SRHE conference 2004

A case study on developing the Graduate Teaching Assistant role in Higher Education

Chris Procter Paul Spedding Jaye McIsaac

Abstract

Universities are developing their use of Graduate Teaching Assistants (GTAs) in a haphazard and sometimes exploitative way. This paper discusses relevant literature and examples of practice from Universities in the UK. It goes on to describe the development of the GTA role at the University of Salford and research into this in one academic department. The views of stakeholders concerned are presented including the students, academic staff and GTAs. Universities have to address the increasing quantity of teaching required together with the call for higher quality of delivery. They also place greater demands on the use of academic staff time for research and management. Effective, ethical deployment of GTAs can help manage this tension.

Introduction

There are a number of factors that suggest that UK Universities will continue to increase their use of GTAs, and that postgraduates will be attracted to these positions. These include increasing undergraduate numbers, lower unit costs, limited scholarships available for PhDs. more academic time devoted to research and the RAE. At the same time there is a greater expectation of professionalism from both the funders and the customers of higher education. We define a GTA as being someone who is employed on a salary (or stipend) to provide teaching support to students, usually undergraduates, whilst also studying for a postgraduate degree, usually a PhD. Our definition does not include the postgraduate student who typically provides 'demonstrator' support on an hourly basis. The title GTA has become well established in British Universities although the titles 'Teaching Assistant' and 'Graduate Assistant' are also used. The recruitment employment and training of GTAs is widespread in the UK, yet not widely discussed and researched. Recommendations of national bodies and reports have little bearing on practice. Whilst in the USA, the role of the GTA is well established and often seen as an apprenticeship to an academic career, in the UK there is considerable variety in the deployment, terms and conditions and development of GTAs. This is in marked contrast to the use of Teaching Assistants (TA) in schools which is marked by national uniformity and a clear division of roles between the TA and teacher

We briefly outline key literature on the subject and discuss examples of the use of GTAs in the UK. We then describe the introduction of GTAs at the University of Salford and evolution of policy and practice. We present original findings resulting from our survey of students, GTAs and academic staff in one department. This work helps forge our conclusions that we believe are a significant contribution to a debate requiring a higher profile.

Literature review

The literature on GTAs divides into two areas – the publications of national bodies and research publications. A review of the literature is followed by some reflections on the similarities and differences between the GTA role and the Teaching Assistant in school role.

Firstly, a number of professional organisations in the United Kingdom have published codes of practice, namely the National Postgraduate Committee (1993 & 2000), the Quality Assurance Agency (1999), the UK Council for Graduate Education (1999) and the Association of University Teachers (2001a, 2001b). Both the NPC and AUT have recommended the well known but little observed annual maximum for postgraduates for teaching related duties of 180 hours per year. The UKCGE report was published in 1999 in *Preparing postgraduates to* teach in higher education to coincide with the launch of the Institute of Learning and Teaching in Higher Education (ILT). It includes a fairly extensive bibliography and the most thorough survey of UK Universities, despite little 'lifting under the stones' – students and GTAs are not asked for their views. It also includes a summary of US provision for GTAs including training programmes and associated awards. Conclusions are concerned with training, pre-service provision, accreditation, guiding principles and outcomes – it argues that the GTA role should be seen as valuable preparation for an academic career and a way of addressing the imbalance in terms of research versus teaching skills in new academics.

Secondly there is research that examines the experience of the GTA, although very little that looks at the student view. The role of GTAs in the USA is much better established. The most widely cited work is that by Nyquist & Wulff (1996) which discusses the provision of support for the GTA alongside ensuring that the students are properly taught. D'Andrea, who was involved in creating the UKGCE report (above) has more recently published an analysis of the use of GTAs in the USA (D'Andrea 2002) as has Park (Park 2004). D'Andrea emphasises the difference between GTAs, who are being trained as members of Higher Education academic staff, and part time teachers. Park discusses the graduate training for a career as an academic that is common in the USA and may involve training on the nationally recognised Preparing Future Faculty (PFF) scheme. He contrasts this with the graduate student who teaches which is more common in the UK. Issues identified in this literature include selection and preparation, training, supervision and mentoring, practical issues (including GTA knowledge, communication skills), personal issues (including developing effectiveness and self-worth) and professional development. The issue of professional development of GTAs in the UK is discussed by Sharpe (2000) and also by Prieto (2003). Apparently the only contemporary UK paper that looks at the GTA experience from their own point of view is that by Park and Ramos (2002) This describes a survey of how GTAs are used in Lancaster UK University. It highlights a number of problems in relation to selection, task allocation, induction, training, time, pay, feedback, QA and responsibility. The two most prominent issues were workload and pay. It highlights the problem of whether the GTA is a student or a teacher and argues for a national debate on the role of GTAs.

In the UK primary and secondary education sectors, the role of Teaching Assistants (TAs) is much better established and nationally consistent. Duties undertaken by TAs in schools range from one-to-one support of special needs pupils, to limited whole-class supervision. In contrast to GTAs, Teaching Assistantship is not generally seen as any sort of teaching apprenticeship.

In a major piece of research into the use of TAs in UK schools, funded by the Local Government Association, Smith *et al* (2004) found that a typical TA is female, in the age range 41 to 50 and is likely to be a carer when not in the classroom. The research found that less that 1% of the 574 TAs surveyed saw themselves as likely to be a qualified teacher within a year, and only 5% within a more realistic 5 years. Around 40% thought they would be in a similar role to their current one in 5 years' time. There are UK qualifications for TAs, such as the City and Guilds *Certificate in Learning Support* and the NVQ Level 3 *Teaching Assistants*. Most training for TAs is seen to be in the area of professional development within the role rather than career development with a view to making the eventual switch to full teacher status. The Times Educational Supplement (19 November 2004) describes the experiences of a TA who, after many years of being "just another pair of hands in the classroom" is taking an innovative degree specially designed for TAs aspiring to become teachers. This transfer is by no means unique, but as the survey figures suggests, is far from the norm.

Views amongst schoolteachers has been mixed. The largest UK teaching union, the National Union of Teachers has always been very reluctant to accept the use of TAs in British schools, claiming that they will be used to replace teachers. (*Guardian* 2 October 2003). On the other hand, the UK Government and many supporters of the TA scheme believe that there will be a resulting reduction in teachers' workloads. For instance another large teaching union, the NASUWT (2003) support the use of TA staff "to support high quality teaching and learning".

Differences between the roles of TAs and GTAs are many. The legal role of the teacher/supervisor in the classroom is quite different: university students are adults, whereas school-children are required to be under the supervision of suitable adult. The difference in typical career aspirations between TAs and GTAs is marked: our findings show that a majority of our GTAs do indeed want to become academics, and there is anyway no real option of them remaining GTAs for a prolonged period. However, the need for a recognised but not over-demanding qualification (in time terms) for university GTAs and TAs is something that the sectors have in common.

There are other very significant similarities which are of interest in this study. TAs and GTAs can both be used to reduce the workload of the fully qualified staff in the two sectors, and in the current environment of resource shortage, this is a powerful argument in their favour. In both cases there are often some resulting tensions between the staff involved and there may be the impression on behalf of the "customers" - children (or perhaps their parents) and students – that they are being given an inferior service.

Examples of practice in the UK

The authors have conducted workshops at two national conferences and investigated the use of GTAs in the North West of England. This section is included to highlight differences of GTA practice among British Universities, in the areas of training, employment and workloads. It is not intended to be a representative or comprehensive study. There are a wide variety of approaches to the employment and utilisation of GTAs in the UK. For example in the North-West there is no regional consensus of 'how it should be'.

Firstly, provision of training to enhance teaching practice is considered. Lancaster University and Liverpool John Moores University offer formal programmes that lead to a credited award for GTAs, advertising the training as an opportunity to gain teaching experience and a qualification.

Mandatory training programmes of more than one day, but less than one week are offered at the Universities of Liverpool and Manchester. These programmes are offered as opportunities to gain teaching experience and support, but do not lead to an accredited award.

GTAs at Manchester Metropolitan University have the opportunity to enrol, on a voluntary basis, in the Postgraduate Certificate in Higher Education programme, provided for new lecturing staff. Bolton Institute of Higher Education advertises teaching assistant posts, on a departmental basis, where tuition fees, living expenses and teaching payments are made as a lump sum.

Secondly, employment and workload practice is considered. In discussions with colleagues from other Universities it transpires that GTA contracts can range from one year (University of Ulster) to four years (University of Leeds). Some Universities waive fees for postgraduate study whilst others do not. Annual stipends range from £6,000 to £12,000. In at least two Universities we were told that GTAs were simply regarded as 'cheap labour'. In some Universities little or no formal training is available, whilst in others (eg Glasgow) credit bearing staff development is mandatory.

In summary there is clearly a substantial difference in practice between British Universities. In many cases there seems to be little in place to support either the GTAs or the academic staff, and in general the policies have not been developed on the basis of any research. There are currently three models of training and development to enhance GTA teaching practice: (i) compulsory courses that lead to a credit-bearing award; (ii) compulsory courses that do not lead to a credit-based award; and (iii) courses that are provided but where attendance is voluntary.

GTAs in Salford

Salford University has identified the need to provide training and development, within a comprehensive framework that will enhance undergraduate student learning and develop GTAs confidence and competence in teaching (and support their own learning). Current provision consists of short workshops focussed on specific aspects of teaching, eg. small group teaching, learning to lecture and the role of the Demonstrator. A longer term development is the commitment to investigating the place of a credit-bearing award. The need to address both immediate and future training provision comes from the emerging pattern of three constituencies within the current GTA cohort. There is no doubt that there are some GTAs who view their future in academia, however there are others who wish to complete the minimum training requirement offered. A third group are keen to undertake all training offered to enhance their practice, while they are in the GTA role. In summary, this diverse range of training needs indicates flexible, yet focussed training and development in the future.

The University of Salford launched a new initiative in 2003, to enhance the provision of learning and teaching, by providing training and development for postgraduate students who provide teaching support. A Graduate Teaching Assistantship scheme provides an annual stipend for each GTA, funded jointly from the relevant Research Institute and the host department of the GTA. At the time of writing, GTAs receive an annual stipend of £10,500 and their fees are waived for a maximum of 3 years.

Between September 2003 and October 2004 thirty-two GTAs have been recruited and are actively providing teaching support while studying for postgraduate qualifications, mainly PhDs. A wide range of disciplines are represented by a mixture of arts-based and science-based students.

In April 2004, a short scoping project investigated the training and development of GTAs in their teaching support role. Recommendations were formulated on the basis of discussions and feedback from the first GTA cohort, academic staff including supervisors and line managers in Schools where GTAs were employed, the Education Development Unit and the Research and Graduate College.

Recommendations identified three main areas for development: immediate GTA training to enhance teaching provision, future provision of a teaching training programme and employment and workload policy and practice. In Autumn 2004, a Co-ordinator of Postgraduate Teaching Practice was appointed to manage this development.

A new learning and teaching programme for GTAs will be offered in conjunction with the Salford Postgraduate Research Training programme (SPoRT): a centrally provided programme of PhD and generic skills training. Development priorities include the investigation of a credit-bearing teaching award, GTA employment policy and the integration of a Virtual Learning Environment into the training programme for GTAs.

Salford's Information Systems Institute – a Case Study

As University policy is developed, individual departments or schools have been allowed to develop their own custom and practice. The Information Systems Institute (ISI) is one of 16 academic schools in the University of Salford, employing eight GTAs. The GTAs were appointed through a process of advertisement, application, shortlist and interview and are under the guidance of a school GTA Co-ordinator and also the University's Co-ordinator of Postgraduate Teaching Practice, the relevant module leader(s) and their research supervisor. They have their own forum to discuss teaching and are part of the doctoral school to support their research. Regular meetings are held by the GTAs to discuss their concerns: these generally include pay, workload/time management and how to deal with particular situations. Seven of the eight GTAs are Salford graduates and have a close connection with the staff and students in the school. Three of the GTAs are conducting educational research. Typically they support two modules each per semester. Whilst it is difficult to quantify the hours of

teaching they undertake, each GTA has organised clear days for their research. The GTAs conduct a wide range of duties involving student support, such as tutorials, practicals, email, VLE and telephone support, presentations and invigilation. These duties are always under the supervision of an academic member of staff who retains responsibility for all aspects of the module, especially the assessment. The following sections outline in detail the views of students concerning GTAs and (more briefly) the views of GTAs and academic staff

Student views of the use of GTAs

About 300 questionnaires were distributed to students in the ISI during November 2004, of which 217 were completed and returned. Students were asked 6 questions which included yes/no and Likert responses together with opportunity for comments.

A full numerical analysis is available in the appendix. In the following discussion, all percentages relate to those who gave a positive response – this was over 73% of all respondents in every question. Students were asked to supply comments where appropriate: many of these were very useful and a number of quotations are included below. Most of the students who filled in the questionnaire were full-time undergraduates (Years 1, 2 and Final - 169 in all), with 26 part-time undergraduates and 22 postgraduates. An analysis was made of any differences between year groups in the views expressed, but no striking divergence was noted. Year 1 UG students seemed less aware of the role of GTAs, but a slightly greater number of them found GTAs more approachable. Fewer Final Year UG students found the GTAs 'sufficiently knowledge', as might have been expected with more advanced work, although this was not echoed in the PG group.

In response to the question 'Do you know if you have been supported by a GTA?' 73% replied that they had and 27% did not know. The latter figure may be due to the recent introduction of GTAs (September 2003) or because some students (especially if in Year 1) may not be particularly interested in, or aware of, the differences between full-time academic staff, GTAs and other support staff.

In response to the question "Do you think it is a good idea to use GTAs?" 86% said that they did. A number of generally supportive comments were made, including the idea that the use of GTAs enables more small group teaching to be feasible. One student remarked that "[GTAs] *teach* us, which makes us understand the lecture material" (our emphasis). Other comments included "They have enough time to explain individual needs".

Students were asked to compare the "approachability of the GTA in comparison with the lecturer". Here the majority (52%) thought they were about the same, with another 39% feeling that GTAs were more approachable. Around eight students expressed a concern over individual GTAs, but the general view was that the (typical) closeness in age between the GTA and student and the fact that the GTA had in many cases been a student not long before were very positive aspects. For instance, one students made comments similar to "More available than the lecturer." A number of the GTAs are of overseas origin, and a very small number of respondents (eight) commented on a difficulty with accent or use of English. Two respondents also complained of poor communication skills by some GTAs. This was an interesting result: the researchers' view is that some of the GTAs speak good English but with quite a strong accent, so it was pleasing to see so few students experiencing any difficulties.

Students were asked if they felt that GTAs were sufficiently knowledgeable in their subject area and 84% felt that they were. Interesting comments arising from this question included those referring to the perceived close working relationship with the lecturer. For instance "If they don't know the answer, they will quickly find out from the lecturer and feed back to you". Where there were criticisms, these often concerned the relationship between the knowledge and experience of the GTA. One comment expressed the views of a number: "The knowledge is there but not the same confidence as the lecturer, probably down to less experience". Response to this particular question show how GTAs are effectively contributing to a professional working environment.

Comment was sought from students on whether the GTAs brought a different and useful perspective to the subject matter compared to the lecturer. A significant number of respondents felt that the GTAs were closer to the students' "wavelength" having recently studied the subject themselves – for instance "Has recently completed a similar programme, therefore has a fresh understanding of the difficulties of learning it". Many felt that the GTAs could provide more practical help with problem solving, coursework and one-to-one support. "The GTA's involvement has always been a bit more hands-on and practical as tutors tend to stay on the theory" was a typical comment. In terms of whether a GTA might bring a truly different perspective, a few comments were noted. One student referred to "richer discussion" as the GTA was not so closely linked with the lecture material. Another said that a different perspective was "refreshing to students". Another said "I just expected them to regurgitate the lectures, but I found they often found much better ways of explaining." A slightly more negative (and cryptic) comment from a postgraduate student was simply "In theory yes, in practice no", though another PG student stated "Gaining different perspectives, particularly at Masters level is vital in forming one's own understanding..."

Students were asked for comments on the likely future situation where most tutorials and practicals would be conducted by GTAs. There was a genuine mixture of views here. Over 70 respondents felt that it was a good idea. Of these a substantial number (44) commented on how important it was that they still had some interaction with lecturers. 30 students did not think it was a good idea to replace lecturers with GTAs in tutorials/practicals for reasons such as lack of experience and lack of respect. Typical and constructive comments included "Lecturers seem to be more confident and better at encouraging participation. GTAs are useful but should not be seen as a replacement for a lecturer." and "Not as well experienced as lecturers". A number commented on the importance of teamwork: "I feel students can only benefit with this as long as there is a good relationship between student, GTA and tutor". One interesting comment by a student obviously considering the future was "Fine by me – I may want to become a GTA!"

GTA views

Each of the GTAs within the ISI was surveyed on their experiences. The results of this are summarised below.

During the year 2004/05, there are eight GTAs in the Information Systems Institute. Seven of these are working towards a PhD; the other one is on a Masters programme. Four are in their first year of study; the others are in Year 2. Three are of British nationality.

Obviously, the sample size is very small, but a questionnaire was carried out to ascertain the views of the current GTAs. The full analysis is again given in the appendix, but it will be useful to include a summary here together with a sample of the additional comments supplied by respondents. All eight GTAs were prepared to complete the questionnaire, which was done anonymously.

It had been expected that most of the GTAs would view the scheme as an important factor in enabling them to study at postgraduate level, owing to resulting income, and in fact all eight stated this – all but one said it was an essential factor. The comments clearly supported this view: for instance "[Without the GTA scheme] I would probably not have considered enrolling for a PhD in the next 4-5 years" and "Impossible....otherwise".

Seven of the eight felt that the experience had been at least as good as they had expected and seven also felt that the tasks they had been asked to perform as GTAs were reasonable, though just one thought they had been difficult, stating "...excellent opportunity but it is hard work and requires a lot of adaptation and improvisation to teach modules that do not match your background..." Having said this, all eight felt that the support given to them by the University had been completely adequate (seven) or adequate (one). The GTAs were asked whether they thought the students being taught / assisted by the GTAs were benefiting, and all eight felt that they were. Comments covered areas such as GTAs having more time to help the students, and bringing a fresh perspective. One wrote "students are able to ask their coursework problems in a friendly environment with a GTA, compared to the lecturer".

Several of the GTAs are planning a future as academics and a number of comments reflected this, for instance "...the opportunity the GTA position provides for developing my skills and takes me a step further in realising my long term goals". Another wrote "It would help me get a job in the academic sector".

One of the questions asked how beneficial the GTAs would find a teaching qualification, if this could be gained during their time as a GTA. All viewed this as potentially beneficial, though some reservations were raised, for instance: "I realise that time is limited" and "It would be difficult to find the time as there is already insufficient time for solid PhD work". This response came as no surprise to the authors – clearly one of the critical areas of interest is the extent to which the GTAs can fit "a quart into a pint pot", trying to balance postgraduate study, teaching support and also working towards a possible teaching qualification.

In addition the views of the whole group of GTAs at Salford were polled in relation to training and development. It is notable that an emerging pattern of three constituencies has developed from the (albeit small) GTA cohort. There are those who want to 'take the line of least resistance', aiming to complete the minimum training offered. Secondly, there are those who are interested in developing both practical skills and conceptual understanding of teaching and learning. This group is also interested in the individual development of broader transferable skills, for example team work, group dynamics and public speaking. The third group are those who want to develop their career opportunities as a future academic, viewing the GTA role as an 'apprenticeship' period. This diverse range of training requirements points to the need for flexible, yet focused programme provision in the future.

Staff views

A further survey was carried out on ten academic staff in the ISI who were affected by the use of GTAs. In fact, there were two potentially different sets of staff. Firstly, each GTA supported one or more modules, each of which would have an academic as module leader. Secondly each GTA would normally have a PhD supervisor. Naturally, these two groups often included the same individuals, and in some cases the PhD supervisor for a particular GTA would also be the module leader for a module supported by that GTA. Again the appendix contains a more detailed numerical analysis of the results.

Nor surprisingly, therefore, there was no significant difference noted according to which of the two "hats" the academic was wearing.

Generally, the verdict was favourable: weight out of the ten wishing to see an increase in the use of GTAs. GTAs were seen as extra support, and likely to reduce the workload on academics staff, although a significant number were clearly concerned about needing fewer academic staff if the use of GTAs became widespread. One said "I would prefer to see more properly paid staff." A significant number also mentioned the need for a considerable management responsibility for GTAs. One commented "[Using GTAS is] more effort than doing it yourself"

The authors noted this particularly. Academics often feel that they are expected to carry our tasks (for instance departmental or financial management) for which they do not have the skills or training. The management of GTAs raises similar issues. The potential benefits to be gained from support by GTAs may not be realised if the academic staff themselves are not trained in any way for their new role as GTA manager.

So far as the effect on students being supported by GTAs was concerned, nine of the ten academics echoed the feeling of the students themselves, feeling that GTAs could provide extra support, and that they might be more approachable or have more time than the lecturers themselves would. They also thought that GTAs might bring a valuable extra perspective, though a few made comments like "not as good as the real thing – may confuse students"

An interesting point was that just one of the ten felt strongly that GTAs were not suitable for masters teaching, though several others just as strongly felt that PhD GTAs would be very suitable for masters students provided the GTA was academically sufficiently advanced, though three felt that they should only be used for masters students in the role of demonstrator.

The academic staff were also asked about their views on the effects on the GTAs themselves, and once again there seemed to be a good level of agreement between the questioned group and the group affected, ie academics and GTAs. Academics felt that being a GTA would provide useful experience for those interested in academia and would anyway be useful on a CV. They clearly also realised that the resulting income would be likely in many case to be a *enabler* for the PhD study rather than just welcome extra money.

A point not raised by any GTA was raised by a few academics – perhaps reflecting their more advanced years and greater cynicism! - concerns over possible exploitation. One wrote "It's exploiting them and damaging them if they are expected to teach degree level courses, since it is too time consuming and onerous." Others were worried that GTAs would suffer if given no training and/or support.

Some of those who were specifically PhD supervisors for GTAs expressed concern over the complication of that role - whether their role was simply to supervise the GTA's PhD study (as previously) or whether there was now to be some implied support / mentor / personal tutor role as well.

Summary of Stakeholder Views

The general student view emerging from the survey was positive and encouraging. The student body as a whole seemed to understand the reality of HE provision with the need to use teaching resources as efficiently as possible. However, they did not generally see the use of GTAs as a second-best option, and in fact many saw real benefits form their experience of GTAs. At the same time, many emphasised the importance to them of maintaining a direct relationship with the academic members of staff. Our limited survey of a group of GTAs suggests that they too saw many benefits from their role, not least that it enables them to study for a research degree and develops their skills in teaching. Academic staff on the whole also welcomed the support provided by GTAs to deal with student support is generally of a better standard than that provided by temporary staff and provides a more lasting benefit to faculty. Clearly both GTAs and academics need staff training if a GTA scheme is to be successful. In particular, academics need to understand the boundaries of responsibility and how to most effectively nurture and develop the GTA as a future academic, as well as managing the GTA on a day-to-day basis.

Conclusions and further work

Our view is that the role of GTAs in Higher Education requires further debate. Important issues concerning this role have been raised in the literature. These include GTAs' workloads, their potential exploitation and their difficulty in conducting teaching support whilst simultaneously studying for a research degree. Our limited research of the use of GTAs in the UK suggests that there is widely diverging practice, and it supports the call for further national discussion. Our experience in Salford shows that these problems can be addressed in practice, and that, if they are, the use of GTAs can be to the benefit of all concerned: GTAs, academic staff and students.

The authors are conscious that most of the empirical work here has been carried out in one department in one university, and they now wish to extend their work across a broader base. Consequently, they would welcome any comment on the paper and/or expressions of interest by colleagues in other HE institutions or elsewhere.

References

Association of University Teachers (2001a) *Employment Charter for postgraduate student academic and academic-related staff.* London: AUT

Association of University Teachers (2001b) Good practice guide for the employment of postgraduate students to teach. London: AUT

D'Andrea V-M (2002) Professional Development of Teaching Assistants in the USA LTSN Generic Centre March

NASUWT (2003) Response to the Consultation

(http://www.teachersunion.org.uk/Templates/Internal.asp?NodeID=69832&ParentNodeID=43 074) (accessed 28/10/04)

National Postgraduate Committee (1993) NPC Guidelines for the employment of postgraduate students as teachers. Lancaster: NPC

(http://www.npc.org.uk)

National Postgraduate Committee (2000) AUT/NPC/NUS Employment Charter for postgraduate student academic and academic-related staff

http://www.npc.org.uk/1003802201 (accessed on 17/06/04)

Nyquist, J.D. & Wulff, D.H. (1996) Working effectively with graduate assistants. London: Sage Publications

Park, C. & Ramos, M. (2002) The donkey in the department? Insights into the graduate teaching assistant (GTA) experience. *UK Journal of Graduate Education,* 3

Park, C. (2002) Neither fish nor fowl? The perceived benefits and problems of using Graduate Teaching Assistants (GTAs) to teach undergraduate students. *Higher Education Review*, 35 (1), 35-42

Park, C. (2004) The graduate teaching assistant (GTA): lessons from the North American experience. *Teaching in Higher Education,* 9 (3), 349-361

Prieto, L. (2003) Teaching assistant development: research and impressions in Buskit, W.et.al. (2002) *Essays from excellence in teaching* (Chapter 1)

Quality Assurance Agency (1999) *QAA Code of Practice for postgraduate research programmes.* Cheltenham: QAA

Sharpe R (2000) A framework for training graduate teaching assistants Teacher Development Vol 4 No. 1

Smith P, Whitby K, Sharp C, The Employment and Deployment of Teaching Assistants: Local Government Association Report, National Foundation for Educational Research, 2004 UK Council for Graduate Education (1999) *Models for the development of postgraduates' teaching skills.* Dudley: UKCGE