Project led by King’s College London

Final Summary Report of Network Research Project: Theoretical frameworks underpinning GTA programmes: their influence on course participants and on the staff delivering these programmes.

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Introduction
Graduate teachers at university occupy dual roles - teacher and researcher. This may present them with a conflict where their academic research community is dominated by one philosophy (objectivism) and the teaching community is dominated by an apparently conflicting philosophy (constructivism). A coping strategy for this has been described as the ‘postgraduate chameleon’ by Harland & Plangger (2004). For the teacher/researcher a simultaneous accommodation of conflicting philosophies (objectivist research vs. constructivist teaching) is required that could be seen as a form of ‘epistemological pluralism’ (Taylor & Willison, 2002). This may seem to be an unrealistic demand upon the graduate teaching assistant (GTA), but actually represents a minor modification of established practices seen within some disciplines, particularly within the sciences.

Whether a focus on ‘product’ or ‘process’ of research has any influence of the nature of teaching is not clear, though it is tempting to speculate a correlation between a common focus on product or on process may exist across the contexts of teaching and research. The tensions between objectivism and constructivism have been described as ‘paradigm wars’ by Taylor & Willison (2002), with advocates of each view trying to discredit the opposing view. Such an confrontational situation has been described within chemical education by Scerri (2003), in which differing perspectives are seen to be at odds with each other so that ‘difference’ is seen only to contribute to confusion. However, such antagonism may be missing the point, and energy put into developing arguments and counter arguments may be better placed in constructing a situation in which each view is recognised as having a positive contribution to make. Toulmin (1976) argued that different epistemological points of view should not be considered incompatible and mutually exclusive. Objectivism and constructivism offer different perspectives on the learning process from which we can make inferences about how we ought to engender learning (Jonassen 1999). Rather than choosing between a vision of reality in which truth is determined by the external world, or by internal constructions, or by the interaction between the world and the mind, Toulmin argues that each of these viewpoints may be seen to complement the others.
Purpose
The purpose of this research was to explore the underpinning theory that guides the development of graduate teaching assistants’ (GTA) programmes and to evaluate how teaching staff on these programmes interpret and apply theory in their courses with a consideration of the possible philosophical conflicts (between teaching and research) experienced by some course participants. By identifying a number of issues, through interview and a review of course material and literature, it was possible to determine which key factors act as indicators of underlying theory.

Research findings have suggested that teaching staff from across the institutions (KCL, Royal Holloway and Warwick) base their GTA programmes on different philosophies on how best to inform academic practice. Questions are therefore raised about whether a best practice model exists for GTA programmes and what this might actually look like. Two variations of such a model were subsequently produced which were subsequently validated by teaching staff and course participants. From these a hybrid model has been identified.

Research Questions
The research undertaken was conducted to fulfil the following two research objectives:

- To make explicit the underpinning theory that guides the development of GTA programmes
- To evaluate how staff on these courses interpret and apply theory in their courses with a consideration of the possible philosophical conflicts (between teaching and research) experienced by some course participants.

By bringing these issues to the fore, it was anticipated that reflection upon the consequences of a dominant theoretical framework could be produced to guide future course development and achieve greater philosophical alignment with the needs of the course participants.

Outcomes
A number of project outcomes were also established:

- Conceptual
  The work aimed to contribute to the development of a model of practice that will enable staff working on GTA courses to reflect upon the theoretical framework that underpins their course and to align these with the needs of their course participants. The aim was to seek ways to enhance GTAs conceptualisation of the links between teaching and research.

- Empirical
  An explicit understanding of our underlying assumptions within such programmes and how these interact with the operational frameworks employed by staff involved on each course. This was to be achieved through the collection of data.
• **Practical**  
  Construction of materials to promote reflection upon these issues when participants are engaged with GTA programmes and to ease possible philosophical conflicts between teaching and research. Materials to be made available to CETL network, presented in the form of pdf files that are supported by a web page.

• **Publications**  
  At least one conference paper and one journal article.

**Methods**  
Analysis of documentation from courses in the three universities was used to identify indicators of an underlying philosophy which could then be used as themes for semi-structured interviews. The documents which were available included programme handbooks, web-based material and assessment guidelines. Indicators (including language in official documentation; learning activities; pedagogic approach and assessment methods) were classified according to their affinities to extreme philosophical standpoints along the constructivist-objectivist continuum. An initial analysis of the documentation from each of the three institutions prompted a number of associated trigger questions to gain further clarity of the programmes in terms of structure, content and rationale from which themes could be identified. An initial analysis of the documentation and the associated trigger questions has been included as Appendix 1 in this report.

These were then used as a basis for a first round of staff interviews to assess the overlap between the documentation, staff beliefs and course activity. Initial analysis of these interview data (extracts and examples of the transcripts are included as Appendix 2) was used to identify recurrent themes which guided personal values and professional frameworks for designing and developing GTA teaching programmes and which would enable further interrogation in a second round of interviews, using a tentative model of practice (derived from the first round interviews) as a focus for discussion (Figure 1).

The main themes identified were: setup, support, assessment, relationship with central administration and academic departments, synergy of research and teaching and E-learning component. A brief synopsis of these is included as Appendix 3.

The review of data produced by each of the three institutions revealed a number of potential similarities in the design of programmes for GTAs, for example the use of teaching observations. During the initial interviews these similarities were explored with those individuals responsible for delivering the content to examine the basis for these actions. The interviews confirmed that some components are broadly similar across all three programmes, although the basis upon which these were then used may have differed:

*There’s a formative component which has to do with the teaching observations which, this component is formative and developmental. So there aren’t any quantitative marks awarded to participants in terms of their participation in the teaching observations. However, completing a satisfactory set of 3 teaching observations is a pre-requisite for people moving towards completing a teaching portfolio, the critical portfolio of evidence… It works well.*
Our feedback from students is that the teaching observations is one of the most useful aspects of the programme.

The main commonality outlined was that elements of the programme were designed to enable ‘reflection’ to occur:

We use critical, evidence-based portfolios. These are evidence-based and allow students to reflect. It is vital for them to be able to use reflection as a mode of improvement... It’s part assessment and part ‘continued professional development’.

There was recognition that the programmes could, if not run effectively, enhance the perceived divide between teaching and research. The comments upon the teaching-research nexus consisted of broadly similar views:

Obviously I’m kind of speculating, but my guess would be that they would see this as something separate from the PhD. I think they would see this as being professional development that’s provided by the institution, but I don’t think, and I don’t think that we do a good enough job of explicitly connecting them either. So I think that’s certainly somewhat coming from their perceptions, but a lot of it is that we don’t open up those discussions well enough.

I think this is a problematic area mainly for the group of PhD students who want to be involved in some kind of teaching and they want to acquire, quite a few of them, some teaching practice. It’s a problematic area because there’s a big conflict between the tasks they have to engage in as far as the programme is concerned and what they have to do as far as their research is concerned.

The mode of assessment (for example critical portfolio of evidence and developmental teaching observations) and support network in place at each of the institutions were also similar. That there are similarities is not surprising, many of the models that have developed aimed at enhancing learning and teaching within higher education have structures that are underpinned by an emphasis on encouraging reflection or reflective practice (Boud & Walker, 1998). Although responses are not entirely uniform, there are elements that tend to be mirrored at most universities. The implication is that reflection offers an opportunity for an individual to examine the bridge between theory and practice. Commonly the emphasis on reflection is recognised in practice through some form of observation (whether peer or with an academic developer) and some form of portfolio of evidence. Many of these programmes are also accredited through the Higher Education Academy and are therefore designed with an eye on the National Professional Standards Framework. As a result it is perhaps to be expected that the research discovered first through a review of course material and documentation and then through the discussions with course staff that there were areas of convergence.

From these initial interviews, it was possible to establish inter-related themes which have guided programme development, for example web-based support and mode of assessment. However, from these discussions we have begun to understand that individuals bring their own meaning to the teaching environment and that the values
that underpin these are the key determinants in explaining the actions that are subsequently undertaken (Inlow, 1972; Lygo-Baker, 2006). When areas of convergence were analysed further, evidence began to emerge that underneath apparent similarities, some sharp contrasts existed. These centred mainly on the delivery of content and appreciating the role of the taught sessions; whether these are used to develop an understanding of theory (generic basis) or explore issues related to their own teaching and learning (discipline basis). From the interviews held we began to see the emergence of a range of different academic developer orientations that may influence the approach taken to programmes that are delivered with the aim of preparing graduate training assistants to teach in higher education.

It is possible that the different contexts established, or helped to shape these orientations, a factor that has been reported by Land (2004), although that was not a part of this research. What became apparent were different discourses adopted by the educational or academic developers through which the programmes for GTAs were delivered. These different discourses were underpinned by the values that each developer expressed and then mediated by the context within which they were working. Although all the developers noted the importance of reflection, the different orientations that were exposed as part of the study suggested different models to enable this to occur. There were those developers whose practice was supported by an emphasis on inquiry, seeing the process of the programme as one within which a joint exploration of behaviour occurred leading to reflection. There were others who revealed a more specific view of passing on ‘expert’ knowledge that would lead to reflection.

With respect to the second round of staff interviews it was intended that through progressive focussing (Parlett & Hamilton, 1972; Stake, 1995) we would be able to target the key factors that act as indicators of underlying theory, and identify ways this is made explicit to course participants. These factors would then be explored in depth through interviews, to determine their utility to the course and their interpretation by course staff and participants, and the implications this may have for future developments. The degree of overlap between intentions and practice could inform future course development.

Following on from the first round interviews, identification of relevant themes and analysis of the ensuing data (Arksey & Knight, 1999) we were able to provide a deeper focus for the second round interviews. The first round of interviews, in addition to stimulating consideration of the different orientations of individual academic developers, had identified two different models for programme development. The first of which was an approach grounded in theory (model 1) and the second of which is embedded in practice (model 2). Model 1 deliberately promotes “uncertainty” to establish change in students, as (potentially) abstract concepts are presented to GTAs that then have to be translated in terms of their own, individual experience. Conversely, Model 2 is intended to ease concern amongst GTAs by requiring them to focus initially upon their teaching experience and then embedding theory to make sense of that practice. Both the theoretical models developed, aim to integrate theory and practice, although in Model 1 experience is bolted-on and in Model 2 the opposite is true, leading to different overall learning experiences (and outcomes) for the GTA.
The utility of a model of practice once produced, was investigated as part of this research (Figure 1). The models were presented to staff and GTAs who were asked to comment upon their legitimacy as a basis for teaching (staff) or as a basis for learning (GTAs). The models have been subsequently validated by teaching staff and GTA students from all three of the institutions involved in this study. An exemplar of the comments which were received when the models were reviewed is presented here:

I think, I would like to believe that model 1 is what we are striving to do, is in our ambition to do. However, there is this kind of conflict because quite a lot of people are happier to engage in something that is closer to model 2 because this is ground in experience and also the disciplinary skills which sometimes can be trivial, disciplinary teaching skills are very important. When I say trivial, what is described in the end is 'tips for teachers'.

Staff, Institution A

I think the whole idea of this course is to provide support (that’s how I see it at least). If you had concerns about teaching you knew that there was someone there and you could go and talk to. I’m not sure that we are supported by generalist teachers – they are more like specialised teachers. I would go for a combination of the two because the generic skills are what we’re actually learning could be applied to any type of environment.

Student, Institution B

I think that the programme represents a combination of both the models. I mean certainly [within this institution] we are generalist tutors, we’re not applied academics and education is our primary discipline. We do have experienced tutors (disciplinary) who engage with discussions on practice. As generalist tutors we are required to be very grounded in the theory. Subject specialists have no knowledge of or exposure to the theoretical underpinnings and therefore, instead, they are essentially grounded in experience. Generalist tutors are more aware of the theory which they then expect to be applied to a disciplinary context. The theory is central for academic study and dialogue to continue, although the experience allows practitioners to reflect upon their learning.

Staff, Institution C

Conclusions and Implications

It is evident from the research that developers have sophisticated understandings of their role and that these underpin the design and development of programmes for GTAs. Our findings suggested that when the theoretical underpinnings of the programme depend on experiential learning, students are required to have accumulated some teaching experience which could then form the basis for their reflection and development. Most students attending such programmes are teaching for the first time and do not have this experience. Conversely, when theoretical knowledge forms the basis of the programme, students have difficulties in both understanding the theory and relating it to their own teaching context.

In order to offer an approach that can reduce the limitations of the two models drawn from the data collected, a hybrid model (Figure 2) is offered. This model acknowledges the wish of developers and GTAs to establish and enable understanding to be grounded within experience and that this is supported through an introduction to components of teaching in higher education. The highlighted components of model 2 reflect inputs by and actions of the academic developers, which ought to be flexible rather than rigorous in nature to enhance critical reflection. This enables GTAs to ease concerns (a feature of Model 1) and at the same time to enhance debate through problematising learning (a feature of Model 2). The result of these questions are opportunities to reflect, which was a strong basis underpinning both of the original
models. The reflection, whilst supported by the developer is undertaken by the GTA in order to enhance and evaluate practice within the disciplinary context which promotes knowledge of teaching that is applicable within each discipline and is understood by those who work within that community of practice (Wenger, 1998).

References

*The appendices for this report, which comprise an additional twelve pages, are available on request from Richard Arnold, Richard.Arnold@learning.ox.ac.uk, ext 86828.*