodology within a higher education institution and the implications of this for improved data collection and benchmarking of activities. Briefly, it illustrates the way in which the substantive findings from the activity based costing study at the University of Newcastle facilitated questioning of the underlying assumptions and approaches to the provision of information technology and library services within a university context. It also considers some of the organisational and cultural impediments to successful implementation and acceptance of costing and other performance measures in higher education. The lessons learnt are relevant to any organisation where services need to be provided within a constantly changing environment that requires strategic choices be made in terms of the services offered and activities supported. The author would like to acknowledge the contributions of Ms. Linda O'Brien, Vice President-University Services and Mr. Jim Cleary, Executive Research Officer, in the preparation of this paper.

Background to the ABC study at the University of Newcastle

In 1993 the Federal Education Minister suggested that future higher education places might be redirected away from lower performing universities as defined by unit costs. Subsequently, in 1998, the Australian Department of Education, Training and Youth Affairs (DETYA) commissioned consultants Ernst & Young, to survey universities on a number of issues related to their costs and budgeting systems. In particular, Ernst & Young were asked to investigate the adequacy of universities' costing information; to propose a costing methodology for higher education for discussion at a representative workshop and then to test an agreed methodology in three participating universities. The first part of this process led to two reports prepared by Ernst & Young in 1998. These reports documented, among other matters, a desire for better costing information to "assist the decision making process within the university, to identify financial anomalies within university budgets and strategies and to assist with pricing decisions with regard to the services and activities the university offers" (Ernst & Young, 1998b: 3).

Ernst & Young proposed an activity based costing and management methodology which was trialed in 1999 at three universities; Charles Sturt University in regional New South Wales, Murdoch University in Perth, Western Australia and RMIT University in Melbourne, Victoria. The priority areas where DETYA was interested in looking at costing data were courses, units of study, student types and research grants. The three individual universities' cost studies focused on human resource management, facilities management and faculty costs. A final report, *A Study to Develop a Costing Methodology for the Australian Higher Education Sector. Final Report* (Ernst & Young May 2000) has been released.

Concurrent with the DETYA trial studies in 1999, the Information and Education Services Division at the University of Newcastle saw an opportunity to improve its own management processes while at the same time contributing to the momentum of strategic cost management within Universities. The Division initiated an activity based costing and management pilot project in February 2000, based upon the DETYA pilot study methodology already identified, with a focus on information technology and library activities. A particular emphasis of the Newcastle study was on using ABC as a tool for better linking the Division's plans with budgets and improving decision-making processes within the Division. The study was also seen as enabling more accurate determination of funding levels required for particular services through identifying reliable methods for tracking the costs of activities, and to contribute to continuous improvement through benchmarking with other higher education institutions.

The Information and Education Services Division was formed in 1998, following a merger of the University's Information Technology Division, the University Libraries and the academic development, educational technology and media units. Prior to the 2000 ABC study, the Division had established planning and budgeting processes which sought to link operational plans and budgets within the Division with the University's strategic goals. Many of the services of the Division are provided to faculties on the basis of service level agreements, under a charge-back or fee-for-service arrangement in some cases, and accurate costing data and systems are integral to the sustainability of such services. Performance related data and feedback is derived from a variety of sources, both direct and indirect, with the major source being the annual Composite Student Questionnaire (CSQ) which provides comprehensive feedback on performance within a standardised framework.

The ABC study provided an opportunity to test many of the assumptions underlying the costing basis of the service level agreements and other charge-back services, as well as providing the Division with better information in general on the costs of its individual

activities. Importantly, the study also provided information on the factors which might cause costs to change, or what the effect on costs of particular strategies or decisions might be. In areas such as information and communications technology or the provision of information resources, the constant demand for investment in new technology and the implications of this for ongoing client support and maintenance services introduce significant budgetary and planning consequences for management. Activity based costing can inform management of some of these consequences.

The historical context of budgeting and reporting in higher education

Budgeting and financial reporting within higher education has undergone a significant shift in recent decades. The historical emphasis upon management accounting within universities and other public sector organisations more generally, was one exclusively focused on financial reporting systems that tracked funds and expenditures against annual budgets. In many institutions this has now moved to a more proactive cost management model. Cost management, as Ernst & Young noted in their 1998 inquiry, is now increasingly seen as a strategic tool that provides information and feedback which helps to set goals and track progress towards their attainment in an environment of intensifying competition. Cost management has become more integrated with planning and management, and the redesign of cost systems to facilitate decision making and corporate strategic analysis and planning is a central tenet of this approach. In the corporate world, but increasingly within the public sector as well, new approaches to management accounting have emerged reflecting this new perspective. Activity-based costing and activity-based management are examples of these.

One of the problems confronting the higher education sector is that the financial and accounting systems in use have traditionally been concerned with meeting external reporting and audit requirements. These are important and essential, but they have provided minimal internal flexibility and information beyond just being "...an extension of the institution's general ledger" (Ernst & Young, 2000:7). The problem for managers in this context is that the internal accounting framework reinforces a particular approach to planning and budgeting, one that is not necessarily responsive to changing service demands or strategic initiatives. Equally, systems which meet financial reporting standards are not necessarily an indicator of effectiveness or relative performance in terms of educational or other outcomes.

In an earlier activity based costing study, undertaken by Ernst & Young at the University of Technology Sydney (UTS) using 1990 data, it was clearly identified

that the higher level data or existing benchmarks across the sector, such as Equivalent Full-Time Student Units (EFTSU) or student workload, were not a reliable reflection of the level of expenditure required to support a diverse student population (Doyle, 1994:42). Ten years on, however, these measures remain, by and large, the basis upon which university funding is allocated by the Federal Government. In most cases, they also form the basis upon which those funds are subsequently distributed internally across academic teaching departments and various support functions. There remains an increasing demand for institutional accountability in terms of university costs and performance, a point noted by Kober et al in a 1996 survey of the application of activity based costing to human resource management in Western Australian universities (1996:3).

Other Australian universities have initiated activity based costing studies at the whole of institution level, or more discretely in particular functional areas. The University of Wollongong is currently attempting a whole-of-university approach to activity based costing, as is Monash University in Melbourne. The Library of the University of Queensland has also used ABC for several years to analyse its services. At present, there has not been a great deal of information promulgated from these institutions about their use of ABC, no doubt due to these studies being still in-progress. As a consequence, there is little performance-related or benchmarking information shared among institutions as an outcome of these investigations.

The decade of the 1990's saw reduced government funding for higher education in many western countries, including Australia. In Australia, the decade was also characterised by continued pressure for efficiency gains and an increased desire on the part of government for scrutiny of the costs of higher education on a comparative basis. In 1993, the then Federal Education Minister suggested that future higher education places might be redirected away from lower performing universities as defined by unit costs. At an aggregate level, definition of comparative costs on the basis of courses, units of study, student types and research grants, is possible on the basis of existing data. This could presumably, and does in many instances, provide the data to underpin a distribution of higher education funds along these lines. However this does not provide institutions with relevant information which would inform them of what might be causing the differences in these comparative costs and nor does it adequately support strategic planning or decision making at the institutional level. The ABC studies carried out under the DETYA project in 1999 and 2000 provide a methodology which might inform different approaches to funding, but importantly, they also provide institutions with a substantial tool for planning, managing and benchmarking their services based upon that funding.

Some issues within the sector

Universities are probably not alone in being conservative and possessing a strong, historically-embedded culture. Ernst & Young, in their 1998 survey of higher education institutions, identified a number of factors which might impact upon a successful implementation of activity based costing (or any improved costing methodology for that matter). However, they noted that "the most prominent and persistent challenge" in implementing an improved costing methodology within the sector was "dealing with and overcoming cultural resistance" (Ernst & Young 1998b, p. 4). An earlier study by Doyle (1994) also highlights the deep-seated difficulties in achieving sector-wide benchmarks when he cautions: "comparisons of costs, both between different activities within the one university, and between similar activities carried out by different universities, need to be treated with caution" (1994:51).

The Ernst & Young survey of universities in 1998 revealed that many staff considered that a costing methodology would not be accepted within the university. [*42% considered that a costing methodology would not be accepted within the university; and 29% felt that it would be accepted, with the remainder undecided in the matter.*] This high level of uncertainty and (in some instances) dismissal of, costing methodologies could be due to "the apprehension of cultural change that may need to occur during its implementation" (Ernst & Young, 1998b: 31). Universities remain highly individualistic and reluctant to share data and information, other than that which they are forced or obliged to for funding or reporting purposes. Examples of this are DETYA statistics or highly aggregated data of little value for effective benchmarking or comparison purposes or to inform continuous improvement.

Again, the 1998 Ernst & Young survey gave an indication of possible reasons underlying the reluctance of university staff to be involved in activity based costing and management methodologies. In some instances the comments provide an indication for the general dismissal among university staff of costing methodologies and benchmarking activities within the sector, but also of perceptions of a "uniqueness" prevalent in many institutions, which underpins either reticence or rejection of such methodologies. Questions raised by individual academics during the 1998 survey reveal a high level of concern for the potential for external interference resulting from the use of a costing methodology and for a loss of independence or diversion from their core activity. The following perceptions serve to illustrate the point:

Our university is unique and we will always need to be recognised as having special needs.

We want to benchmark but don't want other organisations reviewing the basic data or comparing individual university performance without taking into account unique differences and strategies (Ernst & Young, 1998b: 50-51)

The question of how data might subsequently be used is important, but so too is public accountability and transparency in use of public funds. The final reports of the DETYA study reinforce this perception, with all performance-related data removed from the documents. [*Newcastle's report, similarly, does not contain the activity-specific data either at the raw stage nor as it was generated through the reports using the ABC model. This level of detail is confined to the internal report.*] This may be wholly justified given the purpose of the studies being to develop and trial the methodology rather than a focus on the veracity of the underlying data and benchmarks. However, overcoming this inertia of attitude is a major challenge for the sector in its approach to and uptake of activity based costing and other performance management measures.

Commenting on a survey of UK higher education institutions and their use of activity based costing systems through the decade of the 1990's, Cropper and Cook noted that:

...no institution rejected ABC on the basis that it was technically flawed or that it could not be used as an effective decision aid within a university environment. The difficulties identified tended to be cultural rather than technical. (Cropper & Cook, 2000:65)

Reporting on a survey of universities in New Zealand, Fowler and Yahanpath noted that reasons for the non-adoption of ABC were attributed to internal institutional weaknesses rather than drawbacks of ABC itself (2000:28). A common difficulty noted in the New Zealand survey was in reaching agreement over cost drivers and collection of data, and that there were many activities for which no clear link between inputs and outputs could be identified. Further to this, and in particular, Fowler and Yahanpath identified that "higher level activities such as management and research and other multi-dimensional tasks are difficult, if not impossible, to measure" (2000:29-30). Debate will no doubt remain about whether or not these activities are impossible to measure, but it is clear, nonetheless, that they are difficult.

The UK and New Zealand experiences demonstrate that there is still much cultural resistance to costing methodologies and particular forms of performance measurement, and some suspicion of their usefulness

or applicability in that context. These experiences are repeated in the Australian context.

Universities encourage individuality and questioning among their academic staff, and not without purpose. The pursuit of scholarly enquiry and research are in large measure the basis of our university system. But to a university, an approach such as ABC "lays bare the activities performed and resources consumed by individual academics, administrators and departments", and it "renders transparent that which had been previously opaque" (Kober, et al, 1996:26). Kober also notes that there is often a general level of mistrust among academic staff for managerialist initiatives promoted by the "centre" - the centre being university administration or anything non-academic. Gaining support for the introduction of an ABC system, Kober notes, requires a shift from these professional secular interests towards an institutional ethos - a "corporate" culture. In this, the collective interests and goals of the university community are seen to be advanced by openness and less defensive postures towards resource allocation decisions (Litchfield, 1959:504 and Dufty, 1980:27, in Kober et al, 1996:26).

The ideal, and the objective in promoting ABC within the higher education sector is that comparative information about the costs of activities will aid universities in identifying opportunities for cost improvement. Additionally, comparisons of generic support services across different universities may enable the identification of more efficient ways of delivering services (Ellis-Newman et al, 1996:76) through performance benchmarking.

Informing planning and decision making

Jenny Ellis-Newman, reporting on an ABC study at two Western Australian university libraries in 1996, commented on a situation with which many in the public sector might be familiar and perhaps more broadly, many in the private sector as well. This is the tendency for operational units to develop in-house accounting systems to track expenditures (and income) in a more useful way (to them) and provide them with more useful information than that which can be extracted from the general ledger. This is what had occurred in the two university libraries which were the basis of the study. This is no mere bean-counting or quibbling over funds, but rather an attempt to improve the effectiveness of management's decision making in allocating and consuming resources relative to the organisation's needs, and to have access to information which supports this objective. The effectiveness of this depends upon the quality of the accounting information received (Ellis-Newman et al, 1996:77). Obviously in the case of the two university libraries, one may assume the accounting information available at the time was not delivering the utility they sought.

Reviewing the applicability of ABC in the US higher education sector, Gordon and Charles identify similar concerns, noting that the accounting information of the traditional system “directs the administrator’s focus to total expenditures within a particular budget or cost pool” (1997:25). In planning, and critically in linking organisational plans with budgets, new ways of developing plans, agreeing targets and outcomes and identifying the resources to meet those objectives are required. This is often counter to much of the experience of managers in the higher education sector, including academic managers, and equally, runs counter to the resource allocation culture of many institutions. Despite changes, both internal and external, in many instances the current or previous budget is used as the starting point for negotiating the next budget allocation. This may not be surprising, but to achieve improvements in service quality, to realign resources with changing organisational goals and priorities and to provide scope for addressing strategic initiatives, a higher level of understanding is required. We need to better understand where costs occur and how these might vary with the changes and choices the organisation might make regarding its strategic priorities.

One objective with the Newcastle ABC study was to provide a methodology and data which could underpin the planning process through effectively linking proposed expenditures with outputs. The outputs or activities would be identified as part of the annual planning and negotiating cycle, and data such as that obtained through ABC provides a higher level of understanding about the budget consequences of the choices made and decisions taken.

Within a highly innovative and changing area such as information technology, institutions are constantly faced with the gap between user expectations and wants, and the competing demands and limited availability of funds to support these. Outsourcing is one strategy employed by public and private sector organisations alike, although no conclusions should be drawn that either sector has made these decisions on a similar basis. In developing budgets that support institutional goals, deciding which activities should receive funding and those that may need to receive a lower priority requires choices to be made not just concerning the relative merits of each, but what is achievable within the organisation’s budget. To do so, managers must have access to information on the cost of the activities that they manage. However, as the Australian National Audit Office notes, it is unlikely that this information will be able to be derived from the general ledger (ANAO, 1999:13). The solution therefore, is for organisations to implement a costing system that will obtain this data accurately and efficiently.

At the planning level, one objective is to try to anticipate and recognise what impact the decisions and choices made will have on the future costs of the

organisation. This is not just in terms of the immediate budget effect, but can we predict with any level of assurance the ongoing maintenance and administrative costs associated with those decisions? For effective management in the public sector, managers will be increasingly exposed to decisions regarding restructuring of resources, outsourcing decisions and other actions in response to the increased emphasis on contestability, a point identified by the Australian National Audit Office (1999:48).

We tend to have good information about what resources we make available for particular functions, but less so about how those resources are consumed and converted into services and outputs, and what the spread of costs might be across the range of activities underpinning the service delivery. Equally, our traditional systems do not support in any significant measure, an understanding of what impact different levels of activity or demand or changes in circumstances might have on the costs within particular functional areas. In short, our traditional accounting systems may be useful as a financial condition report and to justify certain legal requirements, but they are not much use for strategic planning or operational management in higher education institutions. Activity based costing allows greater management insight into the reasons underlying cost behaviour, compared to the more traditional classification of costs by departments and cost centres which typifies most accounting systems in higher education, a point noted by Doyle in his early study of ABC in an Australian university (1994:44).

The Information and Education Services Division of the University of Newcastle was formed to allow the University to pursue the opportunities presented by the significant changes and challenges occurring in information and communications technology, and to provide a more integrated mechanism for delivery of a range of services within ICT and library functions, among other activities. The Division provides the University with a new approach to the provision of information technology, information delivery and the support of teaching and learning, and part of this is the capability to respond more quickly and more effectively to changes within the internal and external environment. The capability to move or realign resources to meet these changes is critical. One mechanism through which this occurs is the annual planning and budgeting cycle and systems such as ABC have the capability to provide part of the management information systems underpinning this.

Notwithstanding these ideal objectives, it needs to be recognised that within public sector service organisations, costs are less likely to respond quickly to changes in output or service demands. Staffing levels and capital infrastructure are generally committed in advance, sometimes by a considerable margin. Sometimes, as the National Audit Office notes, attempts are made to reduce the unit costs of outputs by

decreasing budgets or eliminating particular functions. However this often occurs without eliminating or modifying the drivers that give rise to these costs. As it is the performance of activities that drives expenditure, if we want to control expenditure then those activities must likewise be controlled (ANAO, 1999:57). Ellis-Newman and Robinson express similar concerns, noting that “traditional costing systems fail to meet (managers) requirements for accurate and detailed information about service costs because they are unable to explain adequately the relationship between costs and the events that cause costs to be incurred” (1998:379).

At Murdoch and Charles Sturt universities (two of the universities which participated in the DETYA ABC study) several key benefits were identified. Among these, the institutions noted that the ABC data and methodology provided a reasonable basis for comparison in developing performance indicators. The Newcastle study also identified this as a positive outcome from the study. The challenge, however, remains. This is the furthering of the use of ABC or other costing methodologies more broadly within the sector. Importantly, if the objective of benchmarking is to be attained, then agreement on common descriptors of activities and cost drivers, among other matters, will be essential if the performance indicators are to be meaningful and useable at the sector-wide level.

Murdoch University noted that a key benefit of the study was that it assisted in the development of pricing policies and highlighted where costs were not fully recovered. Murdoch also identified that the study and data “provides a basis for developing service level agreements with the Faculties” (Ernst & Young, 2000:10-11) and a point also identified at Charles Sturt University. At Charles Sturt, the study revealed:

deficiencies in the knowledge base of the University in regard to precisely what funds had been spent on achieving specific cost objects, and the need for more refined data gathering protocols; (and)... drew attention to the need for accurate costing for fee-for-service activities ... (Ernst & Young, 2000:11)

The IES Division at Newcastle uses service level agreements with faculties in negotiating the services to be provided to support specific goals and outcomes in those areas. The charges underpinning these agreements were in many instances either confirmed or challenged by the ABC study results. The study results also served to provide an information base against which traditional or core services might be reviewed, and equally, against which the efficiency of new technological investments might be assessed. An example of this was the University’s investment in systems which provide for a high level of user independence and hence do not place significant demands on staff to mediate or provide the service. The ABC study most

clearly demonstrated the value of some of these investments, and provided data to underpin capital investment and change management strategies in certain areas of the organisation.

In the US, the information technology division of Indiana University has long managed its services and resources using ABC data for strategic and operational management of its facilities. The IT division balances this with a well established client feedback survey to ensure it is effective in meeting their needs. The two systems effectively underpin each other (Peebles et al, 1999:50). While such systems as ABC can and do assist managers in their role internally, the benefits to be derived can also be external. In an age when universities and other public institutions are expected to be accountable for their use of public funds and to demonstrate the outcomes they achieve for the community in general, ABC can assist in demonstrating the value that the organisation adds through its specific activities. This may be research, international students and so forth, but it might also be its investment in specific areas, such as information technology or information resources. The recent debate concerning Federal Government IT outsourcing in Australia is an indicator of where institutions should be able to make rational and objective decisions regarding the provision of services, and where ABC data could underpin such decisions and demonstrate a cost effective outcome.

Performance management

As noted earlier, some reluctance has been identified among individuals in universities to adopt costing methodologies or other performance or benchmarking mechanisms. Staff within universities have expressed concern at how the results of such studies might be interpreted. Certainly, costing methodologies have the potential to raise the “performance-consciousness” of university staff. This may not always produce the desired results, however, unless it is given some contextual basis. Equally, a level of understanding of the purpose needs to be created and accepted amongst staff. Commenting on the application of activity based costing to human resource management activities in universities, Kober noted that the study refocused attention from inputs and processes to outcomes. This engendered “some fear that the public dissemination of the calculated costs of services may result in resourcing decisions prejudicial to the interests of Personnel Services” (Kober et al, 1996:23-24). Similar fears, as noted earlier, typified many of the comments of university staff in the 1998 Ernst & Young survey.

The challenge for institutions, perhaps, lies in better informing staff of the purpose behind costing methodologies and performance management – that these are not primarily about assessing the individual’s performance but about performance improvement at the group or institutional level. However, some writers

have identified that “there is evidence to suggest that managers deliberately opt for behaviourally-orientated cost systems that are less accurate than costing techniques allow in order to induce desired behavioural responses” (Merchant and Shields, in Cropper & Cook, 2000: 66). What isn’t necessarily clear in this is whether we are talking about modifying the behaviour of staff in performing the activity and supplying the service, or in modifying client behaviour in use of the service, to encourage acceptance of or a movement toward more cost effective outcomes and services. The latter was certainly a useful outcome of the Newcastle study, in that it provided a basis against which the Division could assess the range of its current activities, and consider options which clearly indicated a more cost effective outcome on the basis of data from the study. A concomitant action was the identification of change strategies which would move clients toward those alternative solutions or services.

Implicit in Cropper and Cook’s statement is the inference that simpler costing models may in fact be more beneficial for educational institutions than more complex ones. That perhaps, the desired outcome is not a high degree of accuracy in the financial or costing data acquired, but how it informs the behaviour of staff in such a way as to effect better client outcomes or alignment with strategic goals. Supporting this in some way, is the observation of Fowler and Yahanpath in their review of activity based costing in New Zealand higher education. In this, they noted that the “advantages of using information provided by an ABC exercise is that it gives guidance in resource management, performance management and strategic planning, and indicates areas where expenditure can be trimmed or reallocated” (Fowler & Yahanpath, 2000: 28). The latter is certainly dependent upon the accuracy of the financial data, and reinforces many of the perceptions of university staff about costing methodologies. Staff in general, are suspicious enough that such studies are all about “the bottom line”. It remains to managers and those within the institutions conducting ABC studies to educate staff that the purpose is to improve service to clients (as students or staff) and to inform the management and planning of the university or particular organisational unit, rather than just a cost cutting exercise.

Commenting on the benefits achieved and expectations of institutions in the UK experience, Cropper and Cook, identify that while the majority of institutions were able to raise cost awareness and understanding “... only a small percentage of institutions claimed to have achieved cost reductions (one of the major benefits put forward by Cooper and Kaplan, 1991) or a more equitable resource allocation method” (2000:65). This perhaps highlights the differences in perceptions and expectations of costing methodologies. A reduction in costs *per se* is certainly a possible and desirable outcome. However the experience seems to suggest

that a more positive outcome from the use of ABC is the effective use of available resources and the capability to inform planning and decision making. Cropper and Cook identified these additional benefits – in raising cost awareness and understanding, and improved decision-making processes based on the new information obtained (Cropper & Cook, 2000:65).

Costing of support services is one thing, but if activity based costing is to be applied to the costing of courses and course delivery then it will require considerable thought about the how the variables across disciplines are to be recognised and built into any model. Fowler and Yahanpath noted in the New Zealand case, that “the present government funding system assumes a certain degree of cross-subsidisation across different activities/faculties, resulting in some distortion in any performance measure” (2000: 30). The Australian system of funding for places in universities is weighted to an extent to recognise some of the variables between disciplines, but similarly, the system assumes a level of cross subsidy within institutions, and between undergraduate and post graduate or research students, among other matters.

Performance or benchmarking systems at the sectoral level in higher education are often highly aggregated, and while they may prove useful for some comparative analysis, they may not provide the level of detail required to inform decisions about strategic choices or planning at the institutional level. The application of activity based costing in institutions appears to be based on similar assumptions, such as improving decision-making and being able to “do more with less” by identifying where resources could be better employed. These are outcomes which Cropper and Cook identify (2000: 62) in their UK study. However its effectiveness in meeting these other expectations, such as cost reduction and informing managerial decision-making processes have yet to be fully explored over an extended time period (Cropper & Cook, 2000: 64). The experience at Newcastle was informative with respect to decision making, but this was a one-off study yet to be integrated as part of an ongoing approach to performance management within the institution.

Conclusion

Ellis-Newman, in her assessment of the application of ABC within academic libraries, noted that “the greatest advantage of ABC to library managers lies in the benefits it provides in the areas of performance measurement and improvement” (1996: 85). From the evidence thus far, there still appears to be considerable effort required to realise these outcomes in an ongoing way. Moreover, agreement on common descriptors of activity and activity drivers are required before costing methodologies will prove effective as benchmarking and performance - measurement tools for the sector.

Despite the number of studies and the interest, not just in Australia but in other countries as well, costing initiatives within higher education institutions have so far met with only limited success, a point noted by Cropper and Cook in the UK (2000: 62). The UK experience is probably the most advanced, and the limited success may be indicative that the approach needs either continued modification or alignment to better fit the needs of higher education or, that in the long term, it may not be the most effective tool for performance management and costing within the sector.

The ABC study at Newcastle provided an opportunity to build upon the model and knowledge developed in the DETYA study at the other three Australian universities, with a specific focus on library and information technology areas. The objectives of the project therefore included the development of a model that would have a sector-wide applicability requiring minimal future development or adaptation. The methodology and experiences learned in the study have been shared with the sector and it is hoped that the methodology will be tested in other universities with a view to refinement as a standard tool for benchmarking and costing for library and IT activities in Australian universities.

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