

Higher Education in Australia : When Organisations for Learning Need to Become Learning Organisations

Potential Frameworks for Quality Management in Higher Education

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Abstract

In the research enterprise, learning occurs at two levels. The first level is one which extends the boundaries of knowledge about the particular focus of the research. The second level of learning provides understandings about the ways in which research activity is facilitated. These understandings include the processes of organising activity for research, of framing understanding and of shaping the nature of activity that is valued as research. It is this second level of learning that is crucial for quality management of creative and innovative resources in higher education. It is also through this second level of learning that research processes can be continually renewed and improved. Should the quality of research be judged solely on output from the first level of learning however, quality appraisal frameworks will remain insufficient for quality improvement purposes because they fail to deal with or ensure the processes which are necessary to produce quality outcomes. Systems for self-appraisal of the conditions necessary for nurturing and maintaining a healthy 'economy of human minds' are not in evidence with accepted research performance indicators in Australian higher education research. If these research enterprises are to improve their effectiveness as organisations for learning, then they will need to become 'learning organisations', to value and to enhance those processes which generate quality outcomes. For this to happen, a balanced appraisal framework will be required where equal weighting is given to both the conditions which facilitate effective research activity and the traditional output measures of research productivity.

What can be valued and what purposes can be served by quality appraisal in higher education?

The 1990s may have been declared the 'decade of quality' (HEC 1992c, p7) for higher education but something important is missing from quality appraisal. Effective use of the country's creative and innovative resources is achieved in higher education by the provision of facilitating conditions for research. These conditions are created within three domains of action:

- the organisation and management for research;
- the conceptual and theoretical framing of activities that count as research; and
- the social and communicative patterns shaping effective research space.

It is the conditions which are created with the intersection of these three domains of action which serve either to facilitate or to constrain effective research activity. As yet, however, facilitating conditions are not a valued component of any quality appraisal framework. A substantial knowledge resource goes untapped and is lost to the system. The potential for organisational learning which could improve overall management of creative and innovative resources in higher education research lies dormant in the tacit knowledge of individual researchers. When higher education is operating in an increasingly turbulent environment, it is inadvisable for those involved in the research enterprise and wasteful for the system as a whole, not to be utilising this knowledge resource. In the past higher education research infrastructure was better able to provide for facilitating research conditions because the system was one of elite privilege with restricted participation. That situation has changed (Murphy *et al* 1992). With a greatly expanded system, higher education researchers are now faced with multiple demands, particularly in relation to accountability and use of scarce resources. Dawkins has noted in recent years that 'the system as a whole is faced with an array of often diverse and competing pressures and demands (Dawkins 1988, p. 9). The

tensions created within the research space may be due in large part to the competing demands of various reference groups or stakeholders with quite different sets of values, needs and expectations. While certain tensions can be creative and productive (Senge 1990, p. 151), it is the constraining tensions which require critical review. Diverse sets of expectations regarding what counts as legitimate research activity and research productivity can, in particular, result in destructive tensions for researchers (Jagtenberg 1983, p. 60). If these tensions are to be identified and addressed, the key decisions in determining the choice of quality appraisal frameworks for higher education research activities will be related to:

- which activities and outcomes count as worthwhile and valuable; and
- which purposes ought to be served by research activities in higher education.

The standard indicators of academic productivity are inadequate as an information base for addressing these issues. They are also insufficient for informing the wide range of stakeholders who wish to be reassured that researchers are accountable for the funding they receive. Stakeholders want to know that 'the most able and effective researchers are [being] funded in a way that makes best use of their creativity' (Dawkins 1989, p. 12). But which of the many stakeholders have both the knowledge and the authority to judge what amounts to 'best use' of creativity? Within which value frameworks should such judgments be made and which time frames are appropriate for the efficacy of such judgments to be assured?

The Higher Education Council's (HEC) advice to the Minister is clearly-stated: 'the only way we can make sense of the variety of perspectives ... is through the concept of *stakeholder*' (HEC 1992c, p. 9). This advice is problematic. If the stakeholder concept is interpreted in the narrow economic sense (Guba & Lincoln 1989, pp. 54 & 65), then the longer-term, less tangible benefits and arguably most valuable outcomes of higher education research will largely be eliminated from cost-benefit analyses. An appraisal framework oriented primarily towards economic values will serve those research activities which align themselves with economic options for appraisal. In other words, those which provide measurable, short-term gains. Certain research activities will be disenfranchised within an economic rationalist framework because their productivity cannot be expressed in terms which suit economic criteria (Aylward 1993).

The stakeholder concept may be interpreted much more broadly to incorporate anyone who 'has something at stake' (Guba & Lincoln 1989, p. 51) in the judgments that are made. Most importantly, the appraisal framework ought to allow for stakeholders who may be put at risk by judgments to raise 'whatever claims, concerns or questions which [they deem to be] ... appropriate' (Guba & Lincoln 1989, p. 51). It is in this sense that the 'stakeholder' question masks a more fundamental issue. The industrial metaphor for productivity is inappropriate for 'productivity' in higher education research. In the current environment of economic restraint there is an urgent need to reconceptualise our understanding of productivity in ways that are appropriate for dealing with the creative and innovative resources of the higher education research enterprise.

Higher education stakeholders include administrators, employers, academic staff, students, governments, the general community, professional associations and the international research and scholarly communities. What is it that these stakeholders need to know, what purposes may be served by that knowledge and what options are there for generating appropriate knowledge? Sizer (1992, p. 1310) has suggested that:

One of the reasons why it is difficult to develop meaningful publishable measures of institutional research performance is because research performance assessment, like teaching quality, has to start at the level of individuals and groups in departments (or organisational units), and build up through departmental and faculty assessment. For purposes of internal research planning, selective resource allocation, monitoring, and accountability, it is necessary to develop individual or research group and departmental profiles of the nature of the research activity that is taking place within a department or other organisational unit, and to identify the research PIs that are relevant to that department's research activity.

The bottom-up model recommended by Sizer is echoed in the terms of reference set down for Australia's National Quality Audit Committee (HEC 1992c, pp. 82-83). These state that institutions are expected to determine 'for themselves their mission and processes and how to evaluate their achievements' and that

'self-assessments conducted by the institutions [will] become the very core of the process' (HEC 1992c, p. 83). The options available to higher education researchers in fulfilling their part of the brief will depend on how they frame the task and the purposes which they consider are being served. The current environment of policy responses and structural change presents researchers, as key stakeholders in the research enterprise, with the possibility of shaping the options available for valuing their research activities.

Understanding what universities do is the first step in understanding their value

It is no easy task for researchers, however, to identify and then communicate the nature of their research activities and what ought to be valued. The divergent practices by which different academic disciplines make sense of the world, and the variation in priorities and reward systems among disciplines and institutions, make judgments of what counts as worthwhile and important highly problematic. Professor Gayle (1991), of the University of WA, has commented that:

Quality is about difference [in higher education]. Each institution needs to have its own different measures ... The quality controls for a system that is largely research-based must be very different from those required for a system that is largely skills-based.

The HEC has proposed that understanding what universities seek to do is the first step in understanding their value. It has suggested that universities should communicate what it is that they do and how they know that they do it well (HEC 1992b). The HEC has also indicated that it is important to know how universities manage their processes to yield quality outcomes and to evaluate their performance and achievements. But what relevant appraisal options are there for researchers to meet these information requirements?

The National Quality Assurance Committee (Beazley 1993) has been set an audit task which requires systems within higher education to have the information necessary to compile Institutional Portfolios for the quality audit process. The comprehensive mapping exercises required to develop Institutional Portfolios has presented a real challenge to institutions to

communicate the activities of their systems. One possible set of guidelines for such an exercise was put forward by Piper (1993) in his Evaluations and Investigations Report, *Quality Management in Universities*. Subsequent to the publication of this report, however, Piper noted his concern over the appraisal framework which may be adopted by the Quality Audit Committee and the purposes which could be served by the quality agenda. He cites a possible confusion of purposes between improving the overall quality and potential of the university system and facilitating the emergence of a few world class institutions (Piper 1993). In this, as in many academic activities currently, the definition of what is important, valuable and worthwhile is subject to debate.

The abolition of the 'binary divide' and the establishment of the unified national system of higher education provide the context for 'quality' developments (HEC 1992a, p. 4). The establishment of this system has meant that greatly increased numbers of institutions are now competing for research funding. In this context, however, the competition for research funding has emerged as a sub-plot to the more critical strategic activity of establishing and maintaining institutional identity and strength. Institutional research profiles have, as a result of this need, become a powerful shaping force for determining what is valued in terms of research activities (Dawkins 1989, p. 11). Researchers may find themselves having to redefine the space in which they operate and in some instances the criteria by which their merit and worth are to be judged. Home, bemoaning the values guiding higher education research funding, states that the 'problem with the present attitude to research is that it is producing the quite depraved idea that you can judge the value of research by the size of the grants it attracts' (West 1991, p. 12).

While policy statements have directed that 'only the best researchers [will] obtain the support of institutions and granting bodies' (Dawkins 1989, p. 3), the shortage of research funds has meant that many quality research projects just cannot be supported (Sheehan 1992, pp. 9,10,18). This situation has generated

significant disquiet amongst research communities. The principal reward and legitimisation system of Australian Research Council and National Health and Medical Research Council funding is now unattainable for large numbers of researchers within the system. This means that many researchers will fail to attract not only funding but also recognition for the quality research environments which they have developed. Ziman has commented that the higher education system appears to be 'replacing quality by price as the principle of competition' (Hill 1992, p. 7). A system for reflective appraisal and legitimisation of research activity within academia could address the concerns raised by both Home and Ziman by broadening the framework of quality appraisal in Australian higher education. It certainly does appear that a system for valuing the conditions necessary to nurture and maintain research productivity or a healthy 'economy' of human minds, is absent from current legitimisation and reward systems.

Much of what goes on in higher education research cannot be reduced to the economic criterion of efficiency and, indeed, such a framework would be unduly restrictive and inhibiting to research activities. Economic rationalist frameworks can give only part of the picture when it comes to quality management, quality assurance of research and research productivity. One group of academics from Sydney University has summed up the feelings of their colleagues in the Arts and Humanities:

The 'economic rationalism' now afflicting leadership in our higher education institutions demonstrates its sorriest failure in an inability to recognise that there is another type of economy much more vital to academic efficiency than the dollar. This is the economy of human minds. (Carsaniga et al 1992).

Economic Rationalist Frameworks - only part of the story

Legitimation and recognition of quality research within prevailing appraisal frameworks is determined by quantifiable research products, but the valuing of processes which generate the products is clearly absent. And as Hill (1993, p. 65) has recently noted, 'the attraction of finance or grants is now also viewed as an output indicator .. which only serves to further complicate the reward system'. This places researchers in somewhat of a dilemma because their traditional academic quality assurance measures (publications) also serve primarily to value quantifiable or visible research products. Publications records are central to the traditional peer review system which allocates rewards in terms of merit and focuses on academic excellence. It seems, however, that these 'merit' judgments are being translated into judgments of 'worth', a situation which can only accentuate the shortcomings of the peer review process (Green 1993, p. 9).

In an expanded system where less than 20% of research can be funded (Sheehan 1993), the dollar value of research funds attracted has inadvertently come to signify the researcher's *worth* to the institution in assuring its own accountability and status (Slattery 1993, p. 13). The economic rationalist accountability framework has, in this sense, distorted the intended purposes of the peer review system. Pusey (1991, p. 178) has warned of this darker side of economic rationalism with its propensity to distort the purposes being served by the activities which are valued within a system. This situation may be accentuated if institutions respond to the National Quality Audit Committee's requests for information within the limited terms of economic rationalist appraisal frameworks. Van Vught (1993, p. 9) has warned that direct links between quality audits and funding allocations can serve to 'undermine the quality assessment system completely'. As Piper (1993) predicted, the possible confusion of purposes could mean that what was initiated as incentive funding for good quality management procedures could be turned into a reward system for established excellence or maintaining the *status quo*. This prediction has to some extent been realised in the response of higher education institutions to the results of the 'quality' exercise (Powell 1994, p. 21), a reaction further compounded by internationalisation of higher education and the unintended impact on institutional profiles for attracting overseas students. If institutions continue to view the quality audit process as a contest for funds the results could be disastrous for both the Quality Committee and for the system. With the current 'bias towards *systems* indicators' (Taylor 1993), there is always the danger that the focus for quality assurance could well be interpreted as 'accountability' rather than systems improvement.

The Invisible Product - Enhanced Learning Environments

With the current choice of appraisal frameworks, the 'visible' and 'measurable' products of higher education research overshadow the 'invisible' (Berry 1993) products of research activity. The invisible products of higher education research activities are enhanced learning environments. These constitute the key contribution of higher education (HEC 1992a, p. 4) to development of creative and innovative resources, and the 'value-added' component of higher education research. When higher education researchers also fail to value their 'invisible product', this weakens their ability to generate appraisal frameworks that could balance the current biases of the dominant economic rationalist paradigm. If researchers do not consciously and intentionally seek to make explicit how they go about effectively managing creative and innovative processes to produce quality outcomes, their invisible product remains well and truly buried. In terms of organisational learning, researchers are simply operating on an intuitive theory-of-action which is largely tacit and unexplained (Agyris & Schön 1978, p. 13).

Reflective Self-Evaluation - the rocky road to self-appraisal for best practice

The HEC has advised that the development of reflective self-evaluation processes is the preferred option for quality appraisal in higher education. However, the precise nature of these practices remains problematic and so do the potential self-evaluative capabilities of researchers to employ such practices. Self-evaluative practices will not emerge like a phoenix from the ashes of current confusion. These practices will need to encompass:

- the provision of infrastructures and communication pathways;
- increased knowledge and understandings necessary to make explicit researchers' understandings of 'good practice';
- development of frameworks within which these understandings can be most appropriately generated and communicated,

Aitkin has observed that the analysts of change in higher education 'were too optimistic in believing useful [alternative] performance indicators could be ready by 1992' (Juddery 1992, p. 9). Dill (1992) has pointed out that when the most significant means of improving quality in academic settings remains unexplored the crucial need is for, in Anthony's (1988) terms, a framework 'around which existing information can be organised and directions for needed research defined' (Anthony 1988).

Researchers do not in point of issue have generally available appraisal frameworks (HEC 1992a, p. 3) which are entirely appropriate for quality management of knowledge-generating resources. It is this situation that has enabled economic rationalist values to go unchallenged as a framework of appraisal for research productivity and, by implication, research quality. The strains now appearing in the system of higher education are evidence of the lack of appropriate frameworks for quality appraisal of 'organisations for learning' (Jones 1992; Guthrie 1994, p. 21).

Appraisal Frameworks - the whole story

Regardless of other policy shifts, the primary role for higher education research activities is the provision of effective learning environments for research staff and students alike (Dawkins 1989, p. 89). Research is by its nature a learning activity. Frameworks for judging the value of research ought then to have something to do with the domains of action within those environments which facilitate and enable effective learning to occur. Productivity in research is, in fact, learning. The evidence of research productivity reconceptualised as effective *learning*, can be seen at two levels:

- At the first level of productivity, researchers produce research output in the form of research products, publications, presentations and further successful research funding applications. This is, however, only the visible product and one which is well-accounted for with the economic rationalist framework for appraisal.
- The second level of learning (Agyris & Schön 1978, p. 22; Bawden 1990, p. 34) is that which enhances understanding about the nature of 'good practice' for the particular research endeavours. This second

level of learning is, by its very nature, organisational learning. This being the case, quality appraisal activities framed in terms of organisational learning are ideally suited to research environments.

The researcher's first level of learning or academic ability in extending the boundaries of knowledge can be evidenced by the number of publications accepted in refereed journals. But in terms of identifying the organisational, conceptual and social conditions which facilitated, enabled or constrained such learning, however, an output measure such as a publication record is relatively useless. Publications records and the like are of little or no use in judging how things could be done differently to achieve better quality outcomes. Currently, output measures or indicators of first level learning figure large in terms of quality appraisal frameworks, but information about domains of action or process information is conspicuous by its absence. Process is the core concern for quality management and the basis of quality assurance. Imai (1986, pp. 17-18) has suggested that the Western preoccupation with output or results in terms of appraisal frameworks is a legacy of the 'mass production society' which has left us with an inadequate range of metaphors for conceptualising quality and productivity. He has proposed that process-oriented criteria for evaluating performance are far more appropriate to our post-industrial, high tech, slow-growth economies. It is in this context that the 'process-oriented way of thinking bridges the gap between process and result, between means and ends and between goals and measures, and helps people to see the whole picture' (Imai 1986, p. 21). A process orientation is, in essence, a necessary precondition for organisational learning.

Although the current research environment is one of great turbulence, within the higher education system it is clear that the opportunity now exists for researchers to develop their own appraisal frameworks for research quality, strength and productivity. Such an appraisal framework could focus on *process* as a quality management initiative and facilitate a bottom-up shaping of the system of quality appraisal.

Complementary appraisal frameworks for quality management and quality assurance in higher education research

The 'process' of research can always be improved through the provision of more facilitating (organisational, cognitive and social) conditions for research activities. Researchers continually enhance these conditions through their involvement (Becher 1987, p. 262) in the research process. The research process is, in a very real sense, a research product. It is a value-added product that has not been accounted for in the traditional academic productivity indicators. It is also a product that has simply been taken for granted in the past. Process indicators reflect the side of the research productivity story that is directly relevant to the health of the academic economy - the economy of human minds. It seems possible then that the facilitating conditions which provide a matrix of process indicators could function as an appropriate appraisal framework for higher education research activities. With a quality research environment framework, the ongoing mapping of 'good practice' conditions would necessarily be organized around the key domains of action which represent the research processes and shape the research space.

Green (1993, p. 12) has suggested that there is no 'correct' model for quality assurance in higher education, but that one option might be the development of quality profiles on an annual basis. Categories of indicators for a system that is largely research-based, however, must be representative of the uniqueness of that system and its purposes. In this sense, *good practice* profiles could be understood as:

- differentially-weighted indicator profiles that account for the range of organisational and managerial, conceptual and theoretical, social and communicative patterns across the research enterprise in higher education;
- the cumulative insights of researchers across diverse research environments in relation to enabling and facilitating conditions for research;
- generic categories of process-oriented information indicative of the differential patterns of significant activity across higher education research.

While it could be expected that a range of categories or good practice profile information would be relevant to all research activities, the weightings given to these categories would certainly vary widely. The same variation in weightings could also be expected for the indicators within generic categories. The individual researchers' perceptions of their environment are crucial in understanding what research activities and outcomes are worthwhile and valuable, and what purposes are being served by research activities. As Geertz (1975, pp. 3-30) has commented, 'man is an animal suspended in webs of significance he himself has spun'. It is the mapping of these 'webs of significance' or 'shared perceptions of salience and significance' (Ellis 1993, p. 246) for higher education research activities which could provide the information necessary for good practice profiles. The Australian Public Service (Nethercote 1993, pp. 59-104) has stated that

there can be no prescriptive list of steps that an organisation can take to announce that it has achieved 'best practice' - the unique circumstances, culture and features of individual organisations must be taken into account ... [but] a number of key principles ... can be identified as contributing to best practice.

The development of good practice profiles would require ongoing cycles of review because good practice, like learning, is an ongoing process. Researchers could engage in a self-improving action learning cycles by mapping the differentially-weighted profiles of conditions or key factors which, for them, facilitate or constrain effective and productive research activity. Armed with the type of 'benchmark' (Pryor & Katz 1993, pp. 7-11, 53) information such review cycles could generate, researchers would be in a much stronger position to design quality management practices. An appraisal framework of this nature could complement output indicators with self-sustainable, self-improving process measures. The results of the Quality Committee's deliberations do indeed appear to have fostered an attitude in some which would support such an approach. Professor McNicol, Vice-Chancellor of the University of Sydney has indicated that simply telling others that people look after themselves does not sound too convincing. He has suggested the possibility of using the University of Melbourne as a benchmark of good practice to be emulated by Sydney (Carruthers 1994, p. 21).

Defining the Territory and Investigating the Options

The issues and options discussed in this paper are the subject of a research project currently in progress. The research project in progress seeks to build a picture of the type of self-appraisal activities which may be appropriate for a quality research environment or level two learning appraisal of research activities. The participating research groups have been included because each has been acknowledged as a high achiever in their own field or discipline on traditional performance indicators. The project is, however, looking beyond the traditional performance criteria. By mapping the range of indicators which could constitute good practice in terms of processes of organising activity for research, of framing understanding and of shaping the nature of activity that is valued as research, the project is seeking to build an appraisal framework which will complement traditional performance indicators. The research groups included represent a diversity of knowledge bases and organisational types to increase the potential for identification of the widest possible range of indicators.

The indications are that the information which has emerged from this project will provide a comprehensive account of facilitating and enabling conditions for effective research activity as well as insights into the tensions, either creative or constraining, which present opportunities for strategic change. The information which has emerged in the process of the research has achieved a transparency of research processes previously unattainable. The mapping procedures have enabled participant researchers to step outside their research activities and see them differently. A different perspective has enabled them to generate information which could be the genesis of a quality research environment framework for research appraisal. It appears that the mapping activities employed here, in the review of constraining and facilitating conditions for research, have the potential to provide researchers with the information necessary to bring about changes which would better facilitate effective research activity. It is possible that the information generated within this research project will contribute towards a reconceptualisation of research productivity by confirming that a quality research environment appraisal framework:

- can be value resonant with the creative and innovative processes of research; and
- can clearly complement and enrich traditional academic performance criteria.

The ability to continue to reinvent appropriate structures and supportive infrastructures for research, however, implies that not only research enterprises but universities as a whole will need to become effective learning organisations. However, it must be remembered that:

. . . organisations. which act only through the agency of individuals, cannot be reduced to collections of individuals ... organisations themselves are theories of action - theories of action which are maintained and transformed by individuals who perform roles within organisational structures and live in the behavioural worlds draped over by those structures. (Agyris & Schön 1978, p. iv)

The development of infrastructures which facilitate 'tapping into the tacit and often highly subjective insights, intuitions, and hunches of individual [researchers] ... and making these available' (Nonaka 1991, p. 97) for organisational development, is a real challenge for institutional managers. This will mean that institutions will need to ensure the availability and use of feedback mechanisms within and between related systems. It is here that Pro-Vice-Chancellors (Research) and their colleagues in research management (Hill 1993) have a crucial role to play. These are the people who can mediate the systems' imperatives and who are conversely, able to act as a lobby group to improve the effective operation of higher education research. As Clark (1983, pp. 13 1-2) has indicated:

The effects of different arrangements of authority are fundamental. They affect the way that systems operate as systems, the types of changes that occur, and the values that are implemented ... [it is these values that determine] how authority structure liberates and constrains initiatives.

The communication pathways which senior university managers facilitate between the research groups and institutional management, and between the institutional management bodies and the broader policy-making and policy implementing bodies of higher education, will be a vital link in quality developments. The issues related specifically to research management practices will be explored in a forthcoming DEET-funded Evaluations and Investigations Program by the Centre for Research Policy at the University of Wollongong. The primary task for stakeholders in higher education research still remains, however, the development of relevant quality appraisal frameworks within the research enterprise and the broader system of higher education. Mechanisms such as quality research environment profiles could assist higher education institutions to develop as learning organisations. In becoming effective learning organisations, institutions of higher education will be in a better position to value and enhance those processes which generate quality outcomes.

As organisations for learning there is an urgent need for universities to become more effective learning organisations (Agyris & Schön 1978, Cli. 1), and learn how to provide more effectively for their own learning at all levels.

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