

THE AUSTRALIAN NATIONAL UNIVERSITY THE GRADUATE SCHOOL

Graduate Teaching Assistants: a pilot program of preparation and support at The Australian National University (1995-6)

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Occasional Paper GS 97/2

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ABSTRACT

This article offers a brief account of a pilot program of teaching support for casual and part-time PhD student tutors and demonstrators in their first experiences of teaching in an Australian university. Its analysis of the value of such programs draws heavily on an extensive body of written and oral evaluation data provided by participants, and it shows how some of the classic institutional and disciplinary dilemmas raised in the mounting of such programs are resolved in one context. Some of the unforeseen consequences of the introduction of this program for the larger organization and practice of teaching in the university are briefly analysed.

The provision of systematic, formal training and support for graduate teaching assistants (GTAs) has a long history in the USA - though that provision is less universal in spread and more variable in quality than is often supposed (Prieto, 1995). Such training is less common in Australia and the UK (Irvine, 1993; Gibbs, 1996) where the emphasis has traditionally been on post-factum programs of professional development for full-time academics. In the case of the latter two countries, however, conditions are changing quickly. There is growing formal recognition of the need for such training (Harris, 1996), and more or less formal programs of GTA preparation and support are beginning to appear in institutions across each country.

Nor should this be surprising. What is surprising is the length of time it has taken institutions in these two countries to overcome their accumulated cultural and structural resistance to helping those most - and

most obviously - in professional need. The roots of that resistance are not easy to discern, but they may have less to do with simple institutional cussedness and more to do with an inverted culture of protectiveness on the part of academic supervisors and senior colleagues ('Remember, your primary goal is your own research, your doctorate. Your teaching is secondary, you can worry about that when you're finished. Get on with your own work, don't get too involved with your students ...').

Attitudes of this kind have a certain superficial plausibility. Most GTAs, after all, have tightly circumscribed scholarship conditions and their individual teaching loads are usually light (3 hours per week, on average, in ANU). On the other hand, they are often allotted the most difficult and the most important teaching assignments of all: small group, close-up, highly interactive teaching of first year undergraduates. Socially, these tutors represent the human face of the institution to students new to the university and, intellectually, they are the primary agents of socialization into the various disciplines. They may in fact be the only emblems of this wholly new and largely puzzling tertiary culture that incoming undergraduates get to know in any real sense in their first year of study. And yet, in their employment conditions and their professional roles, they remain, generation after generation, the most exploited and most neglected group of all - neglected not just by their institutions, and not just by their academic supervisors, but also by professional staff development centres within the institutions. The latter have largely reflected and reproduced the status hierarchies of the institutional culture around them, preferring to concentrate their efforts and resources on full-time teaching staff. They may, at the same time, thereby have missed the greatest opportunities of all for actually affecting the quality of undergraduate teaching and, in the long run, effecting

This paper describes one attempt to redress the gap in professional support for 'casual' graduate tutors and lab demonstrators from outside the orthodox structures and agencies of such support. The Graduate Teaching Program (GTP), working out of the Graduate School at the Australian National University (ANU) in Canberra, has recently completed a two-year pilot program of tutor support and development for PhD students teaching in its undergraduate Faculties. Ninety PhD student tutors have each completed a semester-long program of concurrent teaching and training, and the analysis that follows examines their responses to that experience (some foreseen, some totally unforeseen) and the way in which some typical dilemmas in the construction and delivery of such programs have worked themselves out.

The Graduate Teaching Program: an overview

The impetus for the introduction of a program of GTA support came initially not from the academic departments or staff development officers but from the recently established Graduate School, the student tutors themselves and those engaged in learning support in the ANU's long established and highly respected Study Skills Centre. Indeed there was some initial resistance from the former groups, fearing, in the one case, yet another conspiracy from the centre and, in the other, a possible incursion across professional borders. This resistance was gradually worn down by a combination of four interrelated forces: the plain logic and moral cogency, once articulated, of the idea itself; the continuing pressure of demand from student tutors expressed through committees of the Graduate School; support for the idea from key institutional players (Dean of the Graduate School and Deans of the largest faculties of Arts and Science); and the indirect pressure to demonstrate innovation and

quality of undergraduate teaching exerted through the government's Quality audit processes. Indeed, it was funding awarded to the University from the first round of Quality Assurance auditing that finally (four years after the conception of the idea) enabled the Graduate School to mount a two-year pilot program. A half-time Co-ordinator was appointed in January 1995 at the level of Senior Lecturer, and the first intake of 15 student tutors and demonstrators was admitted in the following month. The Co-ordinator was responsible to the Dean of the Graduate School and to an Advisory Committee of deans and other academics and graduate students.

Aims

The primary aim of the GTP, as defined by the Advisory Committee, was to offer systematic support in teaching for PhD student tutors and demonstrators in the ANU. The restriction to PhD students was deliberate. The grounds of that restriction were two-fold: first, the pragmatic ground that most tutors in the University were doctoral students and that their ranks would supply the academic labour force of the future; second, the political ground that providing an opportunity to teach and to receive training in teaching in the course of the PhD would enrich and professionalize the University's PhD offering and serve to attract high quality graduate students from around the country. Preliminary analysis of the Graduate School's recruitment survey data suggests that the latter is already beginning to have some effect.

The secondary or supporting aims of the GTP were:

 to give PhD students a realistic opportunity to assess their interests in continuing in an academic teaching career;

- to give PhD students an opportunity to improve their communication and (particularly) small group communication and leadership skills;
- to strengthen PhD students' CVs and employment prospects;
- to enhance the quality of teaching in undergraduate courses; and
- to integrate these students more fully into the academic community of scholars.

Guiding Principles

In addition to the broad general aims sketched above, the Advisory Committee agreed upon some fundamental guiding principles or understandings which should shape the nature of any program that was eventually developed. The four most important of these were as follows:

- The GTP is a *student* development program, i.e. it is for students who are teaching not staff who happen to be studying. This distinction has important implications for the nature of the program being offered: the level of expectations, the choice of content, and the method of operation.
- The program should offer *practical*, *concurrent* support focused on the present circumstances of teaching in which participants find themselves. It should move from guided reflection on practice towards educational theory rather than begin with models and theories which participants would then be expected to apply.
- The program should be *voluntary*, and participation in it should be appropriately *recognized* by the Graduate School and the University (at the very least by provision of a formal certificate on completion).
- Above all, the emphasis should be on ensuring that participants have a successful initial experience of teaching, and that they derive

Each of these principles relies upon a set of assumptions not just about what is desirable or capable of achievement in such a program but indeed about the nature of learning itself (the strong inductivist preference of the second principle is an obvious case in point). It is also safe to say that the principles reflect the biases and understanding of those involved in their design: mainstream departmental academic teachers and supervisors and their graduate students rather than, say, educationists or staff developers who might be expected to work from a somewhat different, and probably much more explicitly theoretical, starting point.

Perhaps the first principle is the most controversial. At first blush, the distinction made there concerning the status of casual tutors - students or staff? - may seem trivial or unnecessarily hair-splitting. In fact a lot hangs by it. In the case of the GTP, springing as it does from disciplinary and departmental sources, these casual tutors are unequivocally seen as students. In undertaking a few hours of tutoring or demonstrating each week, they are intermittently, and haphazardly, invested with some of the responsibilities and powers of academic staff. The exercise of those responsibilities and powers, however, is both circumscribed (they normally have no say in course design) and tightly controlled (they usually have little discretion in such matters as assessment or the variation of deadlines). They are seen by members of the Department in which they are teaching as student aides, guides, extra hands, more experienced helpers - in science, explicators, 'demonstrators' (of a largely unproblematized knowledge) - more practised learners, at best very *junior* colleagues. They are students - they are listed everywhere as such - and their primary task and focus is their own research and study

From this particular understanding of their socio-cultural role in the department and the institution, a great deal flows for the sort of tutor training program that one constructs. The focus, for example, of such a program is likely to be much more unremittingly on the present (on survival, on next week's class, on assessing this week's lab report) than on more forward-looking, developmental programs in preparing for an academic career - on students, then, who teach a bit, in the here and now, and not on homunculi pedagogi in a hypothesized academic future. Similarly, the *content* of the program will be shaped by current not projected experience (thus the GTP has no component on curriculum construction or course design). Again, the expectations or levels of demand in such a program are determined by the conception of their role as students (thus the GTP is not a reading program - though extensive bibliographies are provided - but a program of reflection, of discussion, of activity and interaction with skilled practitioners, and it is carefully limited in the demands it makes on students' time).

Student tutors

Ninety PhD student tutors have now completed the Program, the fifteen in each semester of 1995 expanding to thirty in each semester in 1996 as content and methods began to bed down. To be eligible for admission, students must fulfil three basic requirements:

- they must be PhD students currently enrolled in the ANU
- they must be teaching at ANU in the semester in which they take the program
- they must have the formal written approval of the Head of the
 Department in which they are teaching.

They should also have the support of their academic supervisor (given tight scholarship time-limits and the tendency of some graduate students to take on more than they can manage). The students are drawn from right across what is a bifurcated institution (encompassing a largely-research arm, The Institute of Advanced Studies, and a teaching and research arm, The Faculties). Thirty-four of the ninety tutors who have completed the program have been Institute-based, fifty-six Faculties-based. Every School and Faculty has had at least one of its PhD students involved in the Program, and all disciplines have been represented.

Each of the four semesters to date has seen a substantial excess in demand over supply of places, and selection has been made with an eye to achieving a good balance in terms of: gender, stage of research degree, experience in teaching, and discipline and department (the complexities of disciplinary mix are treated in more detail later). Preference is normally given to those with least teaching experience, but in no individual groupfor obvious reasons of peer learning - are more than half the members absolute newcomers to teaching. Co-ordinator and tutors are kept in contact between meetings via a weekly four-page newsletter, generated by the Coordinator, dealing with issues from the previous meeting (reflections, second thoughts, references) and preparing the ground for the session to come (points of possible discussion, cartoons, tips from teaching manuals - mostly American). Members of each group are linked by email and are encouraged thereby to exchange ideas, create interest sub-groups and contribute to agendas for the meetings to come.

Content and Methodologies

Each semester's program is built upon a series of thirteen or fourteen 90-

weekly teaching commitments). Some meetings are led by a guest chosen from amongst an elite group of 'master' teachers from around the campus, while others consist of sets of practical activities (role-playing of group leadership, small group problem-solving of typical classroom issues and dilemmas, videotaping and analysis of tutor presentations) or guided excursions (observations of teaching practice out in the departments).

The actual topics for the weekly meetings have obviously varied over the four semesters of this two-year experimental or pilot program, but a reasonably constant underlying structure has been maintained, starting with an emphasis on the self and role as tutor, then opening out to issues of academic leadership and management and some of the technical, skill-oriented processes that underpin it, before finishing with a more sophisticated treatment of professional, ethical and theoretical concerns. One program, for example, included the following list of (short) topics:

- i. Orientation: to the GTP, and to your own first classes. Setting climates for learning.
- ii. Roles and responsibilities as tutor (or demonstrator).
- iii. Time-management (integrating research, teaching and your rest-of-life).
- iv. Who are your students (educationally? sociologically? culturally?), and what skills do you have to lead them?
- v. Specialized teaching contexts: -

Leading tutorials: (a) discussion-based or (b) problem-base

OR: preparing for, managing and following-up lab demonstrations.

vi. Exercises, role-playing, scenarios and classroom observations developing from (v) above.

- viii. Assessment (2): grading and feedback (practice, models, dilemmas, ethics)
- ix. Use of media and technological aids in teaching.
- x. Formal presentations: videotaping and analysis of tutors' lecture
 and seminar performance.
- xi. Tutor feedback: panels of undergraduate students represent to the tutors their experience of being being taught by them (or tutors like them).
- xii. Group dynamics, including personal relations and professional ethics.
- xiii. Student learning: can recent research assist you?
- xiv. Evaluation and academic career building: what have you learnt, and where can you go from here?

Three categories of staff co-operate with the Co-ordinator in the running of the program: teaching staff of outstanding quality, identified as such either by long-term repute among students and departmental colleagues or by some more official criterion such as being recipients of the Vice-Chancellor's Award for Excellence in Teaching; staff developers from the University's Centre for Educational Development and Academic Methods, who are expert in microteaching contexts; and Student Services, particularly Study Skills advisers and personal counsellors, who have specialized knowledge and skills in group dynamics and student learning. Extensive briefing of these staff on the ethos and objectives of the GTP precede their interaction with the tutors. One motif that is continually stressed in these briefings, and with the student tutors themselves, is that the GTP in itself constitutes not just a medium for exploring some ideas and advice about teaching but an ideal context for reflecting on the

explicit 'content' indicated by the topic for that week but with discussion and short trials of the processes by which such a content might best be approached and managed.

Evaluation

i. Processes: As befits a pilot program, the evaluation processes used have been largely formative in nature, drawing heavily on tutors' responses to the program they are undergoing or have just finished. Each semester's evaluation has resulted in significant changes for the program that followed, some of them quite major, e.g. items of content being added or deleted; or components that were formerly optional extras (such as the microteaching segment in the very first program) becoming integrated and compulsory.

Evaluation of the program works at five levels:

- on-going, informal soliciting of tutors' views in meetings and, via email, at two or three strategic stages in the course of each program;
- a more formal, wind-up discussion, audited by the Dean of the Graduate School, in which tutors reflect on strengths and weaknesses of the program and make suggestions for change;
- an extensive (5 page) written evaluation of the program completed by each participant (both quantitative and qualitative, and covering the goals of the program, its content, ambience, load, the role of the Coordinator, suggestions for change, as well as a personal and professional self-evaluation in the light of the program);
- follow-up reflection with tutors 9-12 months after completing the program in order to gauge its longer-term effects and newly emerging

- external evaluation. In October 1995, for example, the Director of the Bok Center for Teaching and Learning at Harvard was brought to the ANU for a week to view the program in action, evaluate it and report to the Dean on its future direction. (Harvard was chosen because its Graduate Teaching Fellows program was the initial model for the GTP.)

The results of these evaluations are reported in detail each semester to the program's Advisory Committee and, in a more concise form, to the Senior Officers, Deans and Heads of Departments throughout the University. This kind of 'political' or public relations work has been an important part of the founding Coordinator's job and has helped to create the favourable light in which the program is now viewed by the university at large - the most tangible manifestation of this being the allocation of funding by the Vice-Chancellor for the next two-year stage of development of the program.

ii. Outcomes: Responses to the pilot program from student tutors have been strongly positive. Eighty-eight of the ninety respondents rated the overall effectiveness of the program in achieving its aims between 5 and 7 on a seven point scale (mean ratings for the four semester pilot programs were, in order, 5.5, 5.8, 5.9 and 5.7). Ninety-five per cent indicated that they would 'unreservedly recommend the program to a peer'. Other, supplementary indicators confirm this strongly positive attitude on the part of tutors. Only one tutor, for example, failed to complete the semester program, and only two others missed more than two meetings in the course of a semester. To date, no minimum standard of attendance has been set for 'successful completion' and the awarding of a certificate, first because there has been no need, and, second, because of a concern.

that the very act of setting a minimum often induces a normative 'satisficing' reflex: 'There is a minimum requirement of eleven out of fourteen meetings - so I can afford to miss three.' Instead, a strong expectation is expressed from the beginning that all tutors will attend all meetings and, to now, tutors have taken that expectation and their obligation to one another seriously.

Amid the mass of qualitative data (three hundred handwritten pages of tutors' comments), three persistent themes stand out. First, there exists the sheer relief of discovering that teaching support is available. One tutor's *cri de coeur* eloquently made this point:

It probably sounds a little melodramatic but I don't know how I would have survived this semester without this program. I (like many others) was given five days notice before teaching began, to prepare for three tutorials in a course that I had very little idea about ...

Others echoed the point - if somewhat less plangently - reminding us how isolated and cut-off the graduate student cum casual tutor can actually be:

It has been good to know that I, as a tutor, am not the only sufferer in the university teaching environment. Sometimes that sense of belonging has helped me overcome the anxiety and fear associated with teaching in my first year ...

Without participating in the program, I would have known only one other graduate student who was involved in teaching ...

It [the program] was a graduate teaching trauma support group - nice to know I wasn't alone in experiencing some of the problems I had encountered.

In fact I think where I got most out of the program was probably chatting to a whole range of separate people, and discovering that the things I was worrying about and dealing with were the same for everyone.

Clearly, for many tutors, between the initial flattering invitation to tutor and the eventual reality of facing the weekly tutorial falls the shadow of self-doubt, even terror. A program such as the GTP can make the

difference between surviving and going under. At the very least, it offers: 'The reassurance that I'm not alone and that there is a whole support network out there'.

The second most common theme in tutors' responses involved a growth in awareness or understanding of the nature of the teaching process itself and of their own role as tutors within it. The expression of this theme was rather abstract yet nonetheless clear and convinced of its authenticity:

The program helped crystallize ideas that had been developed the hard way - by trial and error ... I now regard teaching less as a random collection of skills and more as a coherent philosophy.

I think about my teaching in a much more structured way. Not having been involved in setting up a unit, I just did what was put in front of me, but now I reflect more on appropriate teaching methods and the way that a lecture or tutorial is structured ...

I think more globally about a course in the sense of being familiar with the whole journey at the beginning in order to convey some perspective to the students ...

I am more conscious of myself as a teacher and more aware of the interaction between what I do to teach and what the students do to learn.

The program helped in grounding tutoring in its proper context visa-vis me as an individual, a postgraduate student and a tutor. I feel more comfortable with the 'r

This larger awareness of the nature and value of teaching sometimes moved out from the purely individual to embrace a sense of the whole institution:

The primary aim of achieving systematic support for teaching was fully met, the first and most important step being the recognition, by the University, of the importance of teaching. Throughout the semester I felt that the University was fully committed to this program, which enhanced the program's dynamics and productivity. We felt we were part of a university initiative that was important and innovative ...

The third, and most obviously predictable, theme was a growth in individual confidence, commonly tied to a perceived development in leadership, management and/or communication skills and in the habit of self-reflection:

The most obvious difference about the way I think about my teaching is confidence. I know that I can handle it ...

I feel more confident with my conflict-resolution skills... more comfortable with class/group discussion, dynamics ...

I don't think I have changed my style a great deal ... I do feel more confident in dealing with students, though, now that I have a better idea of their expectations ...

The practice of self-reflection is probably one of the best skills I've learned from the program.

There were two areas of skills development in which some tutors continued to see themselves as inadequate at the end of the program. The first of these was the perpetual problem of leading productive tutorial discussions, a challenge - and a terror - also faced by many experienced academics, even to the end of their careers. The second area of perceived inadequacy was time-management, though this was strongly differentiated by disciplinary background. Humanities tutors, for example, spent more time on their preparation and on out-of-class interactions with their students than did laboratory demonstrators in the physical and biological sciences (Smeby, 1996). They also had more trouble in setting limits (e.g. on student access) and in balancing the demands of teaching and their own research and writing: 'I didn't do nearly enough work on my thesis ... I find teaching very seductive.' 'My teaching, the GTP and my social life integrated well - pity about the research and the thesis, really'. This relative incapacity to manage time and set limits may be partly an individual problem, but it may also provide tentative evidence for something closer to an 'epistemological determination of work' (Clark, 1987).

Structural dilemmas

The basic philosophy of the GTP was bequeathed to it in the moment of conception. The Advisory Committee - mostly deans, practising academics and student tutors - insisted on certain fixed characteristics. Any training program was to be concurrent with teaching practice (no bicycle riding courses without a bicycle). It was to be developmental (spread over a semester to allow for extensive reflection). It was to be practical in orientation (not eschewing theory but not adopting it as the starting point either). This founding philosophy, however, still left room for a variety of possible forms for the program. In particular, it left open the question of whether the program was to be centrally or locally organized, and whether the focus and content of the program were to be generic or differentiated by discipline(s).

The issue of central versus local organization was decided, in this context, on two grounds: one pragmatic, the other cultural. The pragmatic ground was the simple one of numbers. Whereas the large Faculties of Arts and Science would have, in any one semester, a sufficient number of eligible tutors or demonstrators to enable a reasonably sized program to be mounted (a minimum of, say, 8-10 participants), none of the four other, smaller Faculties would have had a similar capacity. (The same would obviously have been true at the departmental level, with the possible exception of two Science Departments with very large numbers of lab demonstrators.)

The cultural ground was almost as compelling. The potential for an early - and often indelible - socialization of graduate students into a negative departmental culture vis-a-vis teaching and its value, is very great. It is a particular danger in an institution which is dominated by and identifies itself largely in terms of its research. Part of the original rationale for the GTP was to break the departmental isolation that many

and faculty walls and see how things are done elsewhere. In their comments on the design of the program, several students articulated this same notion very strongly:

In many ways I think a general change to a 'mind-set' imposed by my department's members has been the greatest achievement for me ...

Because of the emphasis in my Department on research, this [the program] is the first time I've ever been directly confronted with the view that teaching could be important.

A centrally organized program is not the same thing, of course, as a generically focused program. Having brought tutors together from departments and disciplines right across the institution, the question then becomes: to what extent does one see and treat 'teaching' as a generic behaviour (in which case one might assign tutors randomly to groups or even deliberately mix them disciplinarily), and to what extent does one see it as differentiated by disciplinary context and culture (in which case one might seek to cluster students by cognate departments and disciplines)? The GTP has tried both models and settled, for the moment, on a blend of the two.

The initial trial was as much a product of circumstance as conscious design. Fifteen PhD student tutors from fifteen individual departments were brought together by a newly appointed coordinator at short notice (many Humanities tutors are not appointed until virtually the day classes begin), and a program of seminars and activities evolved around them as the semester progressed. The group followed a single integrated program with occasional sub-sets being created for the most obvious differences in teaching context, e.g. a tri-partite division for small group teaching of discussion-based tutoring, problem-based tutoring and laboratory demonstration. In the evaluation for that semester, the tutors were asked whether they thought the program might not have run better had it been

split along Science versus Humanities/Social Sciences lines. With the exception of one sensible proviso:

More split sessions? I don't think so but I wouldn't know without trying...

their responses were unanimous and adamant:

It was good having everyone together, and would strongly recommend against discipline-split sessions. I learned a lot from the comments/discussion of both science and humanities ...

Humanities v. Science - not an issue - every principle was transferable out of context.

I felt having the mix of different disciplines was essential - I already know more or less how most tutorials in my subject are run, I've been in them and talked to other tutors. The best ideas were those from other disciplines, which I found I could often adapt to my subject and therefore have something completely new to think about.

A few more split sessions - but not too many! There is far too little cross-discipline communication already and this is an ideal forum to foster those links. In fact, do you realize the GTP is the only forum in which a university-wide perspective on teaching occurs for tutors like us ...?

Too much is common to both Arts and Science. Teaching is teaching ...

Of course, at the deepest structural level, the last tutor's comment is perfectly correct: 'Teaching is teaching'. On the other hand, the particular *form* which teaching takes is highly diffentiated by disciplinary context. (There are interesting parallels to this dualism of generic structure versus disciplinary form in a whole range of epistemological spheres: are, for example, thinking skills generic or discipline-specific, and how, therefore, should they be taught? Are learning skills generic or discipline-specific, and how, therefore, are they best taught? (Clanchy and Ballard, 1995).)

Despite the tutors' strongly expressed desire for cross-disciplinary participation, the third and fourth programs were divided into two subgroups of fifteen participants each, using the gross criterion of Science versus Humanities/Social Sciences contexts of teaching as the basis of

division In fact the two around often nuround similar tenion

("Assessment', 'Managing and leading small groups'), but the process by which they did so - since they arose largely from discipline-specific tutor experiences - varied significantly. The two groups were brought together on three occasions when it was felt that disciplinary difference was less salient or that cross-disciplinary perspectives might be specially illuminating, e.g. 'Integrating teaching, research and rest-of-life'. In their evaluations, the tutors rated these bi-furcated programs at precisely the same levels of effectiveness, social cohesion, enjoyment and professional development as had their peers the earlier, integrated programs. These later bi-furcated groups strongly preferred their narrower cognate-discipline structure, though they occasionally - "But only occasionally" - enjoyed meeting their disciplinary alter-egos in integrated groups on topics with plausible surface commonality.

The coordinator's own conclusion, after experimenting with three quite different structures and methods of group composition, was that there were simply lots of different and equally effective ways of cutting this particular pedagogical onion:

A successful GTP can be mounted in a myriad of forms. Such is the demand for assistance and support from the student tutors, and such is the character of the tutors themselves (bright, self-selected and motivated to learn to teach well) that the very act of bringing them together in a supportive environment in which they also get to intereact with some outstanding practitioners from around the campus - all of this cannot help but make for a successful experience.

Thus the environment (its tone, atmosphere, resources) is actually more important to the success of the program than any particular item or combination of items of 'content' - and the creation of an appropriate and enjoyable environment becomes the Coordinator's primary responsibility.

(Extract from Co-ordinator's report on the third semester trial of the GTP)

By way of a final, speculative observation, the division of tutors into groups on disciplinary grounds and their clustering by so-called

process. The actual location of disciplines (Maths in Arts in some universities, in Science in others) rests just as often on vagaries of institutional history as on any bedrock of epistemological necessity. Thus, in the experience of this program at least, tutors from some of the 'restricted' sciences such as mathematics or physics (those, in other words, concerned with phenomena of limited complexity but models of great intellectual reach) often seem to have much more in common in their personal, intellectual and pedagogical styles with their colleagues in philosophy or linguistics than they do with those from the 'unrestricted' sciences (such as biology) with whom they are 'naturally' placed in most university settings (Pantin, 1968; Becher, 1989).

Unforeseen consequences

Small innovations, as we've learnt from chaos theory, can have startling, unintended effects in large systems, and at different levels within those systems. They are often much more interesting than the intended effects, whether achieved or not. The GTP was a tiny innovation in one corner of one field of a vast institutional empire. Yet it has already begun to provoke institutional change in unforeseen ways and at levels beyond its own significance. Three such effects are worth noting briefly.

1. It was intended from the outset that the GTP might, as tutor numbers grew, have some effect on the quality of undergraduate teaching. Such improvement, however, was always conceived of as either an entirely individual thing (the particular tutor became a better

(a participant in the program might unconsciously 'infect' other tutors in his or her department). This conception seriously underestimated one element in the program: the capacity and imagination of the tutors themselves. Within one month of the start of the first program, Heads of two large Departments reported GTP tutors within their departments were organizing weekly seminars for all the other tutors in the department to pass on what had been covered in the program the week before. Others quickly began to take initiatives in reshaping the organization of teaching in the year in which they were involved. Here is an extract from one such letter from a tutor to his Head of Department (the Head was also the lecturer in charge of a large first year science unit in which the tutor was teaching and for which no preparation for the weekly lab was ever given):

I am now in the third week of the Graduate Teaching Program. One point that has been stressed repeatedly in the course is that demonstrators need to be adequately prepared for each lab. In the first-year [Department] labs last semester, this was rarely the case, and I felt, at that time, that the situation tended to underminemy effectiveness as a demonstrator. Students would ask questions about how to proceed with an assignment and, at times, because I was still trying to sort this out for myself, I was unable to provide them with helpful directions.

Having given the matter some thought, I would like to propose some solutions to the situation. Firstly, all demonstrators need to have the following information:

- 1. An overview of the course and its objectives, including information on how students will be assessed.
- 2. A copy of the assignment prior to the practical (preferably the week before). etc etc..... (Five such clauses) ...

Secondly, this information needs to be distributed to the demonstrators well in advance of each lab.... Subject of course to your approval, I am willing to offer my services to ensure the pertinent information is distributed to the demonstrators each week, so they are adequately prepared to teach the next week's lab...

Coordinating the demonstrators in this manner will help ensure consistency in our efforts to help the students, and will make the job of demonstrating easier and more rewarding for those involved.

The Head of Department, understandably a little resentful and putupon at first, reported to the Coordinator later in the semester how much better labs and lab reports had been since this individual tutor's intervention.

- 2. One principle of the GTP is that tutors must be teaching in the semester in which they take the program. Many graduate students who wished to take the program felt 'blocked' because they could not obtain the necessary, qualifying teaching post. One of the sources of 'blockage' was the actual system of hiring tutors - a veiled form of patronage whereby lecturers simply appointed a graduate student whose research they happened to be supervising, regardless of merit or aptitude for teaching. The drive to enter the GTP (and to satisfy the necessary precondition of obtaining a tutoring post for that semester) led graduate students in three key departments in the largest Faculty to exert such pressure that the process of hiring graduate students to teach in those departments has now been made more systematic and transparent. Tutoring positions are now advertised not donated. All graduate students in the department are eligible to apply, there are formal applications, selection and hiring criteria and processes. This situation may, with time, have come about anyway because of wider union pressures for transparency in decision-making in the academic labour market. There is no doubt, however, that the GTP was a significant catalyst in its happening on this site ahead of most other institutions in the country.
- 3. The role and duties of 'tutor' are vague, subject to departmental and course coordinators' whim, and potentially very exploitative. There is a vast range of practice among departments. A few regard their student tutors as staff, most ban them from departmental meetings (which

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unpaid marking for lecturers (who are too busy to grade the essays or exams of their own tutorials), and so on.

Tutors from the GTP - and especially some from the most exploitative departments - have now requested from their Heads formal written statements setting out the responsibilities, duties and rights of tutors in their departments. In a number of cases, this is the first time such statements had been issued (or, one suspects, thought of). This has been helpful not merely for the individual tutors but for the departments themselves in sorting out what are legitimate, equitable and reasonable demands upon their GTAs. Again, the fact that, through the GTP, tutors had access to both comparative models of practice and a body of collegial support and reinforcement they otherwise have lacked, was crucial to their capacity to raise such issues and to press them within the (sometimes intimidating) culture of their individual departments. In two more years, when there are over two hundred confident, committed and trained tutors in the one institution, the potential for concerted, constructive change driven from the bottom is obvious. It is blindingly so to the tutors themselves who can see the need, in the current politics of Higher Education in Australia, for the development of something akin to a tutors' union.

Conclusion

Despite their low status in the traditional academic pecking order, GTAs are assuming an increasing burden of the undergraduate teaching in many Australian universities. There are various systemic reasons for this, not the least of which is the recognition by their institutional masters of the one pre-eminent virtue possessed by all

therefore easily exploitable and their proper preparation for what is arguably the most important segment of university teaching is an opportunity cost many institutions still feel they can ignore with impunity.

The experience of a graduate tutor training program at one Australian university, however, shows that GTAs have other virtues apart from their affordability. GTAs are invariably bright, they're almost universally motivated to teach well, they see teaching as important, they are not yet cynical or burdened with the weight of years of academic industry but rather are open and non-defensive, they are still themselves *learners*, they are often at the frontier - as distinct from the backblocks or wastelands - of their subject, and they are frequently participants in the same social culture as the students they teach. In many ways, then, they are ideally suited for the role which the galloping indigence of their institutions is seeking to press upon them. Being ideally suited for a role, however, is still a possible universe away from being 'naturally' prepared to assume it. The GTP at the ANU is one experiment in the construction of such a possible, mediating universe.

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