

A BETTER E-TRAIN

Program Quality Assurance and University E-Training

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Abstract: This paper describes a system of Program Quality Assurance that has acted to improve the quality of e-training programs in an Australian university. It is based on the use of quality cycles, and was devised to enhance the quality of all of the university's programs. This paper is based on research involving interviews with stakeholders in this system and, amongst other things, uncovered some mistakes that had been made in the initial systems implementation that resulted in a number of academic staff distrusting the system. The paper suggests that better training could have reduced these problems. It argues that the use of this system, despite these implementation problems, has been seen by most stakeholders as an important contributor to improving the quality of e-training systems, rather than just measuring them.

Key words: Higher education, industry practices, quality, curriculum development.

1. INTRODUCTION

The multimedia facilities of e-training tools can produce a system that looks impressive, but does not necessarily perform in the field. As universities have embraced e-training tools, the need to ensure quality of electronically delivered material is of increasing importance. In Australia, measurement has been mandated by funding bodies, so a study was made of some attempts to perform this measurement in an environment rich in electronic delivery. Of the universities studied, one was found to be particularly effective not so much in measuring quality as in improving it. This paper details outcomes of this program.

In 1993 the University introduced Program Quality Assurance (PQA) to ensure continuous improvement in all programs. While electronically

delivered or augmented programs were not present in any quantity at the time of its development, the system is now also used to improve their quality. It was set up to demonstrate educational accountability, and also in a genuine attempt to make teaching and learning better (Bowden 1997). Its designers insisted that the system was based in educational theory and that ‘the approach that the University has taken to educational quality assurance has been to attempt to achieve an appropriate balance between the improvement and accountability aspects of quality assurance...’ (Bowden, 1997 p2).

It could not, however, be said that its introduction was without controversy among the academic staff. In hindsight, some implementation mistakes were made, and some aspects of the system did not work as well as they should have. A lack of suitable staff training was one reason for these problems (Matthews, Ueno, Periera, Silva, Kekal and Repka 2001).

In this paper we will, however, argue that the system has some major advantages and that it serves well the goal of continuous improvement in educational quality, particular in relation to those programs involving e-training.

2. E-TRAINING AT THE UNIVERSITY

The University has both a standard authoring tool (WebCT) and an infrastructure product to support delivery. Infrastructure support uses Distributed Learning System (DLS) that consists of a suite of common products including BlackBoard, WebBoard and similar products together with a range of diagnostic and communication tools to allow online testing, chat and normal facilitated communications. All of the programs and almost all of the courses are represented on the DLS, meaning that academic content developers are required to work through the system at least as far as description of their courses.

The University also offers most of its programs overseas (Marginson 2002), particularly in parts of Asia, in addition to its local offerings. This usually involves an offshore partner providing facilities, with the program being delivered by visiting lecturers, supported by technology. An Australian lecturer typically visits the students for a week or so, and then they are supported electronically for the remainder of the time. The University is a member of two co-operative programs: the Global University Alliance and Open Learning Australia in both of which the University delivers units that are taken completely online. Units are also delivered by other university partners so that a student can make up a whole program from amongst these offerings. Some undergraduate and postgraduate degrees

are offered *completely* online through several strategic programs. While comparatively small in enrolments at the moment, some of these programs have been offered for several years.

When development of the system of PQA started in the early 1990s it was described as Educational Quality Assurance (EQA). We will not delve too far here into what might have been meant by educational quality by those developing the system (Vidovich, Fourie, van der Westhuizen, Alt and Holtzhausen 2000; Gilroy, Long, Rangecroft and Tricker 2001), except to say that it was seen to relate to ensuring that course documentation reflected practice and assisted in the improvement of practice.

A proposal by Bowden and Knowles (1994) resulted in the University setting up Educational Quality Audit Committee, and adopting an EQA system which had seven key elements. Their focus has been described by Bowden (1997) as follows:

- The focus is on educational programme (degree course) teams working together to continually improve the quality of teaching and learning and taking responsibility for that quality and its evaluation.
- Course Teams are expected to engage in continual improvement of student learning experiences and learning outcomes through attention to teaching, curriculum, assessment and course management issues.
- The continual improvement processes and their outcomes are fully documented for each course in an Educational Quality (EQ) Log.
- Summaries of each EQ Log document are recorded on a centralised Educational Programme Quality Management computer file developed for the purpose; this file also contains student performance data and is used to monitor quality improvement processes within each course so timely support can be given in a targeted fashion.
- Each course is audited once every five years.

The quality assurance processes are intended to be linked to the University's strategic planning, performance and academic promotion procedures to minimise duplication of effort by academic staff. This process has become more coherent since adoption by Academic Board of a University Teaching and Learning Strategy." (Bowden 1997).

3. THE PROGRAM QUALITY ASSURANCE SYSTEM

Program Leaders co-ordinate each Program Team comprising the academic staff that teach and are responsible for each program. They play an important role in the PQA system as they need to facilitate Program Team participation in PQA planning, review and renewal and are responsible for

collecting input from members of the Program Team relating to student feedback, and ensuring that all program documentation is collected as part of the Program Log. The Program Log is maintained to ensure that all program documentation is kept in a form that assists Program Team effectiveness and provides evidence of the success of the program. It is updated through the Program Quality Management system (PQM), which provides central access to all relevant information so that it is readily available to all stakeholders in the University. It is intended that it be used as a resource for academic and administrative staff, to provide background information for course or program re-writes, as a frame for ongoing program review and to assist preparation of program assessments and accreditation.

An important aspect of the PQA system is the program improvement process, and this, in common with other quality systems (Williams 2002) is based on the concept of continuous improvement cycles which are “planned sequences of systematic and documented activities aimed at improving student learning and the quality and relevance of the program overall” (RMIT 2002). These activities include reflection, decision making, implementation, monitoring and feedback, and evaluation. The continuous improvement cycle can be pictured as shown in Figure 1 below.

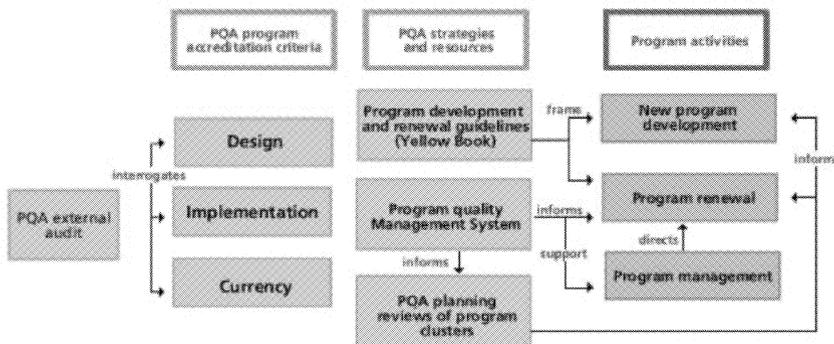


Figure 1. Continuous improvement cycle (RMIT 2002)

4. HOW THE PQA SYSTEM WAS ANALYSED

In this investigation the authors conducted a series of semi-structured case study interviews with a sample of teaching academics, Course Co-ordinators, PQA reviewers, and personnel involved in the planning and

implementation of the PQA system. Interviews were tape-recorded and interviewees were later given a chance to make any corrections they thought necessary to the final manuscripts. Participants were questioned about how the PQA system affected their work, what they thought of the system, what they thought it might achieve in improving educational quality—especially that relating to e-training—and any implementation or other issues with the system that concerned them (Davey and Tatnall 2003). Published papers on the topics of EQA and PQA and appropriate system documentation (Tatnall and Davey 1997) were also used to complete the case study.

4.1 Why Quality Improvement not Measurement?

Funding bodies have a right to demand accountability for the funds they spend in education and training institutions. This accountability focuses on outcomes, which are fairly simple to measure. It is not so simple improve training performance. The managers of quality systems took the view that quality improvement must come from responding to information regarding problems or opportunities with individual programs rather than an overall single aim. Many alternatives studied at other institutions involved simple exit surveys and the like that were difficult to interpret in terms of decisions that could be made with a program. Questions such as ‘were you happy with your course?’ might get to the issue of satisfaction but seldom pointed out what directions a provider team might take in terms of improving delivery.

Program leaders reported many improvement cycles that could not have come from examination of participant responses. Major issues such as documenting changes to a course and the reasons for change enabled a very mobile workforce to be in tune with the team’s intended directions.

4.2 Perceived Problems with Global e-Training

Some administrators of institutions involved in e-training seem to carry a model of e-training that involves a static repository of knowledge with an increasingly effective e-delivery mechanism. The institution studied shows a richer and more complex pattern, particularly in a global context.

The everyday quality problems in this large provider include:

- delivery to multiple locations in multiple countries,
- each location serviced by a different administrator and contract,
- rapid and continuous change in content forced by technology leaps,
- widely divergent learner educational and cultural differences.

Each of these factors produces quality problems that must be addressed. These problems are specific to programs and produce symptoms of a

pressing nature that preclude solutions as simple as surveying students for perceived quality deficiencies.

4.3 Response to the PQA from e-Training Specialists

The PQA is predicated on recording quality cycles starting with identification of a problem or opportunity and involving responses with measurable effects and a review of effectiveness. These cycles are built from the course planning teams. This 'grass roots' identification of quality improvement opportunities was found to be a mixed blessing. People responded with positive comments about the relevance of quality cycles they had implemented, especially in comparison with imposed systems. They also found that work involved with recording the cycles was onerous. This was particularly evident when comparing members of delivery teams that had been stable over a number of semesters as opposed to new teams. The 'pay back' of PQA for stable teams was often seen as being less than effort expended. For new teams, ability to see what had happened to improve courses enabled them to avoid 'reinventing the wheel'.

4.4 Implementation Mistakes

Despite time spent by system developers in speaking with groups from each Faculty, some academic staff either did not understand, or did not trust the University in what was being proposed. It can be expected that some academic teaching staff used to working in traditional roles should be anxious about jobs in an e-training environment (Starr 2001). At the University, a number of academic staff still see the PQA system as an attempt to regulate and stifle professional freedom in course design and teaching. Given the size of the institution, the diversity of its staff, and the implementation mistakes described above, this view is understandable. Current use of the system does not support this view.

It could be argued that with the benefit of hindsight, and of more time to stage the implementation, better change management measures could have been introduced. An Institute of Management survey conducted by Wilkinson et al. (1993) found a strong relationship between an individual's assessment of the adequacy of training and the reported degree of success of the quality management program. Whether or not more time or better training would have convinced all academic staff of the benefits of the new system is unclear but, with hindsight, perhaps more could have been done to convince those academics who were still doubtful. Another criticism is the time needed to document activities.

4.5 Responding to the unique problems of e-Training

It is easy to make the mistake of thinking of an e-training package as 'finished', and as a consumer package that can be delivered without revision. In every case studied it was found that changing markets, changes in content forced by new discoveries and problems with delivery forced continuous change in e-training 'packages'. The philosophy of documenting progress rather than measuring current parameters of output seems well suited to the task of delivery by large teams to very large groups of widely distributed students. The University has found that continuous change is the only way of improving e-training, and that the direction of change and improvement is best left to intellectual property producers and deliverers. To ensure accountability merely requires a properly functioning PQA system.

5. CONCLUSION

Quality education is a difficult concept to define, and this leads to problems with measurements related to quality. A useful view of quality of e-training is to question: 'What can we do to improve quality?' rather than the question 'How much quality do we have?' The case study was of an organisation that focused on the former question rather than the latter. The PQA is designed around identifying problems with quality, or opportunities for improvement, documenting them and reviewing success of responses. This approach entirely avoids the issue of benchmarking a particular program, but involves the delivery team in proposing and implementing improvements based on real evidence. The case study showed significant advantages of this approach in involving the Teams in quality issues. The case study showed that, even with a system based on Teams, imposition of a system from above was resisted by many academics. The case study also indicated that e-training quality is a complex topic with many levels of difficulty that affect the end product. These include writing and delivery teams, the nature of very different audiences and the fast pace of environment change. Although not the focus of this study, respondents often mentioned dissatisfaction with generalised, measurement-based quality control systems.

REFERENCES

- Bowden, J. (1997). Continual Quality Improvement in Learning and Teaching through a Centralised Approach to Educational Quality Assurance. *Managing the Quality of*

- University Learning and Teaching*. Bowden, J. & Sacks J. <http://www.deetya.gov.au/divisions/hed/operations/Bowden/chapter8.htm#head1>, (June 20), Higher Education Division, Department of Employment, Education, Training and Youth Affairs.
- Bowden, J. & Knowles, D. (1994). A Proposal to Academic Board for a System of New Course Approval, Course Discontinuance, Course Re-Accreditation and Quality Assurance. Melbourne, RMIT.
- Davey, B. & Tatnall, A. (2003). Improving Distance Education through Program Quality Assurance. in E. Stacey & G. Davies (Eds.), *Quality Education @ a Distance*. Geelong, Deakin University.
- Gilroy, P., Long, P., Rangecroft, M. & Tricker, T. (2001). Evaluation and the Invisible Student: Theories, Practice and Problems in Evaluating Distance Education Provision. *Quality Assurance in Education* 9(1), 14-22.
- Marginson, S. (2002). The Phenomenal Rise of International Degrees Down Under. *Change* 34(3), 34-43.
- Matthews, B. P., Ueno, A., Periera, Z. L., Silva, G., Kekal, T. & Repka, M. (2001). Quality Training: Findings from a European Survey. *The TQM Magazine* 13(1), 61-68.
- RMIT (2002). *Enhancing Quality*. <http://www.rmit.edu.au/>. RMIT.
- Starr, L. M. (2001). Are Humans Obsolete as OSHA Instructors? *Occupational Health and Safety* 70(11), 58-64.
- Tatnall, A. & Davey, B. (1997). A View of EQA in Business Computing at RMIT. Victoria University, Department of Business Computing.
- Vidovich, L., Fourie, M., van der Westhuizen, L., Alt, H. & Holtzhausen, S. (2000). Quality Teaching and Learning in Australian and South African Universities: Comparing Policies and Practices. *Compare* 30(2), 193-209.
- Wilkinson, A., Redman, T. & Snape, E. (1993). Quality Management and the Manager. Corby, Institute of Management.
- Williams, P. (2002). Continuous Improvement. The Quality Assurance Agency for Higher Education. Available http://www.qaa.uk/public/hq/hq10/hq10_contents.htm.

BIOGRAPHY

Bill Davey has research interests in methodologies for systems analysis and systems development, Visual Basic programming, information systems curriculum, and information technology in educational management. Arthur Tatnall's research interests include technological innovation, information systems curriculum, Visual Basic programming, project management, electronic commerce, and information technology in educational management. Arthur and Bill have worked together on many projects.