The Induction and Professional Development of Academics

Robert H. Barbour

Working Paper 94/2

February, 1994

The Induction and Professional Development of Academics

Robert H Barbour

Computer Science, University of Waikato, Hamilton, New Zealand
email coms1034@lucifer.cs.waikato.ac.nz

Abstract

This paper makes suggestions for the induction and professional development of staff at the University of Waikato. The context of the University as a community of scholars and administrators is outlined. A number of possible induction strategies are put forward for consideration in text and diagrammatic form.

Introduction

The role of an academic is extremely complex and ill defined. Success in academic activity has an associated and unacceptably high wastage of human talent. The very high failure rates of post-graduate students are indicative of both the difficulty of the tasks and the failure of academics as teachers. Suggestions are made in this proposal for ways to encourage the continued growth within the university of a larger group of successful academic teachers. The research and knowledgable comment suggests that context is an important part of success in academic work. In considering wider contextual issues it is recognised that there will be little that is new in the material that follows. However, two points emerge when considering the context within which academics work. The first is that a clear overall framework and rational is urgently needed which enables this university community to show that it is proactively engaged in the changes in the New Zealand academic community and in the wider global academic community.

A second critical point is that knowledge has an implicit 'use by date'. In some disciplines, such as Computer Science, this time span may be as short as three years for a particular computing machine or application. The members of an academic community must recognise, and reflect in their professional activities, the certainty that knowledge and skills have a limited life span or currency. Evidence of willingness to continue individual academic growth could be seen in a variety of ways such as further qualifications beyond doctoral level or publication in recognised academic media.

These remarks apply equally well to general administrative staff who must have successfully participated in the academic process by formal academic qualification in order demonstrate competence, credibility and a minimal understanding of the university teaching and research context (Noble, 1992). Developments in the administrative process are equally rapid and should be reflected in the ongoing upskilling of administrative staff. Natural attrition is no longer a sufficient mechanism for administrative renewal and advancement. Neither is the presence of persons in administrative roles who do not have the stamp of approval provided by formal academic qualification in the appropriate field of study.

While recognising, in these brief remarks, the institution-wide ramifications of the proposals suggested below, the main thrust of the paper is confined to teaching related aspects of the academic induction process.

Prerequisite Social Context

It is assumed that the nation at large has made provisions to support a community of scholars within a university. This community of scholars could be employed in any nation in the global academic community so the conditions of employment must bear favourable relationship with other communities of scholars in other nations. In recognition of those provisions the academic community tacitly undertakes to ensure that members are contributing in a variety of ways to the wider community. These contributions are primarily in the creation, confirmation and dissemination of knowledge through teaching, academic critique and research (Leal, 1989).

The academic community has, in turn, responsibilities to new members and existing members for making provisions for continued personal growth. This growth is generally referred to as Professional Development (PD). PD begins with the educational background of the academic. In general, this training releases capacity to

perform in a limited range of key research skills. Other capacities may have been acquired incidentally or may be acquired through further education or guided self study when such study is adequately supported, evaluated and rewarded (Heath, 1989).

The academic vocation is one in which personal growth is the only acceptable perspective. The provision of assessment, evaluation and moderation experiences indirectly through the editing of publications and directly through mentoring of research and teaching for other colleagues by more senior academics is the mechanism which ensures that community knowledge is passed on to others. In economic terms each academic community internalises the costs associated with the externalities of training and professional development (Watson and Campbell, 1989).

Reward for meeting individual academic targets set within the community is continued employment under privileged working conditions. Very exceptional performance may be rewarded in a variety of ways related to public recognition, salary, conditions of service or availability of resources (Heath, 1989, Fleming, 1993).

Expanding Roles

High expectations carry high obligations on both the individuals in the academic community and the academic community as a whole. Academics arrive in a university community trained for personal growth in research (a wide range of knowledge acquisition and knowledge generation skills), but as roles change so must the skill set. Too often competent research academics are cast in roles which are so complex that failure often occurs. Teaching is one such role and departmental administration is another. While this paper is primarily concerned with the teaching role, there is, as indicated above, a need to give serious thought to the on-going training and induction of general staff and discipline specific senior administrators. Since each academic tends to become increasingly involved in administration while moving through a career path the remarks and strategies suggested below must also eventually lead to a review of the professional development needs of academics as administrators. It is suggested that the most appropriate strategy for making provisions for the on-going professional development of academics in administration is to proceed in much the same way as is proposed below for teaching.

The teaching role in academia is becoming increasingly valued, partly as a consequence of increased fees but more as a result of concern over the quality of the university experience available to students (Duhs, 1992). Few provisions are made for assessing and then recognising skills in teaching or providing rewarded

opportunities for professional growth in teaching skills. There is a fundamental need to 'upskill' academic educators at **ALL** levels in the university community in a wider range of basic teaching skills. These skills extend from teaching small groups to teaching very large classes to formal provision of guided experiences in teaching and mentoring at post-graduate and staff levels (Baldwin and Ling, 1993).

Teaching skills can be learned and assessed in professionally acceptable ways which will reflect well on the overall goal of providing for life long learning experiences in the academic community.

Induction and Professional Development: a form of Adult Education.

By accepting that continued personal growth is a desired goal for the individual academic, the community of scholars of which the individual in a member also accepts responsibility for making growth experiences available. There is simply no other place or group of people to whom this responsibility can be passed. Such is the rate of change in the academic world that scholars who do not engage in professional growth activities are externalising this cost and increasing the cost for those who do. While there is debate about the level of involvement of individual scholars in teaching and research (Prosser, 1989) it is clear that a community of scholars cannot neglect either one for very long. It is also clear that global communities of scholars must address the issues involved sooner rather than later (Leal, 1989). Academics interested in adult education have examined available evidence about adult learning and from that evidence developed various philosophies and principles. Brundage and Mackeracher (1980) have integrated existing work and Byrnes (1993) summarised this work in fourteen points. Her principles are cited below with the implications considered in relation to the academic induction process.

1. Adult behaviour is not fixed but changes according to both internal and external pressures; adults can and do learn throughout their entire lifetime. However, adults do not stay long in programs in which they have no incentive to learn.

Implications: The potential for continued growth exists. Clear incentives need to be stated in terms of reward for success and consequences of failure.

2. Adult Learning is facilitated when the self concept and self esteem of each person are valued.

Implications: Adult learners will respond to enhancing experiences that occur within their currently selected area of disciplinary expertise. Induction Programs must reflect the disciplinary specialisation of the probationer

3. Adult Learning is facilitated when the learners own experience is respected as valid and regarded as a potential source of learning.

Implications: Previous learning experience is a valuable resource in the induction process. This experience may have been positive or negative. Both types of experience are valued as either instances or non-instances of possible future behaviour. Previous experiences are the basis from which further learning can occur. Induction Programs should actively seek declaration and consideration of previous learnings with a view to integrating careful examination of these experiences within the induction process.

4. Programs should appear to the learner to be relevant to life experiences and needs, both past and future experiences.

Implications: Induction experiences should be discipline specific and related to the current issues faced by the probationer.

5. Past experience becomes increasingly important as an adult grows older.

Implications: The Induction Program should allow for mixed experience groups and seek accounts of experiences from older probationers with a view to learning from the wisdom of experience. This is an important facet of the induction process by which the accumulated folklore knowledge of the community is expanded. There is an unfortunate tendency for scholars to become insular to the point of isolation when previous experiences are not valued. Yet the next generation of scholars is condemned to repeat the experiences of earlier people simply by failing to help them to attend to what is already known.

6. Adult Learning is facilitated when each learner can participate in and be responsible for the planning and implementing of his/her own learning objectives, activities and assessment. A collaborative approach is most effective.

Implications: The Induction Program should be experienced as an activity 'done with' rather than 'done to' the probationer. Choices must be real within an overall framework of activities in which completion points are understood.

7. Adult Learning is facilitated when teaching activities do not demand finalised, correct answers and closure; express tolerance for uncertainty, inconsistency and diversity and promote problem finding and problem solving by both teachers and learners.

Implications: The Induction Program should be presented as a period of personal growth. Goal setting should be reviewable and negotiated with expectations of best and worst case outcomes as acceptable within a period on the way to achieving the desired outcomes.

8. A learner's most pressing negative concerns need to be dealt with as a priority in order to relieve distress and channel stress energies into learning. These needs may not necessarily relate to the intended program.

Implications: The Induction Program should encourage participants to take into account the life-world of the probationer. Distress in colleagues is usually easily detected and is often substantially reduced simply by discussing the problem with another person.

9. When adult learning focuses on the acquisition of skills and strategies, learners must have opportunities to actively use the skills and strategies they are learning.

Implications: The Induction Program should provide opportunities for practice of acquired skills and strategies in non-judgemental contexts prior to assessment or evaluation.

10. Adult Learning is facilitated through effective two-way communication between teacher and learner which emphasises clarifying, summarising, listening and reflecting.

Implications: The Induction Program should provide opportunities for participants to engage in high level discussions which are structured towards generalising rather than

getting buried in detail.

11. Success in satisfying needs and achieving objectives becomes a reinforcer for the changes already made and a motive for further learning.

Implications: the Induction Program should be planned to ensure success from the earliest task to the final assessment. This requirement obligates the participants to ensure the tasks are achievable, progressive and eventually lead to the achievement of recognised competence (see charts).

12. Adult learners tend to have well organised defence systems which mask distress. High levels of distress lead to disorientation, withdrawal, confusion, dependency and poor communicating. Low levels of stress lead to boredom and poor self esteem.

Implications: the Induction Program must extend the learner in ways that induce stress but not distress. The probationer must be guided into when to say no to requests for further contributions while at the same time being encouraged to be fully committed to wider community activities.

13. Adult Learning is facilitated when learners can learn at their own pace and in their own ways.

Implication: there is no one best way to induct academics. Each probationer must find their own way. Assessment and evaluation experiences provided for probationers should be rich in variety so that a range of learning outcomes is recognised as being acceptable.

14. Adult learners learn best when hearing and vision are the primary means of communication and where there are a variety of sensory stimuli.

Implications: Multimedia are likely to be a preferred induction tool available on-line for probationers. Media which provide real choice and rapid appropriate feedback are likely to be preferred.

The following sections take these general principles and associated implications and attempt to recraft them into workable academic staff induction programs.

Mechanisms for Academic Staff Induction.

Three induction models, including one which extending from current practice, are presented with a view to inviting academic staff to choose the most congenial procedure for them. The first two models follow established induction processes described as "Oxford Practice and the Cambridge Theorising (an Analytical Framework)". They have been adapted for the particular context of the University of Waikato. These frameworks are adapted from Barrie (1992).

Oxford Practice: It is intended that the probationer completing this programme would be awarded an Academic Educator's Certificate of Registration and that all academic staff would acquire such a certificate as confirmation of teaching competence.

As applied to the University of Waikato context, Oxford Practice would involve a three way partnership between the School of Education, the Department to which the academic belonged and the Teaching and Learning Development Unit. This programme would be structured around a curriculum programme and a general programme.

The curriculum program would be concerned with the education process within a particular discipline. An appointed mentor, at least at senior lecturer level, would be assigned to work with the probationer to ensure that discipline specific aspects of the teaching role developed. The primary role here would be to confirm that preparatory work was thorough, assessment appropriate and timely, that everyday teaching practice was acceptable and that minor administrivia were dealt with. It is envisaged that twice monthly formal meetings of one hour would be scheduled and that half of these would take the form of observed sessions. The observed session would be reciprocated with the mentor providing a session and then the probationer. The point here is not to grade the performances but to provide a context for discussion about teaching techniques and associated problems and solutions. An A5 summary account of the meeting or observations would be collected forming a body of written records of the probationer's progress.

The School of Education would be expected to contribute three seminar courses, one in each year, on educational philosophy and theory or confirm that the probationer's existing education qualifications were equivalent. A senior academic with interdisciplinary interests would coordinate the seminars which would introduce a

range of current views on educational philosophy and theory for consideration. The course outcomes would be a series of critiques of the range educational philosophies and theories in essay form in relation to the probationer's chosen discipline. Where the probationer had recognised educational qualifications, or experience, attendance in the seminars would not be required but reports confirming this knowledge would be required. These reports to be submitted in the form of Working Papers in January following the year of appointment and each subsequent January during the probationary period. The Working Papers, moderated by the mentor, of limit 3000 words would be lodged in the library in the normal way.

The Teaching and Learning Development Unit's role would be to provide resource materials on teaching tools and techniques, direct assistance with summative assessment at the end of the first year and formative and summative assessment at the beginning and ends of the second and subsequent years. Part of the task of providing of these materials would be the preparation of guidelines on the use and interpretation of the tools and techniques as well as the process of conducting student review of academic teaching. The probationer would need to show competence according to the criteria indicated on the accompanying charts

At the end of each academic year, in January, the documented records of teaching work carried out during the year would be collated and presented by the probationer to the probationary committee for their consideration. This meeting would take the form of a collegial discussion of progress during the year. The meeting agenda would be prepared and copied to staff beforehand with a view to providing support where required and realistic consideration of prepared teaching goals for the coming year. The overriding assumption is that the academic is responsible for the own learnings and that the induction process exists to facilitate and support the taking of that responsibility.

The combination of the School of Education Seminar series and the Teaching and Learning Development Unit's experiences make up the general part of the induction programme

At the end of the induction period, the academic would be awarded an Academic Educator's Certificate of Registration

Cambridge Analytical Framework: It is intended that the probationer completing this programme would be awarded an Academic Educator's Certificate of Registration and that all academic staff would acquire such a certificate as confirmation of teaching competence.

The Cambridge Framework construes academic activities as artistic performance in which the repertoire of performances, intuitive apprehensions and actions and skills are redeployed in creative ways suited to particular contexts. An 'interactional dialectic' between the "mind" and the "world" is conducted in which each informs the other. Professional growth occurs when the individual is in personal conversation with lived experiences through each of Furlong's levels (or aspects) of professional training (Furlong, in Barrie 1989).

Aspect (a) Direct Practice

Practical Training is offered through direct experience in lecture theatres, laboratories and tutorial sessions. Observation, critique and discussion of the work of practicing academics is included. This can occur effectively where the outcome is an agreed document in which the academic and the probationer resolve the teaching issues that arose during the session.

Aspect (b) Indirect Practice

Training carried out in association with the Teaching and Learning Development Unit on practical aspects of the teaching role. Among the topics that could be covered are: administrative responsibilities of teaching, effective time management and sources of effective teaching techniques.

Aspect (c) Practical Principles

A critical study of principles of educational practice and their use. This aspect may be most effectively dealt with through a taught course run by the School of Education.

Aspect (d) Disciplinary Theory

A critical study of teaching practice in the discipline in the light of fundamental educational theory and research. This component of the course may best be acquired through a course run by the appropriate Education Research Centre within the discipline (SMER)

There is no implication of a hierarchy in these aspects. Rather, they function as focal points around which the probationer accumulates and demonstrates the prerequisites of

professional competence as a member of an academic community. Documented records acquired during the induction process would be submitted to the probationary committee on an annual basis.

A Third Practical Induction Framework

It is intended that the probationer completing this programme would be awarded an Academic Educator's Certificate of Registration and that all academic staff would acquire such a certificate as confirmation of teaching competence.

The primary purpose of this induction framework is to provide support for new academics while at the same time ensuring that progress in professional development in teaching skills occurs. Beginning academics must have legitimated access to an established academic. This person does not need to be in the same department but must have been at least two or more years in a particular department.

A series for formal meetings, beginning in February of the year of appointment, should be set up with each person being clear on the agenda for each meeting. Weekly meetings during which key performance related areas are checked out and an agreed record signed by both persons seems the best way of ensuring that the process is taken seriously. The alternate meetings would take the form of observations in which the probationer would either observe or be observed by the mentor. At the end of each session a written record of the observed work would be provided by each person for the record with comments. It is envisaged that a file of progress reports would be built up for consideration by the probationary committee when the appointment is reviewed. The enclosed charts suggest some key performance related criteria and are intended to act as a guideline for both probationer and associated academic. The third alternative places much greater emphasis on the academic mentor for the probationer. This proposal brings together all the roles identified in earlier proposals into the care of a single person. It has the single advantage that the contacts with other staff are limited and therefore may suit probationers with very high teaching loads. The responsibility implied suggests that mentoring under the third scheme should require direct recognition in teaching and administrative duties allocation.

These carefully monitored professional development programs can occur at any stage of academic development from probationer to professor. The principles behind these suggestions imply levels of care and control of 'academic reputation' that are increasingly required by the changes in the way university is funded and the way students gain access to the academic experience.

Establishing the Academic Review and Assessment Framework

A first step would be to request Government adopt the policy of identifying resources targeted to support induction and professional development processes by showing that this is a cost effective way of improving tertiary educators performance .

A second step would be to develop in-school guidelines for the expected skill sets and expectations of incoming academics. An associated step would be to identify obligations on academics for the training of the next generation of academic teachers and matched rewards for the additional effort involved.

The third step would be for the academics in each school to adopt the view that ongoing (biennial or triennial) voluntary peer assessment of each academic become part of the community expectation. This assessment could be carried out within the school and quinquennial, at the request of the school, by colleagues from another school or another university. The framework provided could act as a review mechanism but is better thought of as merely a starting point from which a community of scholars begin the process of establishing agreed observable performance levels.

The fourth step would be to recognise that the skills and resources for PD are already in existence in the academic community as a whole and within each discipline in most schools. The major tasks seem to involve the identification and subsequent recognition of these skills among colleagues. The consequent reward of people who exercise, demonstrate or support professional development on behalf of the academic community should also be identified. An invitation should be made to each academic in each school to contribute to a database of the existing skill sets in the university community. This database could be made available on request to colleagues in departments as a resource from which to build professional development experiences within the university community. It will be clear from previous comments that such additional contributions would attract additional identified rewards in any of the ways identified above.

The fifth step would be to establish bands of achievement and reward in the professional growth of academics based on the clear demonstration of acceptable skills in teaching students and in collegial support. The basis of acceptance would be a combination of student and peer review in relation to criteria some of which are suggested in the accompanying charts. These bands already exist in the form of salary scales. Salary scale movements should be of two types: cost of living increases reflecting a job well done and identifiable performance related gains reflected in achievement of specific goals.

Graduate Supervision

International evidence (Lindsay 1989, Leal, 1989, and Prosser, 1989) suggests that the supervision of advanced degrees competes for the academic's attention with research activities. Direct recognition of the burden of supervision of post-graduate students must be remunerated in an overt way in order to ensure that the best efforts of academics are directed to supervision work. Graduate supervision is so demanding and the consequences of failure for the student so great that the traditional ad hoc process must change. While committees make the outcomes of supervision more public, the actual process of supervision needs many more visible and recorded points of decision and more careful oversight by senior academics of each other and colleagues (Poole, 1991). Careful record keeping of every weekly meeting is an obvious essential. When this additional responsibility is directly factored into academic workloads it is more likely students will get the attention they deserve (Keepes, 1989, and Phillips, 1989).

The sixth step would be to invite academics to engage in the process of professional development by determining their own professional development and growth goals, and to develop associated forms of recognition for achievement which are directly reflected in salary or conditions of employment.

A number of reciprocal obligations emerge from these greater expectations of stake holders in the academic process. The obligation for providing supporting documentation lies with the academic. The obligation for providing professional development opportunities lies with the academic community, particularly the School of Education and the Teaching and Learning Development Unit.. The obligation to provide reward lies with the university administration on behalf of the wider community. The process of meeting obligations should be very carefully documented with clearly defined terminal points that reflect international practice. However, this requirement does not mean that evaluation and assessment require levels of activity that seriously disrupt teaching and research activities. Rather what is proposed is that clear and concise guidelines be established that can be met expeditiously. It is intended that notes of observations take no more than an A5 page of text each. It is intended that supporting material at any probationary meeting entail no more than ten single sided pages of A4 text including annexes and appendices.

It is my understanding that the mechanism for professional development exists in part but that it is not continued beyond the beginning academic probationary period. It is

my view that the university community must become actively involved in the on-going professional development and assessment of all its members at all levels including and past the probationary period for new members.
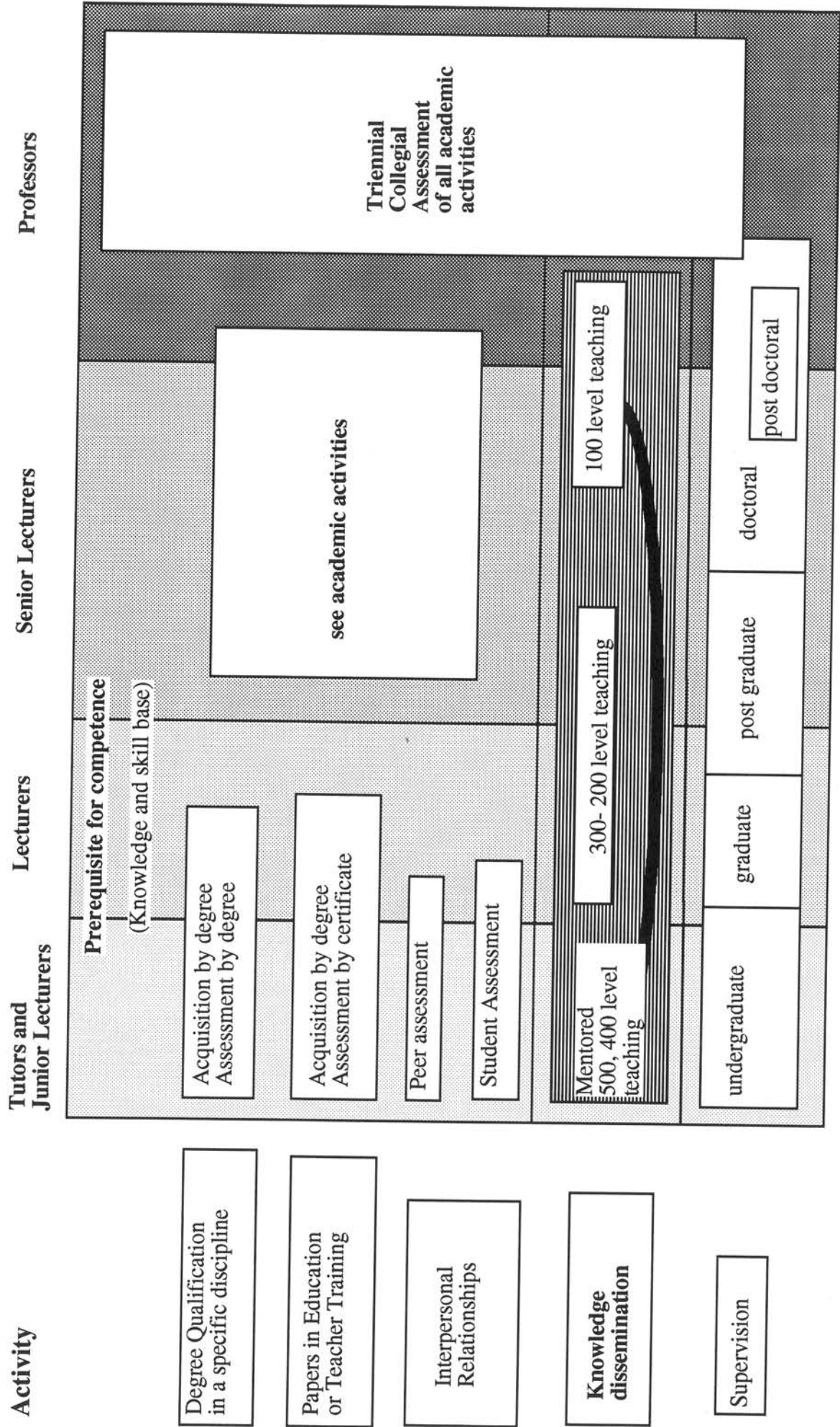
The seventh step would be to invite discussion among colleagues about acceptable ways to carefully encourage academics who consistently withdraw from personal professional development to seek employment in an institution more fitted to their abilities.

Summary

The increased complexity of academic role and the general concern over the quality of academic experiences point to a need to ensure that current activities are better understood. The proposed induction frameworks are suggested as starting points from which academics can engage in the process of ensuring the continuity of academic activities. The framework will also serve to ensure that the academic role is seen as defensible and thus warrants remuneration at internationally appropriate levels.

Academics may be more than meeting the requirements suggested in the enclosed material. The clear identification of the large range of tasks completed and the levels of skill and ability required to complete them will do much to improve public confidence in a quality return for public provision of resources.

Proposal for Collegial Control of Academic Staff at The University of Waikato including the Professional Induction Program

Activity

Tutors and Junior Lecturers	Lecturers	Senior Lecturers	Professors
			Triennial Collegial Assessment of all academic activities
		see academic activities	

Prerequisite for competence
(Knowledge and skill base)

- Acquisition by degree Assessment by degree
- Acquisition by degree Assessment by certificate
- Peer assessment
- Student Assessment
- Mentored 500, 400 level teaching
- 300- 200 level teaching
- 100 level teaching
- undergraduate
- graduate
- post graduate
- doctoral
- post doctoral

Degree Qualification in a specific discipline

Papers in Education or Teacher Training

Interpersonal Relationships

Knowledge dissemination

Supervision

Academic Assessment Categories

Tutors
Junior Lecturers
Lecturers
Senior Lecturers
Professors

Triennial Collegial Assessment

Resources and Grant Acquisition
Departmental
Commercial
National
Government Contracts
International

Curriculum Development
Maintain courses
Review courses
Initiate new courses
Review Courses

Administration
Course Administration
Advice clinics
Recruitment
Staff Selection

Publications
Conferences Proceedings
Journals
Books

Conferences
Campus
National
International

Interactions
Seminars
Research seminars
National
International

Academic Activities

Tutors and Junior Lecturers	Lecturers	Senior Lecturers	Professors
Preparing material for presentation in lectures from prepared outlines	Presenting prepared materials in tutorials and lectures. / Preparing teaching support materials for tutorials	Coordinating the preparation of teaching support materials (Laboratory and tutorial manuals)	Evaluate others' lecture materials
Assessing non-examination (assignments, essays, pracs) work using prepared materials	Preparation of examination model answers to prepared questions	Preparation of examination questions for prepared curriculum / Preparation of curriculum and examination questions	Evaluate others' preparation and assessment
Demonstrated evidence of student review of work	Demonstrated evidence of participation in peer review	**Evaluate the teaching of others' courses**	Moderate teaching of others' courses
Report observations of a range of teaching strategies / Demonstrated skill in ten small group (2 to 5 people) teaching strategies.	Demonstrated skill in ten distinct large group (8 to 40 people) graduate teaching strategies	Demonstrated skill in ten teaching strategies for undergraduate learners / Demonstrated skill in ten distinct very large group (40 to 400 people) teaching strategies	Demonstrated skill in ten strategies for interdisciplinary teaching
Administer prepared tests / Mark using model answers / Prepare own test model answers	Mark own tests	**Coordinate the test process** / Evaluate own Tests / Evaluate others' tests	Moderate Tests
Administer prepared examinations / Mark using model answers / Prepare own exam and model answers	Mark own examinations	**Coordinate the examination process** / Evaluate own Examinations / Evaluate others' Exams	Moderate Exams
Participation in curriculum review of shared course(s)	Participation in curriculum review of related courses	Curriculum review of own courses / **Coordinating the review of courses**	Curriculum review of courses in a discipline
Demonstrated skill in paper presentation in three local conference settings.	Demonstrated skill in paper presentation in three national conference settings.	Demonstrated skill in paper presentation in three international settings.	Demonstrated skill in presenting material to the general public

References

Barrie, J 1992: Oxford Practice and Cambridge Theorising: Some thoughts on Initial Teacher Education. *Educational Philosophy and Theory*. Vol 24, No. 1, pp1 to 16.

Baldwin, G. and Ling, P., 1993: To Lecture or not to Lecture. *Herdsa*, Vol.15 No.3, pp6 to 7.

Brundage, D.H. and Mackeracher, D. 1980: *Adult Learning principles and their Application to Program Planning*. Ministry Of Education, Ontario.

Brynes, J., 1993: Aboriginal Learning Styles and Adult Education: is a synthesis possible. *Australian Journal of Adult and Community Education*, Vol. 33, No.3 pp157 to 171.

Duhs, A., 1992: Misconceptions about teaching incentives. *Herdsa*, Vol. 14 No.3, pp11 to 12.

Fleming N., 1993: What works and what doesn't in academic staff development. *Herdsa*. Vol. 15, No.2, pp12 to 13

Heath, Rewarding excellence in Teaching. *Herdsa*, Vol.11, No.2, pp3 to 5.

Keepes B., 1989: The Sydney College of Education Approach. *Herdsa*, Vol. 11, No.1, pp3 to 4.

Leal, B., 1989: The Teaching and Research Roles of Academics are Symbiotic. *Herdsa*, Vol. 11, No. 3, p6

Lindsay, A., 1989: The Teaching and Research Roles of Academics- Conflicting Pressures in the Higher Education System. *Herdsa* Vol. 11, No.3, p5.

Phillips E., 1989: The Birkbeck College Approach. *Herdsa*, Vol. 11, No1, pp5 to 7.

Poole M., 1991: Establishing a research culture. *Herdsa*, Vol. 13, No2, pp3 to 5.

Prosser, A., 1989: In Reality the Teaching and Research Roles are Independent. *Herdsa*, Vol.11, No.3, p7 to 8.

Watson K., and Cambell, G., 1989: Paying your Way: Postgraduates and Restructuring in Higher Education. *Herdsa*, Vol. 11, No.3, pp9 to 11.