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# Aspiring to excellence: maximising data to sustain, shift and reshape a library for the future

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## **Abstract**

Perhaps more than ever before, libraries face the challenge of excelling during uncertain times. As library leaders, we have a responsibility to ensure our libraries are reputed as relevant, visible, valued and contemporary. It is imperative that we seek out new methods for maximizing the data that we are invested in and make it more readily accessible and comprehensible to key stakeholders: the senior leadership teams of the library and those of the institution. Yet where does the persuasive evidence lay to demonstrate outcomes aligned to the institution's aims? It is unlikely that library data on its own will be sufficient for future assessment, evaluation and reporting requirements. It is necessary and vital that we rethink the indicators that are markers of a healthy, thriving library as well as extend our competency and capacity to leverage enterprise and third party data platforms for both library and institutional impact.

## **Keywords**

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## **Aspiring to Excellence: Maximising Data to Sustain, Shift and Reshape a Library for the Future**

### **Abstract**

Perhaps more than ever before, libraries face the challenge of excelling during uncertain times. As library leaders, we have a responsibility to ensure our libraries are reputed as relevant, visible, valued and contemporary. It is imperative that we seek out new methods for maximizing the data that we are invested in and make it more readily accessible and comprehensible to key stakeholders: the senior leadership teams of the library and those of the institution. Yet where does the persuasive evidence lay to demonstrate outcomes aligned to the institution's aims? It is unlikely that library data on its own will be sufficient for future assessment, evaluation and reporting requirements. It is necessary and vital that we rethink the indicators that are markers of a healthy, thriving library as well as extend our competency and capacity to leverage enterprise and third party data platforms for both library *and* institutional impact.

### **Introduction**

The principles and application of continuous improvement, quality management and assessment frameworks within the academic library sector have been widely communicated as reflected in extensive bibliographies, such as those collated by Poll.<sup>1</sup>

Through examination of the literature, it is possible to observe and mark the evolution of the application of quality management methodologies and the notion of excellent libraries and their iterative reform and transformation over the past decades. Numerous libraries now have access to standards and handbooks<sup>2</sup> allowing for the development of the necessary competencies to measure, assess and communicate performance outcomes; representing a significant shift from collecting and monitoring data on what a library *does*<sup>3</sup> in terms of activity with, what now, is considered a narrow focus on inputs and outputs.<sup>4</sup>

Increasingly of late, libraries are being tasked to demonstrate and provide evidence of their relevance, value and worth<sup>5</sup> to students, faculty and the university executive.<sup>6</sup> Indicators, measures and analyses that may have served libraries well in the past, are now being questioned for their adequacy to communicate outcomes, impact or positive affect for the various stakeholder groups the library serves.<sup>7</sup> How does the contemporary academic library enhance the faculty experience, the quality of academic life,<sup>8</sup> influence engagement and advance the aspirations of the parent institution?<sup>9</sup> Town<sup>10</sup> notes that 'value requires opinions from a much broader range of stakeholders'. This advice was at the heart of the challenge that University of Wollongong (UOW) Library embraced as part of its commitment to reshape its services, resources and capabilities for optimal alignment to the newly articulated strategic imperatives of the university.<sup>11</sup>

### **Considering outcomes, impact and value**

In a period of time where colleges and universities are faced with competing pressures, including policy reform, financial challenges, increased competition and changing technologies, it is unsurprising that greater transparency, accountability and value for money is sought from all faculties and units that make up the institution.<sup>12</sup> Nitecki and Abels<sup>13</sup> note that a 'library competes for funding and recognition, and does so in a political culture that particularly responds to faculty expressions, sometimes to the rationale of quantified return on investment, and often to the perceived value influential people attribute to the library'. Winkworth<sup>14</sup> provides a useful reminder in observing that one of the many purposes of performance measurement is to influence people – their behaviour and decision-making.

Given the increasing emphasis on describing and demonstrating the library's benefit to the institution,<sup>15</sup> there is merit in defining the notions of outcomes, impact and value, for until libraries do so, they will be stymied in their efforts to demonstrate institutional value to maximum effect.<sup>16</sup> Hosseini-Ara and Jones<sup>17</sup> describe impact (as opposed to outcome) as the long-term, overall effect of the program or service in the larger community or selected audience. Herein lies the challenge for many academic libraries; what measures and assessment tools can be harnessed to determine whether there has been a change in user's skills, knowledge or behaviour?<sup>18</sup> Has the library enhanced the faculty experience?<sup>19</sup> Does the Library have sufficient knowledge of how others within the institution consider and define impact and what is important to them?<sup>20</sup> To gather and draw upon these critical sources of intelligence, Neal<sup>21</sup> puts forward that 'academic libraries must develop a more sustained and intimate understanding of their user communities'; echoed by Town<sup>22</sup> who states that 'new valuations will need to be based on a deeper understanding of both our own [library] and user behaviour and context in a changing world'.

## **The challenge**

Best practice principles dictate that excellent organizations regularly measure and assess changing stakeholder requirements and the organization's capacity to be relevant to stakeholders into the future; that it can deliver increasing value for all customers and other stakeholders.<sup>23</sup> These principles are particularly pertinent in a time when academic libraries' capacity for change, growth and innovation are being tested at unprecedented levels; change driven by, in some part, shifting economies and through increased competition within the higher education sector.<sup>24</sup>

Regardless of the urgency and immediacy of these factors, I propose that as leaders of academic libraries, we should be compelled to strive to be the best possible library we can be – with the capability and motivation to make optimal use of scarce resources, drive innovation and contribute to goal attainment for the parent institution in a meaningful and impactful way. We are beholden to create environments that ensure continuous learning, adaptation and the agility needed to rise to such challenges. The consequences for not doing so can be severe. Libraries can become marginalized, downgraded, moved down the list of institutional priorities - real threats unless a library takes action to ensure it is considered to be of value and, in turn, does deliver value.

Town<sup>25</sup> asks how do libraries 'compute' their own value? Neal<sup>26</sup> presses that 'new and rigorous qualitative measures of success are needed'. UOW Library acknowledged the need to refocus and strengthen its alignment to the university's goals, notably in the areas of strategic research support, learning and curriculum transformation and cross-unit and faculty collaboration.

## **An outcomes and values based framework**

The UOW Library has utilized performance indicator frameworks for two decades; frameworks contextualized to its vision, goals and values. While the frameworks had served the library well, the existing indicators lacked the ability to deliver a new narrative on value and impact, a narrative founded on robust evidence. To enable supported assertions on the value provided by the library, new methods for valid, reliable and ongoing data collection and analyses were required, drawing on data from both the library's and the enterprise's systems.<sup>27</sup> The reference to enterprise systems is significant. Large numbers of universities have created sophisticated data warehouses.<sup>28</sup> Library data is typically under-represented in institutional enterprise data and reporting systems. Yet these are the 'go to' destinations for the senior planning staff, the University Executive, Deans, Council, Board etc to gather essential data and information to understand how the institution is performing across its many learning, teaching, research and business functions.

In 2010, a commitment towards rebalancing the Library's services to align with the research, teaching and learning goals of the university was cemented, influenced by the Vice-Chancellor's strategy to reposition and enhance the reputational standing of the institution.<sup>29</sup> The organizational structure of the time would soon lose relevance due to the imbalance of how services were targeted (heavily weighted to learning and teaching) and limited resources for research.

The review of the Library's Performance Indicator Framework (PIF) was thus centered on the question: *what are the indicators of a successful thriving library?* The examination of this question was coupled with an assessment of the Library's understanding of the current university landscape and, therefore, its alignment with the stated aspirations of the university.

At a minimum, the Library sought to create a measurement and assessment framework that would enable it to:

- Demonstrate value and impact – moving beyond measures of satisfaction and usage
- Better assess the demand and uptake of services; to evaluate relevance
- Improve the capture and reporting of continuous improvement initiatives
- Create a new narrative for communicating our role and unique contribution to the university's strategic agenda.

The results of this assessment revealed the imperative to develop a deeper and nuanced understanding of the needs of our students and the staff of the institution. The new UOW Strategic Plan also provided numerous signposts as to how the executive leadership articulated and prioritized their transformation agenda.

Securing new sources of business intelligence became an immediate priority. Initial activities included establishing new 'listening' systems in the form of Academic Outreach, targeting researchers and senior leaders of the institution - groups who typically eschewed standard approaches for eliciting feedback. The results were revealing on a number of fronts: many were skeptical that the library had anything of value to offer, others pointed to an array of real or perceived barriers to their research activity.

Simultaneously, work had commenced to rigorously query: *what is the value to the student when they use library information resources?* This became the catalyst to collaborate with UOW Performance Indicator Unit to conjoin datasets from the Library, e.g. borrowing activity, electronic resource usage with student data collected by the institution, e.g. demographic, enrolment affiliation and status etc to create the Library Value Cube.<sup>30</sup> Separated, these data silos revealed a small and fragmented story about one facet of the student experience. Together, a compelling new narrative emerged revealing insights into the value of using library owned or subscribed resources – effectively demonstrating a positive correlation between students' use of library resources and their academic performance, i.e. their grades.

These activities were pivotal in reframing the Library's approach towards thinking about impact and value; and distilled to the notion of students and faculty being deserving of a 'dividend' for investing their time, effort and energy in using and engaging with the Library's services and resources.<sup>31</sup>

The new sources of business intelligence were influential in the identification of a new indicator set. The language used to define the indicators and articulate their purpose (see Table 1) was selected to unambiguously communicate UOW Library's priorities for performance:

**Table 1 – Indicators Defined**

<b>Indicator</b>	<b>Purpose</b>
Demand	To ensure we are providing the right mix of services and resources; that our capacity to supply services and resources is being absorbed through client transactions
Operational excellence	To encourage continuous improvement; working effectively and efficiently with available resources
Learning and growth	To encourage the continuous alignment of people’s professional capabilities; ensuring that we anticipate the competencies and capacities needed now and into the future
Impact	To encourage maximum alignment of Library operations with UOW goals; the contribution our services and resources make to the realisation of UOW goals

For example, through the lens of the PIF, we actively monitor the indicator of *demand*, as to who to target; priority audiences; the breadth and depth of outreach and engagement (students and faculty); outcomes of consultations, i.e. services valued, resources requested, service gaps and opportunities; alongside services delivered, transactions and consumption of available resources.

Through assessment against the PIF, the Library has revitalized consideration of its organizational strengths and weaknesses and thus potential for continual growth. It has become more outward facing and opportunistic; seizing opportunities to fill service and resource gaps that play to the Library’s strengths and unique capabilities.<sup>32</sup> This has been particularly evidenced in new research services.

Like many other universities, research quality and institutional reputation are high on the strategic agenda. The data emanating from Academic Outreach activities provided critical insight to what the researchers valued. As Town<sup>33</sup> noted on experiences at York, ‘by asking what users value, instead of what they want, need or rate as satisfactory, we received answers which were surprisingly different to what we had learnt through quality approaches’.

Importantly, the intelligence gathered through the assessment of *demand* has touched every aspect of the Library’s business; through the creation of new services, extending capacity for scale and volume, changing and improving workflows, staff skill and competency attainment and structural design. In sum, reshaping the Library.<sup>34</sup>

## **Results and outcomes**

To what affect has the new PIF had at UOW Library? We acknowledge the real challenges of developing measurement systems to assess outcomes and impact. Yet early examples have resonated with the University Executive, including:

- Student academic performance (Library Cube)<sup>35</sup>
- Collaboration success (learning and teaching and research); leveraging synergies to attain agreed outcomes
- Professional course accreditation
- Research publications – accessibility and visibility (rankings and other ‘excellence in research’ initiatives).

It must be stressed that the approaches chosen and subsequent evidence is highly contextual to UOW, reflective of the institution’s goals and values.<sup>36</sup> We have some assurance that the approaches are reasonably sound as they align on a number of fronts to published guidelines, e.g. the RIN and RLUK: the Value of Libraries for Research and

Researchers<sup>37</sup> (see Table 2). Assessing our contribution to research, outcomes and affect can best be described as being intermediate outcomes and benefits (RLUK) such as:

**Table 2 – Mapping against RIN and RLUK Intermediate Outcomes and Benefits**

Intermediate outcomes and benefits (RIN, RLUK)	UOW Library - evidence
Wider institutional role	<ul style="list-style-type: none"> <li>• Centralised publications management for government reporting – captured outputs up 37% since 2010 – results linked research block grants</li> <li>• Governance:               <ul style="list-style-type: none"> <li>○ Institutional Repository</li> <li>○ Open Access Policy</li> </ul> </li> <li>• Hosting UOW Journals, conferences (Institutional Repository)</li> <li>• Minting DOIs</li> <li>• Academic Promotion and Probation – provision of research impact profiles</li> </ul>
Researcher focused services	<ul style="list-style-type: none"> <li>• Academic Outreach</li> <li>• Research Impact Analysis Service:               <ul style="list-style-type: none"> <li>• Research Impact Profiles</li> <li>• Journal Activity Reports</li> <li>• Citation snapshots (recruitment and promotion)</li> </ul> </li> </ul>
Better informed researchers	<ul style="list-style-type: none"> <li>• 2,419 Academic Outreach Consultations (Jul 2011 – Dec 2013)</li> <li>• 1,129 research impact analysis reports (Jul 2011 – Dec 2013)</li> </ul>
Increased visibility of research	<ul style="list-style-type: none"> <li>• Significant growth and population of content within the institutional repository (33% more full-text content since 2012)</li> <li>• 205% increase in downloads from 2011-2013</li> <li>• Significant improvement in international rankings of repositories for visibility (40<sup>th</sup> world-wide – Source Webometrics – Ranking Web of Repositories)</li> </ul>
Improved institutional understanding of information assets	<ul style="list-style-type: none"> <li>• Research data management guidelines</li> <li>• Institutional repository feeds data into enterprise systems that produce research publication reports.</li> </ul>

RIN and RLUK describe end benefits as: Increased potential readership of research, more research income, higher quality research, recruitment and retention of higher quality researchers, more efficient research, more satisfied researchers, greater research output, more motivated researchers.<sup>38</sup> The activities described above will contribute to many of the desired end benefits, however, more time is required to assess impact.

### Learning Analytics and UOW Library

Student progress, engagement and retention are critical performance outcomes and key success indicators for universities. Performance influences reputation, funding and rankings.<sup>39</sup> The capacity and capability to mine the rich sources of data housed in institutional data warehouses offers distinctive competitiveness through improved knowledge and analysis of how and when (or importantly when don't) students engage with university life. Through analysis of students' and associated services' data (e.g. library usage),

universities have the potential 'to provide a predictive view of upcoming challenges, both for the institution and for students'.<sup>40</sup> UOW Library's experience with the analysis of student usage data and their academic performance (enabled through the Performance Indicator Unit) has offered a new foray for the concepts of impact or affect. More recent developments driven through the newly formed Business and Learning Analytics Unit point to new models for the analysis and visualization of the student experience; by campus, faculty affiliation, schools and the individual. While this work is in formative development, library data (enabled through the development of the Library Cube) is being drawn in, providing faculty with multi-faceted views and insight as to whether students are engaging with critical services and applications and to then make the determination as to whether this is indicative of potential risk. This is an important and significant milestone in terms of how library data can contribute to the success goals of the institution.

## **Conclusion**

To excel in challenging times, there is an imperative to seek out new methods for maximising the data libraries are investing in and make it more readily accessible and comprehensible to key stakeholders. The technologies that are now offered through institutions and those that are offered through commercial means present a plethora of opportunities to leverage and exploit the data we acquire and collect. Through leveraging such datasets to produce information and meaning (evidence) a narrative of value becomes increasingly tangible and compelling.

These datasets, if captured and assessed in isolation of the parent institution's strategy, goals and aspirations will soon lose meaning and relevance. The approaches chosen at UOW Library, therefore, are highly contextualised to current goals and aims, and its agility will continue to be tested as contexts change over time.

The review of the Library's assessment framework was pivotal to the realignment of resource allocation and services to strategic priorities. We are heartened by the increased fluency and confidence of researchers in understanding their research profile and impact and their informed decision-making in where to publish. We are excited by the prospect of library data being integral to learning analytics; where the Library contributes to understanding of student and risk factors. Leveraging data has been a strategic and deliberate approach to ensure the library is positioned to be considered viable and relevant; that it is an indispensable partner to the institution, now and into the future.

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