Performance Measurement and Metrics
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Article information:
To cite this document:
Permanent link to this document:
http://dx.doi.org/10.1108/14678041311316095

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Developing a values scorecard

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Abstract

Purpose – The purpose of this paper is to define a framework and categorization of the types of evidence required to prove the value and impact of libraries. It questions the limitations of current measurement for library value, and hence for contributing to academic and research library planning and advocacy. The paper describes and draws on some of the recent progress in value and impact measurement over the last five years. Scenario planning exercises conducted by both ARL and SCONUL are used to analyse the likely future value proposition emerging for libraries. A values-based value scorecard is proposed, which would demonstrate the transcendent value of academic and research libraries now and in the future.

Design/methodology/approach – The paper examines research literature from library and general management texts to propose a framework for measuring the value and impact of libraries.

Findings – The paper concludes that a value scorecard can be used alongside the balanced scorecard to add a more value-oriented picture of library strengths and contribution. The potential benefit of the proposed value scorecard is to gather evidence which will assist both strategic planning and decision making in relation to key areas for future investment.

Originality/value – The proposal defines a new framework aimed at measuring the full value of academic research libraries, considering both tangible and intangible assets. The proposal has been developed by exploring measurement gaps in the library management field and exploring potential options from this area and general management literature. If applied successfully, the model should provide a useful tool for strategic management and decision making.

Keywords Value, Libraries, Scorecard, Balanced scorecard, Academic libraries, Research libraries, Value analysis

Paper type Research paper

Summary

This paper defines a framework and categorization of the types of evidence required to prove the value and impact of libraries. It questions the limitations of current measurement for library value, and hence for contributing to academic and research library planning and advocacy. The paper describes and draws on some of the recent progress in value and impact measurement over the last five years. Scenario planning exercises conducted by both ARL and SCONUL are used to analyse the likely future value proposition emerging for libraries. A values-based value scorecard is proposed, which would demonstrate the transcendent value of academic and research libraries now and in the future.

The authors are grateful to Katie Burn for her work on analysing the scenarios, and to colleagues at the 2nd QQML Conference in Athens and the 6th EBLIP Conference in Salford, both in summer 2011, who commented on earlier versions of this paper.
**Background and context**

The challenge for library leaders to demonstrate value and impact is well summarised in a recent report:

[…] there is a strong feeling among senior librarians that they have failed effectively to communicate the value of their services […] in rigorously demonstrating the value of their activities.

The focus of performance indicators up to now has tended to be on inputs and outputs […] rather than addressing the much harder issues relating to impact and value. […] we believe it is essential that more work is done to analyse the relationships between library activities […] and learning and research outcomes […] (RIN & RLUK, 2011).

Thus there is a recognised demand for improved measurement of academic and research library value, and that these new measures, if successfully developed, will assist library advocacy.

**A quest for value measurement**

The requirement for value measurement was established in the literature some time ago (Orr, 1973). Orr distinguished between quality as an indication of capability and utilisation and value as an indication of the beneficial effects of the library. In the intervening years much progress has been made on the measurement of library quality, but the challenge of creating effective value and impact measures has been more of a feature of the last ten years.

Work in the UK began with the SCONUL/LIRG impact initiative (2003-2005) (Payne, 2006), followed by the SCONUL VAMP initiative (Town, 2006). The first author of this paper presented a summary of the literature, and value theory and its relation to potential measurement practice in libraries, at the 8th Northumbria Conference in 2009 (Town, 2009). In North America the IMLS “Lib-Value project” (Lib-Value, 2012) and ACRL’s Value of Academic Libraries (Association of College and Research Libraries, 2010) involved work on similar concerns, with a particular focus in the former on return on investment (ROI). The first author’s paper at the 3rd Library Assessment Conference in 2010 (Town, 2011) sought to move the locus of value measurement beyond the immediate boundaries of the library so as to reflect its more transcendent contribution. More recently there has been polemic against the narrowness of ROI as the basis for value measurement, with calls for a return to consideration of “virtues” (Neal, 2011). This last challenge is taken up in this paper.

The arguments about value measurement which the first author has made in the contributions above are as follows. There are cross-pressures on measurement methods on research libraries to prove worth in different ways. However, there has been a failure to categorically prove worth. Worth here is assumed to be about value (and including impact). The value which stakeholders seek from libraries is transcendent, in the sense that the impact demonstrated must be beyond the library and immediate satisfaction or fulfillment. Library assessment effort to date has been (mainly) about quality rather than value.

Value is inextricably linked to values; thus values will provide the key and route to proof of worth. The transcendent library is one in which the value can be judged beyond immediate needs and demands, through contribution to less concrete aspects of institutional or societal intent. These intents also relate to the chosen values of institutions and societies.
Institutional scenarios and consequent values
In order to build a framework for value measurement which might provide a lasting contribution, the second author proposed an analysis of future research library scenarios.

Scenario planning has been in use in libraries at institutional level since at least the 1990s. More recently academic and research library collective organisations on both sides of the Atlantic have developed pictures of the future which might be used to define trends and possibilities, and thus inform strategy. In Association of Research Libraries (ARL) case this resulted in an assessment focused on the broad context of research in 2030 (ARL, 2010), and in SCONUL's case focused on the context of universities beyond 2020 (Curtis et al., 2011).

In both cases, as the ARL report suggested, “Each scenario has a gap where the library can fill itself in [...].” Thus a picture of the future library relevant to each future context may be developed.

The analysis for this paper has focused on the following questions:

- What values are assumed in the scenarios?
- How does this link to value?
- What is the resulting library value proposition?

The first ARL scenario, entitled “research entrepreneurs”, implies a future of greater competition and outsourcing of research, in which the value of information is high, and individual researcher reputations may be very high, to the extent of personality cult relationships. Libraries might have a role in this future linking data stores and in discovery tools.

The second scenario, entitled “reuse and recycle” is based on collaboration in research. Here, information value is low, with the relationship focus across groups. Research management and professional training are important here.

The third scenario, entitled “disciplines in charge”, suggests and reasserts specialised universities as the focus of research, in which data stores have high value. In this future, political skills are valued. Research information in this future is disaggregated, with potential consequences for libraries.

The fourth and final ARL scenario, entitled “global followers” spells out the end of western hegemony over research, with the further development of Asia-Pacific nations to dominant positions. In this context, intellectual property is assumed to become looser. Relationships with the east are critical, and from a library perspective this may result in a more open global communal library.

The SCONUL scenarios appear to assume that universities will survive as the focus for research as well as teaching, in contrast to some of the ARL research scenarios in which this is not likely. The SCONUL axes of uncertainty are between open or closed societies (and consequent higher education values), and the degree of market or state provision in higher education provision. Following the more accepted method of scenario planning, one future is discarded leaving three named SCONUL scenarios, listed here with their respective trend choices:

Again, it is possible to work these through from a library perspective in terms of the results of the predicted balances of community good against state control; competition or consumer drivers; and insularity and information protection.

For the purposes of developing the likely important concepts of performance measurement to fit these scenarios, one important feature leaps out. That is that the value system applying in each future is absolutely critical to ideas of the successful performance of organisations, and hence libraries. Thus chosen value systems will define the most important measures.

To summarise the conclusions from an assessment of the scenarios:

1. there is an assumption of elites throughout all futures (either individual or institutional);
2. there is an assumption of competition throughout all futures, although this operates at different levels in different scenarios;
3. there is an assumption of quality being required throughout, and therefore quality management and measurement will not disappear as a feature in all likely futures;
4. however, what does vary is assumptions about values, and therefore value measurement will be different across these future scenarios;
5. assumptions about locus (e.g. in terms of workplace and national influences) are variable across the scenarios; and
6. assumptions about work psychology are also variable, with consequences for people value.

A conclusion to be drawn from this is that value is likely to be a differentiating factor in preparing for a successful future (through choices for change and strategy). Libraries should therefore concentrate on building value in areas which are likely to match future values. However, given the long-term nature of the scenarios and the large variation in possibilities, it would be a high-risk strategy to back any one prospective future to the exclusion of others. Quality would seem to be a constant requirement in any future, but a consequence of this is that if it becomes a given, then the differentiation it provides in competitive terms diminishes, reinforcing the need for some other basis of achievement and measurement which does provide this differentiation. Value measurement therefore probably needs to assume a greater import alongside quality measurement for libraries in the future.

Some of these futures are disturbing, but that is one of the strengths of scenario planning. Whilst none of these futures may actually come to pass, the sense of substantial change in many current cherished certainties produces challenges to our fundamental concepts of how libraries might operate and deliver in future. Another important point is that in many of these futures, change will be rapid and any kind of mitigation at library level will be difficult if not impossible. This reinforces the fact that libraries may need some different methods for advocating value to ensure their future existence.

**Building a value scorecard**

If value measurement becomes more important in future, how can we build a value measurement framework which will be robust enough to deliver effective assessment and advocacy through the kinds of major change envisaged in the scenarios above?
It might be helpful to consider sources for structuring value measurement. Value measurement must be linked to stakeholder values, otherwise the measures have no force or meaning. This implies that value measures cannot be chosen until the prevailing values set is agreed. Institutional values statements are one current key source for considering value measures. These may lack some of what arises from the scenario analyses, given their immediate focus; a combination of the two might provide relevance to both current and future contexts. The first author’s institution, the University of York, is fortunate in having a university plan strongly focused on values, providing the potential for suggesting relevant areas for new measures beyond traditional quality or activity metrics:

- excellence;
- internationalisation;
- inclusivity; and
- sustainability.

It is possible to link the messages that these high-level objectives provide to the York Library’s values statement in a way that assists consideration of some new measures of value.

Traditional value measurement tools will only provide a partial answer to populating a coherent framework. For example, some economic value tools may only reflect instrumental aspects of library activities, and will therefore have a short-term focus. A full assessment of value will require assessment of more intangible benefits, particularly those relating to impact.

Consideration of standard methods for valuing intangible assets (also described as intellectual or knowledge assets) and applying them to libraries has received some recent attention, and begins to provide some new potential foci for measurement and assessment. Kostagiolis and Asonitis (2009) provided a potential framework of the standard components of relational, organisational and human capital to contribute to management strategy based on the measure of both the intangible and tangible assets of the academic library. In this model library performance indicators are geared to a capital and asset focused framework. This approach has been taken up in other research to consider specific measures for intellectual assets within academic libraries in Thailand (Corrall and Sriborisutsakul, 2010). This contribution emphasised the link between assets and institutional objectives, and also reasserted the importance of collections and services as knowledge assets.

**A value scorecard**

Is it possible to create an expression of the full worth of the academic research library based on the measurement of both tangible and intangible value?

The scorecard approach is considered to be one of the four categories of measurement approach used in the assessment of intangible assets (Sveiby, 2010), and would seem the most appropriate for academic and research libraries to adopt. As Sveiby suggests “the various components of intangible assets or intellectual capital are identified and indicators and indices generated and reported in scorecards or graphs”.

The proposed scorecard comprises four areas or dimensions of value measurement. Two of these reflect current thinking about intangible assets, but focus attention on asset creation and assessment rather than the process and delivery measures used in quality-oriented evaluation. The third brings in the requirement for impact assessment, and the fourth adds the dimension of time and progress into measurement frameworks.
All dimensions are labelled with the term capital. However, this does not mean that they will all simply be reducible to accounting sums. In the scorecard approach no estimate of the monetary value need be made, and no composite numerical score or value arrived at, in contrast to ROI or ROA approaches. It is very likely that both qualitative and quantitative measures will help populate the scorecard, and the assumption is that a finished expression of library worth will be made in a more narrative form.

**Dimension 1: relational capital**

It is perhaps surprising that there has been little or no previous consideration of the measurement of the benefit created or value added by library relationships within and beyond the institution. Libraries are fundamentally relationship organisations; activities and services and their development depend on relationships with users in both individual and collective forms; large sums are spent with suppliers, but this relationship has not apparently been actively measured for either quality or value purposes; academic and research libraries often have substantial liaison teams, but the effectiveness of these in building value has not been measured. The current worth of these teams have been questioned in some institutions, with occasionally serious consequences.

The proposed elements of this dimension for which specific measures need to be devised are.

**Competitive position capital.** This will involve defining measures for the reputation and reach of the library beyond institutional boundaries. Many leading research libraries trade on their reputation for their own benefit or for that of their institution. This is worth something, but it is currently difficult to quantify, say, the benefit of a national press mention of the library on acquiring a new special collection.

**Relational capital.** This element could be split into an evaluation of external relationship developments of the kind mentioned above, and a parallel evaluation of relationship development within the institution. The route to this is probably through an initial audit of relationships with various stakeholder groups. Relationship measurement matrices are available which define various levels of effectiveness, but further work may be needed to direct these towards strategic added-value assessment.

**Dimension 2: library capital**

This dimension brings together both tangible and intangible library assets.

**Tangible assets.** Whilst there are measurement conventions in business and accounting for physical assets, a broader set of values exists in higher education and research contexts, and so value estimation of obvious physical assets may need to be more sophisticated. The three areas of tangible assets which need to be evaluated for a coherent sense of library value might include:

1. collections;
2. environments; and
3. services.

In the digital environment collection measurement (at least of a traditional statistical kind) has not been seen as important as hitherto. In a value framework it assumes much greater import in the direct benefit it confers to achieving institutional objectives. The issue of the changing value of collections in the context of licensed access superseding hard copy ownership has not been deeply considered. It is clear that
unique and distinctive collections are likely to be a differentiating competitive factor in future; where are the specific measures which quantify the value of these collections?

The previous scenarios of the end of large-scale academic library buildings have not come to pass. Instead there is substantial investment in new types of library and related space. Each institution will have its own sense of the business case involved in such investment, but it would be difficult to claim that we have good measures available for the advocacy of such developments from a value (as opposed to quality or student experience) point of view. Libraries also tie up capital investment in physical storage which must have a diminishing marginal return. It would be helpful to have more precise value measures to inform, say, when to invest in collaborative storage.

The evaluation of services from a value as opposed to quality or efficiency perspective is also not well developed. In times of scarce resources better measures are required to allow discernment between currently apparently incommensurable alternatives. For example, it may be easy to price a move to 24/7 library availability, but it is more difficult to judge what value this development generates against a similar sum spent on information content.

Intangible assets. If tangible assets prove difficult to evaluate, then intangible assets by definition are likely to be more difficult to measure. However, much of what the libraries do is to add value around their principal tangible assets. Three areas here need to be assessed:

1. meta-assets;
2. organisational capital; and
3. human capital.

The term meta-assets is used here for those assets which libraries build to add value to the physical assets above. Clearly catalogues, finding aids and discovery tools are on the boundary between the physical and the intangible. Whilst these are often assessed from a quality point of view, they are also a growing element in the overall estate value, and tend to be neglected as a key component of overall library value. The same could be said of the substantial digital libraries created by leading research institutions, which have not attracted much measurement attention as yet, even from a basic statistical point of view.

There is no standard convention for assessing other aspects of organisational capital. Libraries have a large body of corporate knowledge tied up in their organisation and its processes and methods. This is one of the keys to library strategic success or failure, in the sense that existing organisational knowledge can be either a constraint on or a driver towards the innovation necessary to prepare for a different future. It is surprising that academic and research libraries as knowledge services within knowledge institutions do not have a better handle on their own organisational knowledge assets.

Most substantial academic and research libraries invest around half their revenue budgets in people. Whilst a great deal of effort is expended on management of this asset, this is not usually accompanied by a similar degree of measurement and evaluation from a value perspective. Libraries obviously have a sense of the competence they require and seek to deploy through their people, but this does not seem to be used for advocacy, particularly as a counter to the common efficiency argument that reducing the head count must always be good. Staff value measures are
difficult to glean from the few raw statistics collected; the narrative in annual reports
appears to be one of the few places where staff competence and value is celebrated.

Dimension 3: library virtue
The first two dimensions are about providing the means to the main objective of
libraries, which is to be virtuous. Virtue here is taken to mean doing good and
generating benefit. This is the dimension in which proofs of library impact will be
delivered. Much work is going on to demonstrate the impact of libraries of all kinds,
and this dimension of the scorecard will be populated mainly with evidence of the
social capital which the library generates beyond itself. It is sufficient here to supply a
non-exhaustive list of the potential areas in which this might apply:

• contribution to research;
• contribution to learning;
• contribution to employability;
• contribution to professional and vocational intent;
• contribution to inclusivity; and
• contribution to other common goods.

Dimension 4: library momentum
The final dimension introduces the concept of time into the overall mix. If libraries
need to prepare for a different future, then the pace of innovation will be a critical
organisational asset. There already exist quality maturity matrices which allow
measurement of organisational capability for change and innovation, but there is an
additional value benefit to be realised and measured in this context. Further work is
required to develop this idea into specific metrics, but some potential areas for value
measures might include:

• capital saved or gained by progress;
• capital assets developed early;
• facilitation of research capital;
• facilitation of learning capital;
• facilitation of quality; and
• capital saved by sustainability.

Discussion and conclusion
A question arises as to how this scorecard proposition relates to the balanced scorecard
now used in some academic and research libraries. This work supplements use of
other scorecards by broadening concepts of the range of measures which might be
used within them. The original concept of the balanced scorecard incorporated
value strongly in its strategy map (Kaplan and Norton, 2001). The generation of a value
proposition for libraries fits with this intent, and encourages the addition of
value measures to this type of framework. In summary the extensions required for
each perspective of the balanced scorecard might include:

• financial – broadening to include capital development of all kinds;
• internal process – broadening to include capital developed through these processes;
• customer – moving beyond immediate satisfaction to impact; and
• learning and growth – fundamental to human capital development, but requires
  extension to evaluating the full capital asset represented by people.

In our view the value scorecard can be used alongside the balanced scorecard to add
a more value-oriented picture of library strengths and contribution.

There are some obvious tests for a successful value scorecard. The first of
these is whether it begins to provide measures that reflect and demonstrate transcendent contribution, beyond the library and its black box of processes and services. The second is that it has an obvious link to institutional values. The deployment of a scorecard will only be successful if it generates a cultural and behavioural effect, particularly in assisting innovation and change. Finally the scorecard should present a coherent and full picture of library worth, providing measures which are of strategic relevance to the library and the parent institution.

It is worth adding that because the scorecard must relate to chosen institutional values, then a “balanced” scorecard may not be what is sought. In other words institutional values may emphasise some dimensions of value creation at the expense of others. There will need to be local consideration therefore of the precise make up of a value scorecard.

The population of the framework through either existing value measurement methods, or the development of new measures is required. This may also help identify what might be missing from the analysis. There is therefore further work to do to provide a working tool for libraries to adopt.

The potential benefit of the proposed value scorecard is to gather evidence which will assist both strategic planning and decision making in relation to key areas for future investment. The final test will be whether libraries can measure and develop their performance in capital accumulation of all kinds to the benefit of their institutions and society more broadly.

References


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J. Stephen Town is Director of Information and University Librarian at the University of York, responsible for the JB Morrell Library, the Raymond Burton Humanities Research Library, the Borthwick Institute for Archives, IT Services and libraries at the King’s Manor and York Minster. Recently he chaired the SCONUL Working Group on Performance Improvement and has led projects on benchmarking, information literacy measures, and LibQUAL +, as well as the value and impact measurement programme (VAMP) resulting in the Performance Portal. He is a member of conference and journal editorial boards in the evaluation field, and has presented and written widely on assessment topics. He convened the 9th Northumbria International Conference on Performance Measurement in Libraries and Information Services, hosted at the University of York in 2011. J. Stephen Town is the corresponding author and can be contacted at: stephen.town@york.ac.uk

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