

# 'Some students really want to know obscure facts about chi-square but others will pass out in terror if you mention it': Psychology postgraduates' experiences of teaching research methods

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*Gaining teaching experience is an important aspect of being a psychology postgraduate. We undertook an online survey of 140 postgraduates from 50 UK institutions to explore their experiences of teaching with a focus on research methods in order to inform training and workshop provision. Of the sample, 91 per cent were involved in some type of teaching; the most commonly reported activity was marking. Participants reported a high level of enjoyment of teaching and thought it was an important part of their future careers. Written responses were received from 85 respondents about their experiences of teaching research methods. Qualitative analysis of these findings allowed us to identify the positive aspects of this experience, such as finding it rewarding to help students with this important area of their learning. Our findings also identified challenges in teaching research methods such as confidence, student disengagement and lack of control over content taught. The findings are discussed in light of their implications for future training provision for postgraduates who teach.*

UNIVERSITIES IN THE UK commonly employ large numbers of postgraduates in part-time teaching roles (Park, 2004). Psychology postgraduate students, therefore, often find that teaching plays an important role within their research degree training programmes. Teaching experience adds value to postgraduates' CVs and is an often considered to be an essential component for those who wish to pursue an academic career. Psychology postgraduates may often be tasked with teaching or supporting research methods and statistics. 'Statistics anxiety' is a widely used term that describes the anxiety that students feel when they encounter statistics in a learning environment (Onwuegbuzie, 2004) and is acknowledged as a potential barrier to effective learning of the topic. However, it appears that less is known about how new teachers cope with this issue with their students or indeed if teaching research methods itself provokes a similar anxiety

which must be addressed by the novice teacher in themselves as well as their students. The overall aim of the paper is to present our findings about the teaching experiences of psychology postgraduates with a focus on research methods, in order to inform training and workshop provision in this important area.

The Postgraduates who Teach Psychology Network (PGwT) was formed in 2004 with the remit of providing training and support in this vital area. In 2007, representatives of PGwT undertook a survey to explore teaching experiences and inform the provision of training and development by the network (Lantz, Smith & Branney, 2008). The survey identified that while most psychology postgraduates reported enjoying their teaching responsibilities many struggled to balance their time commitments especially in relation to marking and preparation. The PGwT network was formed of regional representatives and training work-

shops were provided to address these issues and to develop postgraduates' skills as lecturers. Training sessions provided included teaching with different group sizes, preparing lectures, managing student expectations, giving assessment feedback and marking. Unfortunately this unique network is no longer in existence leaving a gap in specific training provision for postgraduates.

The Psychology Postgraduate Affairs Group (PsyPAG) exists to provide a network for postgraduate students in the UK and has a small amount of funding set aside for workshops each year and an annual conference. Thus it is well placed to attempt to fill some of the gap through the provision of workshops and training sessions about teaching. However, since the 2007 PGwT survey there have also been significant changes in the undergraduate fee structure and funding to the higher education sector following the Browne report (2010), and the impact of these changes on undergraduate expectations is as yet unknown. There have been a number of suggestions that the increase in fees contributes to the commodification of higher education (Molesworth, Nixon & Scullion, 2009) and that students may, therefore, become 'consumers' of education (McCulloch, 2009) leading to a change in student teacher relationships. Furthermore, in recent years there has been a reported increase in the amount of teaching that postgraduates undertake with many students required to undertake teaching as part of funded PhD places (Kaye & Brewer, 2013; Moore & Semmens-Wheeler, 2008; Park, 2004). Universities face challenges from increased student numbers and reduced funding requiring them to 'do more for less' (Jones, Upton & Wilkinson, 2013). Adequate training and support for postgraduates who teach is of high importance to ensure there is a provision of a good learning experience for today's students. We therefore set out to conduct a survey of PsyPAG members in order to inform our own training provision and also for potential collaboration with organisations such as the Higher Education

Academy (HEA) who provide workshops aimed at our members.

The overall aim of this paper, therefore, was to explore postgraduates' experiences of teaching with a focus on research methods. We planned to use our findings to both inform the provision of training and to contribute to the literature in this area.

## **Method**

### ***Participants***

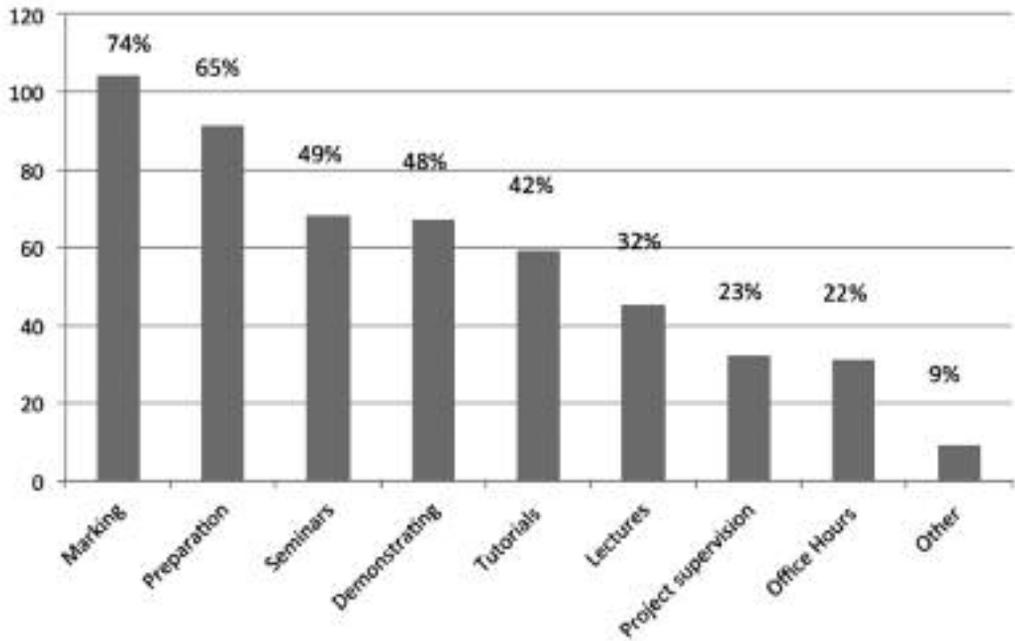
Participants were recruited via the PsyPAG JISC mailing list, HEA Psychology Bulletin and social media, and were offered an incentive of entering a prize draw to win £25 vouchers in return for taking part. One-hundred-and-forty psychology postgraduate students (82 per cent female, 75 per cent full-time; 88 per cent studying for a doctoral qualification) took part. Of the sample, 91 per cent were currently involved in some kind of teaching or teaching related activity. Thirty-four per cent reported that they were required to do some teaching as part of a funded studentship, 62 per cent were paid for their teaching and 23 per cent reported that they undertook unpaid teaching at their study institution.

Figure 1 shows the types of teaching activities that the respondents reported being involved in. The most commonly reported task was marking with 74 per cent of our sample undertaking this activity. Twenty-three per cent of the sample was involved in supervising undergraduate student projects and 22 per cent had office hours for students. Involvement in other additional activities was reported by nine per cent of the sample, but although there was space to indicate they did not report what they were.

### ***Procedure***

Prior to data collection, the survey was piloted with three postgraduate students. Changes were made to remove any errors and clarify the meaning of one of the questions to attempt to reduce the likelihood of non-response. The first page of the online questionnaire included a participant infor-

Figure 1: Teaching tasks undertaken by postgraduate respondents.



mation sheet and consent was implied by completion of the questionnaire. Email addresses entered into the prize draw were stored separately from the responses to ensure anonymity. Data was collected from between February and June 2013 and questionnaires took approximately 15 minutes to complete. Ethical approval for the study was obtained from Oxford Brookes University Research Ethics Committee (study reference number 120690).

### Measures

Survey data was collected online using Google Docs. The questionnaire had sections related to involvement in teaching; experiences of teaching; teaching research methods; training and development and the transition from student to teacher. This paper reports only the findings related to involvement in teaching and experiences of teaching research methods.

*Involvement in teaching:* In this section participants were asked about their current teaching commitments, pay, the number of hours spent on teaching and what kinds of teaching and teaching related tasks they undertook. We included the same teaching tasks that were used in Lantz et al.'s (2008) survey which were marking, preparation, demonstrating, seminars, tutorials, office hours and lectures. Following feedback from the pilot, we added supervision of student research projects to the list of teaching tasks.

*Experience of teaching:* Ten statements were generated to try to capture teaching experiences. They were constructed from the feedback which was received from a previous workshop (Davies & Jackson, 2013) and from consultation with postgraduates who were engaged in teaching. In this section participants were first asked to respond to the 10 statements about teaching experi-

ences by rating their level of agreement with each statement on a scale from 1 (lowest level of agreement) to 7 (highest level of agreement). For example, statement one was 'I feel confident in my teaching'. Following the 10 statements participants were asked to provide written comments about their experiences of teaching research methods.

### Analysis

Numerical data was entered into SPSS and analysed using descriptive statistics. Written responses about experiences of teaching research methods were analysed guided by the principles of thematic analysis (Braun & Clarke, 2006). First, both authors coded the responses to each question independently to identify codes and discussed these codes in order to agree on a final set. The codes were then sorted independently before discussions took place to agree on a final set of themes.

### Results

This paper focuses primarily on our findings related to teaching research methods as stated. We first present findings which describe the respondents' involvement in teaching. We then present our themes relating to teaching research methods which are supported with a selection of illustrative quotes.

We also asked respondents to indicate how many hours they spent on teaching each week. There was considerable variation in the responses that we received from one to two hours per week up to 30 hours per week depending on whether respondents were full- or part-time students. Many of the responses indicated that the amount of time they spent teaching was dependent on the time of year, so, for example, they might spend more time when assignment marking was required. There were some comments made regarding the time spent on teaching related to the payment that was received.

*I spend a lot more time than the time allocated by my studentship – the hours allocated don't seem to cover preparation time. Plus the*

*marking allowance time is not enough compared to the actual time it takes to mark student essays.*

Linked to this we also asked about the payment received for undertaking teaching. Again there was much variability in responses and it was not possible to calculate an average. However, lecturing was paid at a higher rate than marking. Payment ranged from nothing for preparation work to £39 per hour for lectures. Many respondents reported being paid a set rate for marking which assumed they would be able to complete a set number of essays per hour but this was again variable but commonly two to four per hour.

### Experience of teaching

The questions are reproduced in full and the median responses are presented in Table 1. Some of the questions were negatively worded to attempt to reduce acquiescence bias, however, we have not reversed scored them for the purposes of this table as they are presented singularly and not as part of a scale.

The statement with the highest level of agreement were regarding enjoyment of teaching, teaching as an important part of being a postgraduate and an important part of future careers. Statements with the lowest level of agreement were about being asked to do too much teaching and not being able to gain enough experience of teaching. The ratings all had a large range suggesting variation in the ratings.

### Teaching research methods

In the experiences section of the survey we added a comment box regarding teaching research methods which asked: 'If you have experience of teaching statistics or research methods please tell us about it here'. We received 85 individual responses to this section of the survey (60 per cent of respondents) which allowed us to undertake a detailed analysis. We identified a number of positive aspects and challenges relating to the teaching of research methods. The themes were labelled

**Table 1: Median rating and range of postgraduate respondents to statements about experiences of teaching.**

<i>Statement:</i>	<i>Median rating</i>	<i>Range</i>
I feel confident in my teaching	5	6
I am happy with the amount of teaching I am asked to do	5	6
I am not able to gain the amount of teaching experience that I would like about my study institution	3	6
I feel able to ask for help with my teaching if I need it	5	6
I enjoy undertaking teaching or teaching-related activities	6	5
I feel that I am asked to do too much teaching	2	6
Teaching interferes with the amount of time I would like to spend on my research/studies	4	6
Teaching is an important part of being a postgraduate student	6	6
Teaching is an important part of my future career	6	6
I do not do any more teaching than I am contracted to do or paid to do	3.5	6

Note: 1 (lowest level of agreement) to 7 (highest level of agreement).

positive aspects, student relationships, confidence, qualitative/quantitative divide, control, and student disengagement.

***Positive aspects***

Overall there were a high number of very positive comments made about teaching research methods. Respondents reported enjoying the experience of teaching research methods to undergraduate students for a variety of reasons. Many of the responses contained the phrase ‘*I really enjoy it*’.

*I love teaching research methods and statistics, it is really rewarding.*

*It is my favourite module to teach (although that might say more about me than the students!).*

Some participants said they liked it because they felt that they were good at statistics themselves and wanted to pass this knowledge on. Others reported that they had been able to improve their own understanding through their teaching.

*It improved my confidence and my statistical knowledge.*

Another reason why the respondents seemed to enjoy teaching this subject matter so much was perhaps through their own experiences as a research student they had come to value it. The comments also indicated that postgraduates did see this as an important part of their future careers.

*I loved it; I can’t wait to get a lectureship to get on the team.*

***Student relationships***

Another positive aspect of teaching research methods which was identified was about respondents’ relationships with their students. This sometimes appeared to stem from their ability to relate to their students based on their own experiences:

*I struggled with stats myself, I feel this makes me more able to empathise with the difficulties that some students have.*

Many postgraduates also reported that they felt that the experience of teaching research

methods was rewarding as they were able to see the progress their students made throughout the course. Respondents described having a personal connection with their students and a real desire to help them succeed; potentially putting in more time and effort to ensure all had a level of understanding. However, the hard work appeared to pay off as respondents conveyed a sense of pride when the moment of realisation took place. The relationship with students is thus rewarding for both parties.

*It's rewarding to hear students feel that they can apply what they are learning to their studies and gain confidence in research methods and statistics.*

*The moment a student understands it's like a switch going on and it's nice to see someone have this realisation.*

*It's been nice to see some students conquer their stats anxiety.*

### **Confidence**

Although the overall picture was of a positive experience of teaching research methods, we also identified a number of challenges that were faced. The first challenge was about the respondents' confidence in their ability to teach. Teaching statistics using SPSS seem to be of the most concern where respondents had doubts in their own abilities in the topic area.

*I still feel like I'm learning and relearning early SPSS tasks from an undergrad so sometimes I don't feel like I'm competent enough to advise students.*

There were a number of comments along these lines demonstrating that participants frequently thought about their own learning experiences when they were involved in teaching research methods. Participants also reported their first experiences of teaching research methods as 'daunting' for a number of reasons including a fear of being asked a question that they could not answer.

*Sometimes I don't feel I am competent enough to advise students.*

*I found this really hard because the students would ask questions that I didn't know the answers to.*

It is also possible that some postgraduates might be missing out on gaining teaching experience due to this lack of confidence.

*I didn't volunteer to teach this subject as I thought it would be too challenging.*

### **Qualitative/quantitative divide**

Another common challenge for our respondents was demonstrated in their perceptions of a divide between qualitative and quantitative research methods. This divide was reported to be both in the prominence given to quantitative methods in the degree syllabus and within the expectations of students.

*There is so much emphasis on statistics that students struggle to see the relevance of qualitative methods.*

Those who were involved in teaching qualitative methods felt that they had an additional barrier to overcome because students sometimes considered qualitative research methods as secondary. Respondents saw it as has their role to address this imbalance.

*It is challenging to get students to understand the value to qualitative research.*

*Some students are very scientific and they feel they won't get any substantial results from qualitative.*

### **Lack of control**

Respondents' enjoyment of teaching research methods was sometimes hampered by their feeling of a lack of control in the content they were required to teach. Restrictions were set in place which meant that respondents were unable to adapt sessions even if they thought this would be of benefit to the students.

*I didn't agree with the order of the sessions and the programme but I realised I have no control over it.*

*It can be difficult to teach with someone else's materials, especially when students are not happy with it.*

This appeared to result in frustrations with members of staff or the methods used in course delivery particularly when students also demonstrated their displeasure. This may be where the relationship with students becomes difficult as postgraduate students are effectively mediators, understanding both the lecturers and students perspective.

*The lecturer who ran the course changed and it became really disorganised and it was difficult to mediate between the students and the lecturers.*

Some respondents noted being able to change materials, and commented on how rewarding this was and how it developed their confidence.

*I try to create and update a range of teaching resources including walkthroughs, workshops, quizzes and practical's based on feedback from students.*

### **Student disengagement**

Finally we received a high number of comments that revealed postgraduates' concerns about students being disengaged with the topic of statistics. Some felt that this disengagement began before students entered the classroom:

*It's a bit of an uphill battle because you know you've lost some of them before the lectures even start.*

*A lot of them hear the word 'stats' and immediately switch off.*

This frustration was evident in some of the comments which described the challenges of trying to work with students who demonstrated their displeasure in having to study the topic. Some of the respondents also felt that students were expecting to be provided with the answers rather than working towards discovering them on their own. There were a number of mentions of the term 'spoon-feeding'.

*Recently, students have become more demanding, expecting the teaching assistants to have all the answers and to spoon-feed them.*

*They seem to be used to just being given the answers.*

There were also numerous comments made about the varying levels of ability and interest within classes. This relates back to the theme of lack of control, as teachers with pre-set material to be covered had little time to encourage the enthusiasm that some students had because they need to spend time with those who really struggled.

*Some students really want to know obscure facts about chi-square distributions, and others will pass out in terror if you mention it.... Being able to recognise what level someone's knowledge is at and adjust your explanation to it is a huge skill as a tutor.*

There was also evidence to show that the respondents felt that statistics anxiety was a real barrier to student engagement.

*They're scared of stats and the anxiety prevents them from trying.*

*Their fear of maths makes it challenging, even when they grasp the logic.*

### **Discussion**

Our survey aimed to explore the current teaching experiences of psychology postgraduate students at UK higher education institutions. In this report we have presented our findings about what types of teaching activities postgraduates are involved in and those related to teaching research methods, one of the key components of a psychology degree.

Postgraduates reported to be involved in a wide range of teaching activities with the most common being marking and preparation work. Nearly half of the current sample reported being involved with demonstrating and tutorials and almost a quarter were supervising undergraduate research projects. Nearly two-thirds of the respondents were paid for teaching, however, in line with the previous findings there seemed to be discrepancies between the allocated time and payment provided for teaching-related tasks (Lantz et al., 2008). This highlights that training and development needs to have a broad focus in order to help postgraduates prepare for the different roles that they might undertake.

The statements about experiences of teaching demonstrated that respondents enjoyed teaching, felt confident and supported, and were happy with the amount of teaching they were asked to carry out. Respondents also thought that teaching was an important part of being a postgraduate student and for their future careers. These findings suggest that psychology postgraduates are positive about teaching which is an encouraging finding for UK institutions and their undergraduate students

The themes derived from the qualitative analysis of respondents' experiences of teaching research methods suggested they enjoyed teaching this topic. Many reported that they found it rewarding and saw it as an important role. Being able to relate to the students they taught contributed to the process of enjoyment and reward. Much of this appeared to stem from being able to empathise with undergraduates who might be struggling with statistics if they had found it challenging themselves. Previous research suggests a benefit from peer-assisted learning in research methods where third-year undergraduate students were assigned to first-year undergraduates (Stone, Meade & Watling, 2012). It is possible that postgraduate teachers who completed their undergraduate studies more recently can have a similar impact in terms of empathy and a feeling of peer support. Further research could be conducted to explore this area further to see how this relationship might benefit those who struggle with learning about statistics.

Although many of the respondents agreed they felt confident in their teaching, the comments about teaching research methods revealed another side to this story. Many of the respondents reported having doubts about their own abilities. For example, some people reported fear about being asked a question and not knowing the answer. Some of these responses might be attributed to the 'imposter phenomenon' a common feeling among academics that your perceived lack of abilities might be found

out (Jarrett, 2010). It is clear that developing confidence is a hugely important aspect of teaching for psychology postgraduates and one that could be addressed in training.

We also found evidence for a frustration felt by our respondents in terms of a perceived divide between the emphasis on teaching of quantitative and quantitative research methods. Respondents who taught qualitative research methods reported that it was given less prominence by their departments and sometimes by students as well. This finding is unsurprising given the BPS accreditation requirements for undergraduate teaching. However, given the increasing prominence of qualitative methods and mixed methods research in psychology we may want to think about ways of increasing student engagement with and appreciation of these approaches. Specific training for those involved in teaching qualitative methods may be one way to address this.

A further feeling of frustration was evident where respondents felt a lack of control over their teaching. This may be due to being provided with materials and lesson plans that they had to adhere to or when there were disagreements with more experienced staff. This may result from the dual role which postgraduates who teach have within their departments. Although there has been recent attention given to the transition from pre-tertiary to higher education (Kitching & Hulme, 2013), it appears that much less is known about the transition from student to teacher. Our survey address this question and we received a similar high level of responses which we hope to be able to report in the very near future in order to contribute to this discussion.

Our final theme was about student disengagement and it highlighted an important challenge that postgraduates who teach faced. This appeared to have two distinct features. Firstly, the evidence from our respondents suggested they the thought their students were experiencing 'statistics anxiety' (Onwuegbuzie, 2004). It is clear that we need to think about ways in which work-

shops and training can help postgraduates who teach to address this issue with their students. The second feature we identified within the survey responses was around a feeling that students expected to be helped much more than they were. This appeared to be leading to disengagement and dissatisfaction in addition to statistics anxiety. In addition to helping postgraduates to manage these challenges it is also important to recognise that this may have another cause. A qualitative study about undergraduates' experiences of learning about statistics revealed that there was a mismatch between their expectations about studying psychology and the reality of it, particularly around proportion of the degree focussed on research methods (Ruggeri et al., 2008). While we can attempt to assist postgraduates who teach in dealing with this mismatch, we need to ensure that universities and the pre-tertiary sector are working to address this challenge.

Our findings suggested that postgraduate students would benefit from receiving additional training and support in teaching research methods, particularly around gaining confidence and addressing student disengagement. Because of these findings we designed a workshop focused on this important topic, the content of which we have reported elsewhere (Jackson & Davies, 2014). The findings also suggest that other training sessions should focus on developing confidence and managing classes of students who have varied levels of ability. Our results suggest that a UK-wide programme of events would be welcomed by postgraduates who teach in psychology.

Our survey had some limitations which we must acknowledge. Firstly, the sample was opportunistic and so our respondents do not represent all UK HE institutions. Secondly, it is cross sectional in nature and, therefore, only captures a certain point in time. The higher education landscape is constantly changing and, therefore, so may the teaching experiences of psychology post-

graduates. Thirdly we also realise that those who felt the most strongly about teaching research methods are likely to have felt more compelled to respond to that question. However, we suggest that these may also be the people who would desire and benefit from training workshops.

The findings are also exploratory in nature and so it is not possible to extrapolate firm conclusions from our survey. The findings do suggest that this is an important topic for further research in order to enhance the teaching of research methods in psychology. One avenue for future research might be to examine more specific topics in statistics that postgraduates might find challenging in order to design specific workshops on teaching techniques. It may also be beneficial to conduct interviews with a small number of postgraduates to find out more about their positive and negative experiences of dealing with anxious students. This may give an insight into the impact of these relationships on teaching styles and skills. A key strength of our survey was the inclusion of both quantitative rating scales and open questions. The responses to statements on the rating scales indicated a largely positive situation overall but when we analysed the open questions we were able to identify key areas where training and development is required.

In summary, our survey found that psychology postgraduates are engaged in a wide range of teaching activities demonstrating a need for a broad range of training workshops and activities. In this report on the findings which focussed on teaching research methods we found that although psychology postgraduates who teach enjoy teaching this subject there were a number of specific challenges. We have already applied the findings by running a workshop focussed on engaging students and we hope we can work in conjunction with other organisations to inform a wide range of training to support psychology postgraduate who teach.

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