CHAPTER FIVE

5. TOWARDS COST-EFFECTIVENESS IN THE DETERMINATION OF OPERATIONAL USE

5.1 Introduction

The results of the cost accounting study, Infospend, were fully reported in Chapter four. It was the intention to publish the findings as a statement of the average cost to a South African law firm to supply the annual library and information requirements to a legal practitioner. There were no industry figures against which to measure the accuracy of the values and the small sample militated against the efforts to determine a clear pattern of national spending.

The description of results in terms of ratios and percentages was presented as a source of data for cost-based measures of performance such as productivity and cost-effectiveness. Cost-effective measures and indicators were identified as those transactions that measured outcome or use against input costs (King Research, 1990: 49; Adams et al., 1993: 22).

The Infospend study enabled the operator to assign a monetary cost to every information resource and to every service unit, measured as the cost of labour (salaries and benefits of information professionals). In order to determine cost effectiveness with regard to library and information services it was, however, clearly necessary to compile data relating to the operational use of these services.

A month-long study of the use and usefulness of information resources was devised and implemented in a Cape Town law firm. The development of this operational study is the subject of Chapter five.

5.2 Measuring use and usefulness

This study was an attempt to determine the value of information services to an organisation with reference to the use that was made of these resources in a given
period. The rationale for monitoring operational value was that cost effectiveness of library and information services was based on the perception of use and usefulness of the services.

5.2.1 Measuring use of print-based resources

An informal survey conducted on the listserv of the Organisation of South African Law Libraries (OSALL) in June 2001 suggested that statistics relating to circulation of books and other print-based materials were not typically collected in private South African law firm libraries (Appendix 6).

It was apparent that issue and circulation statistics were not considered to be helpful in monitoring use or user satisfaction with the information resources in this particular environment. It was common practice in many South African law firms, for example, for practitioners to borrow materials without proper issue procedures being followed. The failure to adhere to proper procedures was found to occur most often when practitioners borrowed material outside of normal office hours, and when they borrowed material from colleagues without first returning it to the library for discharge and re-issue. Both of these practices were common where practitioners required specific information very urgently, particularly after normal office hours.

In general South African legal practitioners in private practice were found to have access to library and information resources at all hours (Appendix 4). A recent survey in a South African organisation identified the following patterns of usage by its legal practitioners (Pitts, 2000):

- Sixty two percent of practitioners made use of information services during office hours only;
- Fourteen percent made use of these services both during and after office hours;
- Seven percent claimed to access information services only after hours (weekdays); and
- Three percent used information services after hours (weekdays) and on weekends.

Open access to library and information services at all hours impaired the effectiveness of traditional means to monitor usage of information resources. Some
attempts were made to monitor in-library use of materials (Riley, 2001) but it was hard to see how these could be reliable in an open-shelf system where practitioners had unrestricted access to resources. This obstacle did not, however, obviate the necessity for there to be an attempt to determine use and usefulness of print-based resources.

5.2.2 Measuring use of electronic resources

The Infospend study indicated that South African law firms spent an average of 10% of their information budget on electronic resources and 42% on print-based resources during the 2000/2001 financial year. Difficult as it was to obtain helpful data from the methods of monitoring the usage of print-based resources, it was more difficult still to measure usage of electronic resources with any degree of objectivity.

Internet activity was relatively easy to monitor because of the compliance with international standards for access. All Internet activity could then be correlated by a single system that provided a unified, standard reporting structure (Garratt, N. 2001). Other electronic sources were more difficult to monitor because of the proprietary nature of these products. Without a standard reporting facility across all the products, it would be necessary for information specialists to monitor products on an individual basis, and correlate all available information into a meaningful report. In the case of products with no formal monitoring or reporting system, there was no way to generate automatic reports of activity, and anecdotal evidence was the only source of data.

The Folio Views software, on which most South African legal resources were captured at this period, did not provide for administrators to monitor or report on usage. For the purposes of this study of operational use this researcher therefore relied on survey and interview results to determine usage of electronic resources.

5.3 Objectives
The primary objective of this study of operational use was to measure cost-effectiveness of corporate library and information services. Cost-effectiveness it was assumed subsisted in the relationship between outcome and income in the context of performance evaluation (King Research, 1990: 49; Adams et al 1993: 22). A study of operational use was seen as complementary to the practice of cost accounting described in Chapter four.

Secondary objectives in implementing a study of operational use were the identification of under-utilised information resources and services, and the identification of key areas requiring attention in the delivery of library and information services.

5.4 Development of the operational use study

5.4.1 Definition of terms

Usage and operational value of corporate library and information services were viewed as indicators of the cost-effectiveness of these resources and services, where -

- Information resources were understood to be print-based and electronic materials organised to support the information requirements of information users;
- Information services were identified as the time invested in optimising information resources for the benefit of information users. Service was seen to result from the application of labour to resource;
- The use that was made of a resource was determined as the actual time that a practitioner searched for and read a text relating to a specific matter. Information resources included paper-based and electronic products that were acquired and organised to meet practitioner information requirements;
- Operational value was determined by the engagement of the practitioner with the information resource such that its acquisition was validated and the cost involved in its acquisition and organisation was justified; and
- Reference and research were seen to be the points at which real use of resources was measured. Reference was taken to be the corroboration of fact or
procedure with reference to authoritative statement; research was taken to be
investigation of new or little known fact or procedure with reference to a variety of
information sources. Limiting operational use of resources and services to
reference and research work was suggested by collegial comments in online
discussion group regarding the identification of so-called "billable time".

Generally, when private sector law librarians bill their time, they are billing the clients of
the firm (just like the lawyers do) for research or document procurement.

Toth, 2001

5.4.2 Context of the case study

The law firm that was the subject of this case study was one of the organisations that
participated in the Infospend study that was described in Chapter four. Cost
accounting making use of spreadsheet software had been an established practice
since the commencement of the 1999 - 2000 financial year but there had been no
attempt to determine the use that was made of the information resources when
practitioners researched legal issues.

Reference and research were undertaken both by the information professional and by
the practitioners, sometimes in concert with each other and other times independently
of each other. South African information professionals did not as a rule have legal
training (OSALL 2000) and the contribution of information professionals to legal
research was centred therefore on their expert knowledge of the print and non-print
media as sources of information rather than points of law.

5.4.3 Methodology of the operational use study

The implementation of a study of the use and usefulness of information resources
and services in a Cape Town firm of attorneys required management support. The
programme was discussed with the managing partner and the directors were advised
individually (Appendix 7.1). An explanatory note was prepared and circulated on
internal e-mail to the professional assistants and candidate attorneys (Appendix 7.2)
and shortly thereafter the formal notice of the study and the data capture forms were
distributed (Appendices 7.3 and 7.4).
The month of September 2000 was selected as information awareness month. It was intended that the data capture relating to use of information resources and services would precipitate purposeful contact with each practitioner on a daily basis. Practitioners were asked to note their use of information resources on the data capture form (Appendix 7.4). Towards the end of each working day this researcher intended to call on each practitioner individually to collect and collate the data. It was anticipated that this would be a labour-intensive exercise for the researcher and an irritation for the practitioners, particularly over a sustained period. In order to minimise the annoyance of filling in forms and optimise the time spent with each practitioner this researcher encouraged them to express their candid views on the provision of information support for them in their practices. The daily round of interviews then became the opportunity for practitioners to comment on the resources and services in very specific areas of practice.

In order to complete the record of how information services were used during this period the movements of this researcher as information officer in the practice were also subjected to scrutiny. This involved monitoring all library tasks undertaken during the month of September 2000 and noting the time taken over each task. This data was captured to a Microsoft Excel spreadsheet (Appendix 7.7).

The month-long study was concluded with a structured interview with all practitioners (Appendix: 7.5).

5.5 Results of the study

5.5.1 Record of general reference and research work

The daily records of reference and research work were collected from practitioners and collated to an Excel spreadsheet (Appendix 7.6). The statistical records of candidate attorneys were recognised to be the most significant indicators of the use that was made of library and information resources. It was customary in this organisation for candidate attorneys to be appointed to prepare memoranda and reports on point of law for their principals. In this regard they liaised closely with the
information professional in obtaining appropriate legal resources and in learning how to use the specific resources most effectively.

The daily records of the information resources they used during the month were collated to a spreadsheet (Appendix 7.6) and the results were tabulated.

**TABLE 2 Percentage time spent on research by candidate attorneys**

<table>
<thead>
<tr>
<th>Name of candidate attorney</th>
<th>AS</th>
<th>BK</th>
<th>DvdM</th>
<th>EZ</th>
<th>JL</th>
<th>LduP</th>
<th>WS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage time spent on research September 2000</td>
<td>12.88</td>
<td>8.13</td>
<td>6.25</td>
<td>0.75</td>
<td>10.13</td>
<td>5.88</td>
<td>0.75</td>
</tr>
</tbody>
</table>

5.5.2 Information professional time record

The information professional time analysis was captured to a spreadsheet from where the percentage of time used in each operational activity was calculated. A diagrammatic representation was generated by the spreadsheet software.

**Figure 9 Information professional time allocation, September 2000**
The information officer recorded that 12.6% of time that could be accounted for was spent on reference and research work during September 2000. It was not library policy at that time to keep statistics of books issues or of research work and there was no comparative data against which to measure the operations or the time taken to perform these. Most of the requests for reference and research work were concentrated in one week. These findings indicated low levels of research in the organisation during September 2000, confirming generally low levels of use of library and information services during this period.

The statistics were distorted by the time taken to administer the operational use study. The daily or in some cases weekly interviews were time-consuming and encroached on other library and information operations, particularly routine administration and tasks that were not urgent.

5.5.3 Results of the debriefing interview

In the final debriefing interviews practitioners were presented with the summary of their time recording sheets together with a list of the serial subscriptions for the organisation (Appendix 7.6). Faced with the record of how often they had consulted the publications that were available to them many practitioners expressed concern about the volume of professional material that they did not have time to read.

These interviews confirmed the importance of the current awareness service in alerting practitioners to legal information appropriate to their specific requirements. Some practitioners felt that the content should become more focused for particular user information requirements. These practitioners assisted in drawing up a profile of their information requirements with reference to the list of legal headings that were attached to the debriefing questionnaire (Appendix 7.5).

One of the most useful findings from the debriefing interview was the ascertainment of the varying attitudes of practitioners towards electronic products. The consequence of this was identification of the need for training of several practitioners in the use of the electronic resources, including the Internet.
5.6 Discussion of the operational use study

The results indicated low levels of research undertaken in the study law firm during the month of September 2000. It was not possible to determine whether a level of research below 10% was unusually low since there were no comparative data. Whether the rate of 10% and below was a seasonal fluctuation could be shown only if the study were to be repeated at another time of the year. Consideration was given to repeat the study but it was recognised that a month-long study was intrusive for all concerned. An alternate strategy was indicated.

The information professional’s log recorded a list of 14 tasks (Figure 9) that could be categorised into the key operational areas of collection development, professional development and direct engagement with users. This time recording exercise was seen to be significant as an expression of accountability with regard to corporate library and information services. It was not, however, sufficiently comprehensive: the total allocated time accounted for less than 50% of the information professional’s working hours.

The data capture method was reliable only where practitioners kept meticulous records. The method of monitoring time was not consistently or uniformly applied by all practitioners. Some completed the data capture forms fully, others wrote down little or nothing and had to be prompted. Erratic meetings with practitioners further undermined the validity of the study as an objective measure of library and information use. The daily round to collect datasheets was essential to drive the daily recording of reference and research work but it was time-consuming and encroached on regular activities of both practitioners and the information professional.

The findings were, however, regarded as important from a marketing perspective. The daily round of interviews succeeded in focusing attention on the resources as well as on the necessary development of information services to meet real user needs. In particular attention was drawn to the importance of an effective current awareness service, and on the need to offer more training on the use of electronic databases and the Internet as sources of information.

5.7 Conclusions
The cost effectiveness of the information resources and services in the organisation that was the subject of this case study were not adequately determined by the operational use study. The assumption that use and operational value were indications of cost-effectiveness was challenged by the evidence of low levels of direct use of information resources for reference and research work.

The evidence further challenged the assumption that time spent on research and reference work was a fair reflection of the use and usefulness of library and information services. The rationale for using reference and research as the means of evaluating operational use (5.4.1 above) was derived from the policy in some organisations for operational value to be determined relative to return on investment and the practice of cost recovery. The debriefing interviews associated with this study indicated that value of corporate library and information services consisted in a wider range of operational activities, including current awareness services and assistance to practitioners in equipping them to optimise their own reference and research skills.

The assumption that cost effectiveness could be evaluated by juxtaposing input data with outcome data relating to use could not be validated. The study yielded results that were anecdotal: a clearer indication from practitioners regarding satisfaction with library and information services, and a challenge to the information professional for more consistent attention to logging time. Time monitoring was perceived to measure cost effectiveness to the extent that it measured accountability. The consequence of this revelation was the development of a time monitoring programme that began operating from January 2001 in the same organisation.

5.8 Summary

The literature claimed that cost effectiveness with regard to corporate library and information services was indicated by the relationship between the input cost and the outcome or use to which the services were put. A month-long study was implemented in a South African law firm to obtain data in respect of operational use so that this hypothesis might be tested.
Operational use was defined in terms of reference and research work. Practitioners were asked to record the time they spent interrogating print-based and electronic information resources. The manual recording and capturing process was labour-intensive and unreliable. The study failed to establish a data set against which to measure the data relating to input costs such that cost effectiveness could be determined. It succeeded, however, in directing practitioner attention to certain under-utilised information resources and services. And it indicated the need for the information professional to account more thoroughly for her use of company time to maintain these information services.

The development of the time-keeping log as an information best practice is discussed in the following chapter.