Quality interventions: Examining the unintended effects of quality policies on academic standards and staff stress

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Abstract: The purpose of quality assurance measures is to demonstrate quality of a product or process. It is tacitly assumed that the quality assurance process is either neutral or will encourage improvement in quality. This paper examines how data collection processes undertaken for quality assurance change the reward and motivational systems within universities and asks whether it is reasonable to assume that quality assurance strategies act benignly in their effects on aspects of educational quality such as standards and staff stress. The problem is important because it is undesirable if quality assurance measures adversely contribute to diminution of standards or unacceptable staff working conditions. Although validity of individual quality measures has been addressed in several studies, no study has examined the unintended consequences of individual measures or the combined effects of several measures on universities as organisations. Answers to these questions would permit those designing quality assurance strategies to predict the likely affects of data collection on the behaviour of those working within the organisation and on the educational experience for students. The problem will be addressed using systems dynamics methodology to map the combinations of effects of policies and strategies on reward systems and expected organisational behaviour. The analysis results in a new application of a methodology that will help those designing quality assurance processes avoid unintended outcomes from quality policies.

Keywords: Quality, Universities, Organisations

Background

In Australian universities, quality assurance is defined as “the policies, attitudes, actions, and procedures necessary to ensure that quality is being maintained and enhanced” (Australian Vice-Chancellors' Committee, 2000, p. 46) and the purpose of adopting the current approaches to quality included the intention that it should “facilitate progressive improvement of standards” (Skilbeck & Connell, 2000, p. 6). A question posed in this paper is whether quality assurance processes contribute to pressure within universities to reduce standards and increase staff stress, through their unintended effects on university institutional strategy and the reward systems.

Recent management texts, for example (Senge, 1994), stress the importance of being aware of assumptions and findings ways of rigorously scrutinising our ‘mental models’ of the world. The method he proposes uses a ‘conversational approach’ to testing models, and links strongly to the theme of this conference. Although the claimed focus of quality assurance and
improvement processes in universities has been ‘whole organisation’ approaches to quality (DETYA, 2000), no literature was found that examined the unintended effects of quality interventions upon the function of universities as organisations and the consequences for equity, academic standards, professional standards or workplace stress, even though concerns about all these issues appear in the literature (Elson-Green, 2001; Gosden & Hampton, 2000; Winefield, Stough, Jagdish, & Gillespie, 2001). The efficacy of whole of organisation approaches to quality management depends not upon whether single measures produce their intended outcome, but upon the overall effects of the cumulation of ‘quality interventions’ and other policy measures. It has been recognised that management interventions (of which quality assurance is an example), change the internal dynamics of organisations in complex ways that may give results that are not always anticipated by those initiating the interventions, (Forrester, 1972, p. 273; Wolstenholme, 1990). Measurements of the efficacy of quality management should therefore include assessment of unintended outcomes of quality interventions and should be explicitly related to the intended concept(s) of quality. Since public universities in Australia must now have quality plans to promote the adoption of organisational changes that improve educational quality, it appears that the lack of any framework to predict or detect unintended effects of proposed change is a serious shortcoming.

This paper outlines a method of predicting and detecting unintended outcomes of strategies arising from institutional policies, using conceptual qualitative systems dynamics modelling to map the organisational effects of policy interventions to enable detection of undesirable interactions between strategies.

**Higher education policies and quality**

The government outlined its requirements for the current quality system, DETYA (1999b, p.5), in the context of its overall vision for education. In this report suggested indicators of quality for Australia Higher Education as:

- Percentage of staff with a PhD
- Percentage of students from overseas
- Percentage of students satisfied with their course overall
- Percentage of students satisfied with their acquisition of generic skills
- Percentage of students satisfied with the quality of their teaching

More recent documents have extended the list of indicators, (McKinnon, Walker, & Davis, 2000). An examination of the Quality Improvement plans (2001-2003) (DETYA, 2001,) of Western Australian universities shows that these indicators have influenced the plans of institutions, especially with regard to data about student satisfaction, the main focus of government policy. The plans also indicated intent to monitor staff research output as part of the quality process.

Other government policy objectives have influenced institutional strategies, including policies to increase efficiency of universities and reduce university reliance on government funding. ‘Efficiency’ policies have a direct effect on institutional strategy by reducing available government funding. The AVCC and DETYA have documented and monitored changes in the sources and types of government funding for universities. Public funding per student place has been declining since 1984; during the same period student contributions to fees have risen, rising most sharply between 1996 and 1999. The total proportion of revenue from public funds and student payments has declined, despite a steep increase in the rate of student payments. (AV-CC, 2000, p. 5). The consequences for the teaching and learning processes have been an increase in the staff student ratio. In 2001 there was one member of academic
staff for every 18 student compared with 12.7 in 1987, (Megalogenis, 2001). These figures show that the cost cutting processes forced by changes in government funding have had a direct impact on staff student ratios, and are therefore relevant to considerations of policy and educational quality.

Outline of the systems dynamics methodology

Systems Dynamics is a methodology originally developed to map the interaction between policies within complex organisations (Forrester, 1972, p. 273) and locates unintended and ‘counter-intuitive’ effects of policy. The method examines how policy informs strategy and how strategy influences institutional processes, such as the exercise of power and control and the flow of resources within organisations and across organisational boundaries. It is based upon the concept that strategies act across organisational boundaries, and that overall outcomes may be other than what was intended. The diagram presented in this paper is the initial conceptual diagram.

Organisational boundaries

For the purpose of analysing how organisational quality assurance and efficiency policies have influenced academic and professional standards and staff stress, four organisational groupings have been delineated:

- University management,
- University teaching staff,
- Professional institutions,
- Students.

The rationale for dividing universities into two discrete organisational units is that the locus of control and responsibility for teaching is divided (Cooper, 1998). Students are a separate stakeholder group, because they have been identified as ‘customers’ of the universities whose feedback on satisfaction is part of the quality assurance process (DETYA, 1999a). Student behaviour is influenced by separate policies and considerations, including policies relating to financial support, and therefore, they form a separate constituent group in organisational terms. The professional institutions are included because they have been identified as a having a role in auditing standards for professional courses (DETYA, 1999a,45).

Resources

The term ‘resource’ describes both human and physical resources and time. Examples of resources include: the students, the teaching staff, classrooms, time available to staff for teaching related activities, and time available for students to study. This paper examines the effects of institutional strategy on ‘time available for staff to teaching related activities’ and briefly discusses other evidence relating to the time available to students to participate in university learning activities.

Processes

The main processes of interest to an examination of how policies affect standards and staff conditions is how policies affect:

- The reward system within universities and hence place pressure on staff decision-making processes about how to prioritise their time
- Staff and student perceptions of the nature of the teaching and learning process and of their respective duties and responsibilities within this process
Information systems

Two information systems are relevant to the problem of standards and staff stress within universities: the formal quality monitoring systems (student satisfaction surveys, attrition data,) and the informal information channels that influence decision-making about standards.

Policy objectives and associated strategies

Five policy objectives have been selected that have direct bearing on teaching processes and reward structures within universities, when viewed systemically. The rationale for choosing these policies is that they either form the basis of common university quality assurance / performance measures (evidenced in quality improvement plans) or are based upon the forced need for universities to diversify funding sources and reduce costs because of the progressive reduction in the real value of the combined public subsidy and fees per student place, or because they change the nature of the teaching and learning relationship. The policy objectives are:

- Improve staff qualifications
- Improve staff research output
- Improve efficiency
- Increase student numbers
- Monitor staff teaching performance

Each of the five policy objectives is pursued through strategies. Some typical strategies employed to achieve desired policy outcome are shown in Table 1. These are used in the analysis that follows.

Table 1: Policy objectives and institutional strategies

<table>
<thead>
<tr>
<th>Policy objective</th>
<th>Institutional Strategy</th>
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<tbody>
<tr>
<td>Improve staff qualifications</td>
<td>Reward through tenure and promotions</td>
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<tr>
<td></td>
<td>Support with study leave</td>
</tr>
<tr>
<td>Improve staff research output</td>
<td>Reward through tenure and promotions</td>
</tr>
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<td></td>
<td>Reward staff by giving them and a share of the Research Activity Index (RAI ) point</td>
</tr>
<tr>
<td></td>
<td>value they generate</td>
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<tr>
<td>Improve efficiency</td>
<td>Increase student: staff ratio</td>
</tr>
<tr>
<td></td>
<td>Increase student numbers (becomes policy objective)</td>
</tr>
<tr>
<td>Increase student numbers</td>
<td>Recruit more local and overseas full fee paying students</td>
</tr>
<tr>
<td>Monitor staff teaching performance</td>
<td>Monitor student satisfaction with study</td>
</tr>
<tr>
<td></td>
<td>Monitor student retention and student progress</td>
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Institutional strategies manipulate the reward structures, have consequences for teaching processes, and can affect the flow of resources, (especially how staff prioritise their time), processes (especially teaching and learning processes) and information flows (especially the degree of surveillance experienced by teaching staff) within the organisation (see Figure 1).

Description of the diagram

Qualifications policy strand: The use of the measurement of ‘the proportion of staff with PhD’s’ as a measure of university quality leads to pressure on academic staff to upgrade qualifications. Staff study time reduces the time available for teaching related activities and has no demonstrable relationship to teaching quality (Terenzini & Pascarella, 1994).

Research policy strand: Research output has become more important to universities. Staff are encouraged to spend more time in research related activities. Again, there is no
A demonstrable relationship between research output and teaching quality (Terenzini & Pascarella, 1994) and research activities reduce the time available for teaching related activities.

**Figure 1: Conceptual diagram of reward and monitoring systems**

Key: HECS: Student Fees contribution

**Efficiency policy strand (class size):** The average class sizes have become larger especially in first year courses. Whilst larger class sizes do not necessarily imply the quality of teaching and learning processes is reduced, class size contributes to the difficulty of teaching, and has implications for teaching processes. It is more difficult to effectively teach larger groups of students in ways that engage all class members in teaching and learning activities. This has been recognised and universities offer professional development courses to help staff improve their teaching skills and the learning outcomes for large classes. These courses represent...
another call on the time of the staff member, reducing time for teaching related activities, for research, or for qualification improvement. Class size changes teaching processes.

**Efficiency policy strand (student numbers and diversity):** The second strategy within the efficiency strand represents attempts by universities to increase their student numbers. Two principle strategies are used to address this policy objective. Firstly universities have devised alternative entry pathways and secondly they have sought ways of increasing their numbers of fee-paying students. Both these strategies have increased the diversity of the student group (Meek & Wood, 1998). In the USA where trends towards open enrolment are more advanced, diversity is such that in some universities almost 40% of students have not achieved Year 6 standards in literacy and numeracy when they enter college, (Tinto & Riemer, 1998). More diverse groups require greater teaching skills to keep members effectively engaged in learning and increase the overall difficulty of teaching. Professional development courses are offered to help academics improve their skills, but this represents another claim on their time. Diversity changes teaching processes.

**Monitoring staff teaching performance policy strand:** The policy objectives of this strand are concerned with the strategies universities use to monitor staff teaching performance within the institution. This strand represents what university management chooses to measure for internal management purposes. Common measurements include surveys of student satisfaction with individual units, and data on student retention and progress rates. Staff are aware that their future employment may depend upon demonstrating a good performance on these measures and are therefore under pressure to teach in ways that prioritise satisfying and retaining students and accelerating the progress of students through the course, even where this may conflict with sound educational principles and practices. These strategies might be expected to influence goals and decisions within the teaching process.

**Students as ‘customers’:** Increases in HECS and the acceptance of full fee paying students means that students have now become ‘customers’ of the university and this almost certainly changes their expectations of university education. The change in status is supported in the overview of quality in higher education, (DETYA, 1999b, p. 14). Customers buy a ‘product’, but whether students believe they are buying an educational process or a final qualification is a moot point and has implications for perceptions of responsibility for failure and of what constitutes an appropriate level of study effort. (For a discussion of why student should not be considered as customers see, (Scrabec, 2000).) Evidence from McInnis indicates that students on average spend less time in study related activities, even if not employed, (McInnis, 2001).

**Students and paid work:** Student poverty has been recognised as a growing concern (Long & Hayden, 2001; Turale, 2001) There is evidence that students are under increasing pressure to work substantial hours whilst studying fulltime (Long & Hayden, 2001; McInnis, James, & Hartley, 2000). If these perceptions are accurate, then other things being equal, the consequences are that students without independent financial support have less time available for study because of work commitments.

**Professional institutions and professional standards:** The professional institutions are a formal part of the proposed quality assurance process that links universities with industry and commerce, (DETYA, 1999b). The professional institutions accredit university courses by granting recognition of their qualifications and admitting graduates of specific courses to the professional institution. Some institutions stipulate specific professional learning outcomes and learning processes (for example, Australian Association of Social Workers, Institute of Engineers Australia) others make more general judgements about standards, (for example, the Australian Computer Society). In many courses, the professions accredit content (and perhaps
process and staff professional qualifications) but academic staff make judgements about whether students satisfy the professional requirements and may have some flexibility in how the standards are interpreted.

**Academic standards:** Academic teaching staff have responsibility for delivering courses that are approved by the university. In practice, this means that they are required to make autonomous judgements about the standards of student work. Student appeals may trigger a review of judgements of academic staff, but students appeal only when they believe their marks are too low, not too high. Unlike the UK, there is no system of external moderation of student work in Australia, (Harman & Meek, 2000).

**Discussion**

From a systemic perspective, the various strategic responses to government policies combine to produce a *prima facie* systemic pressure that tends to reduce the time available to academic staff to spend on preparing to teach students and on meeting with students outside formal tuition times. There are fewer opportunities to compensate for this within formal teaching time because the average class sizes have increased. From other data, it also appears that students have less time available to spend on study related activities and are less willing to prioritise their studies (McInnis, 2001).

Academic staff who rationally prioritise their time according to institutional rewards systems would minimise their time spent time on teaching related activities and organise the teaching and learning process to prioritise keeping students happy rather than insisting on any standards of achievements. Many skilled teachers entertain their students as they engage them in meaningful learning activities. Less skilled teachers may be able to compensate for their lack of teaching skill by increasing the entertainment value of their lectures. Since, in practice, most academic staff can set their assessment standards without scrutiny, rational staff members would allow standards to float to whatever level satisfies students and would design assessment tasks to minimise staff time spent marking and providing individual feedback to students.

By contrast, staff wishing to maintain academic and professional standards will find themselves in an extremely stressful position. They will find that teaching has become more difficult as classes are more diverse and larger, that offering individual support to students takes up more of their time, students may respond negatively in satisfaction surveys because they feel that academic and study expectations of the staff member are too high. At the same time they face institutional pressure to undertake research, improve their qualifications and undertake professional development. The logical consequence of this is that they will only be able to maintain teaching quality either by extending their working hours (as indicated, (McInnis, 2000)) or by foregoing non-teaching opportunities that might enhance their promotion and career prospects.

From an organisational perspective, the diagram indicates three factors (structural, strategic and expectation) contribute to this undesirable situation. A structural problem occurs because academic teaching staff have responsibility for academic standards but inadequate control of resources necessary to support standards. Government controls the size of the resources pool, university management allocate resources within the organisation, academic staff have limited control over how they prioritise their time but no control over other resources. A strategic control problem occurs because of the choice of monitoring processes and the operation of reward systems. The monitoring processes ignore research that indicates no evidence of a relationship between teaching quality and attrition in higher education (McInnis, Hartley,
Polesel, & Teese, 2000). Other strategies derived from quality assurance requirements, reward staff who give lower priority to teaching support activities. Unrealistic expectations are masked because academic duties are not referenced to available time. Management can make increasing demands upon teaching staff without assessing whether staff have time to perform the task to the required standard. It is argued elsewhere (Cooper, 1998), that it is in the interests of university management to better support collegially management arrangements for academic teaching. Perhaps instead bureaucratic management principles should be applied rigorously throughout the university to co-locate control and expose unrealistic expectations responsibility by requiring academic workloads to be referenced to available time.

Avoiding unintended consequences

Two measures could help universities avoid setting up systems that deliver unintended consequences. First view universities systemically, so that interventions are evaluated against the big picture rather than local optimisation or narrowly defined objectives that may damage organisation as a whole (Ison, 1999). (This implies monitoring that transcends a focus on intended outcomes.) Second develop an organisational culture that encourages reflection, recognises that there are of multiple perspectives on the meaning of data, that ‘quality conversations’ can facilitate awareness of assumptions, test the applicability of mental models, provide means of constructively working with conflict and difference and a processes for airing alternative possibilities and visions for the future (Senge, 1994). Such a perspective moves beyond ‘sloganeering’ quality to achieving a flexible management style that will facilitate change consistent with quality.

Conclusions

A systemic perspective on university organisational reward systems indicates that efficiency and quality improvement policies may combine to have unintended consequences contrary to the initial overriding policy intention. It is suggested that universities might integrate a similar monitoring process into their quality assurance processes so that they can anticipate how policies might combine, monitor for unintended outcomes and identify how they might best take remedial action.

References


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