

Section 2: General Introduction

Summary

This project arose from discussions at the April UniServe Science Symposium at the University of Sydney in 2002. The collaborators from Biology and Chemistry at both universities have been heavily involved in both the teaching of first year science to large student groups and the development of computer-aided resources for at least a decade. As a group of colleagues from two large universities we are committed to quality assurance within our teaching and learning arenas.

The objectives of this collaborative project include:

- self-improvement - to improve processes within our discipline areas on the basis of identifying and adopting best practice; and
- to pilot benchmarking techniques to instill an understanding of the value of benchmarking for quality improvement in our discipline areas.

The original plan was to make comparisons of biology and chemistry taught at the two universities and to compare the Australian context with that of a large British University. The work done to date has concentrated on the comparisons within the Australian context.

One of the purposes of this benchmarking project was to improve the quality of the programme and subsequently to have a positive impact on teaching and student learning. We realise the value of the benchmarking process as a vehicle for critical reflection on current practice and we recognise its potential as a stimulus for changing current practice for the better. With greater accountability and public attention being paid to the quality of teaching in higher education nationally and internationally, it is seen that the quality of our courses should emulate the very best and it is expected that the investigation about our two discipline areas in our two universities will identify best practice.

The Australian focus has looked at the structure of the two universities, the structure of the Faculty of Science at each university and the detailed information about the two discipline areas. In addition transition programs were identified and compared and the use of ICT in first year units was given a special emphasis, in particular the use of *ChemCAL* in the teaching of chemistry at both universities.

The outputs of the project include making a teaching quality inventory that would help to identify areas of best practice and possible transfer of practice from one institution to the other and disseminate the project via a substantial report, conference presentations, and short articles in university magazines.

Funds were sought from the Faculties of Science for 2003 and a small Teaching Improvement Fund grant for 2004 was allocated to the Sydney group to continue with the project.

Rationale for benchmarking

Higher education world-wide is undergoing massive change from an elite to a mass system. There is also a change from a collegial system of university governance to one of corporate managerialism and internationalism. There are changes to the structure of higher education as a result of funding provisions, declining resources and increased class sizes. Academic staff are being asked to do more with fewer resources and tensions pervade the system at all levels (Coaldrake and Stedman, 1998). Higher teaching loads, flexible delivery, lower staff morale, increased bureaucracy, and a more diverse student population, equity issues, increasing competition and demands for accountability are changing the ways in which higher education institutions operate.

Tools are being borrowed from industry and business and developed to improve and measure or benchmark the progress and success of an institution's processes. From these improvement strategies, including other techniques such as Total Quality Management (TQM), Continuous Quality Improvement (CQI), benchmarking has emerged as a useful and easily understood process of learning how to improve (Alstete, 1995).

Whilst benchmarking originated as a term from carpenters and surveyors jargon (a mark on a bench or pole became the standard or measure for future repetitions), today it is a term given to a process of measurement using an external standard of quality to measure internal and external tasks. It can also be viewed as a framework for a process of continuous improvement.

According to Sairi & Hutton (1995) benchmarking is a process-driven tool for quality improvement. It is one of a range of strategies that have been developed over the last ten years to assist organisations to assess and develop their performance. However, benchmarking is better known in industry than higher education. Murphy (1995) noted that the uptake of benchmarking in higher education has been slow, despite its recognition elsewhere as a useful tool in the pursuit of continuous improvement.

Benchmarking, according to Stralser (1995) should be seen as a natural process for higher education to keep improving and learning from those who are doing fascinating new things and performing at extraordinarily high levels of excellence. Universities should not only foster learning in their students but also foster learning within their organisation so they can grow in quality, stature, and value (Stralser, 1995). Competition among faculties (in higher education) is more collegial than it is in the business arena, and campuses have fewer dollars and personnel to carry out continuous, systematic benchmarking (Stralser, 1995), and it is suggested that we engage in collegiate benchmarking.

According to Weeks (2000) the benchmarking literature suggests that the best place to start is with yourself. Before looking at what others offer it is important to understand one's own programmes. From the literature, there appear to be two types of benchmarking - performance and process. Competitive cost-driven benchmarking has been the most common type of benchmarking carried out in the West and it has been a major catalyst in helping companies to reduce costs. This type of benchmarking has been referred to as a quick-dip approach, as only superficial processes need to be understood (Zairi and Hutton, 1995). In contrast, process benchmarking is a qualitative process, which requires detailed understanding of processes.

The phases of the process according to Weeks (2000) include:

1. Planning, determining what and with whom to benchmark, collecting data;
2. Analysis of information collected to produce a “map” of the two discipline areas and their similarities and differences. This mapping process will be quite time consuming but very necessary;
3. Redesigning or at least making suggestions about delivery of discipline areas based on common agreements, shared goals, identification of best (better) practice; and
4. Writing the documentation that completes this round of the benchmarking process – including where we started; what changes have been made; how these will be evaluated; how this will all be disseminated within our institutions.

References:

- Alstete, J W (1995) Benchmarking in Higher Education: Adapting Best Practices to Improve Quality, ASHE-ERIC Higher Education Report No 5, The George Washington University, Washington, DC.
- Coaldrake, P and Stedman, L (1998) On the Brink: Australia's Universities Confronting their Future, University of Queensland Press, Brisbane.
- Stralser, S. (1995) Benchmarking: The new tool, *Planning for Higher Education* **23** 15-19.
- Weeks, P. (2000) Benchmarking in higher education: An Australian case study, *Innovations in Education and Training International* **37**(1), 59-67.
- Zairi, M and Hutton, R (1995) 'Benchmarking: A process tool for quality improvement', *The TQM Magazine*, **7**, (3) 35-40.