Teacher and Student-Focused Approaches: Influence of Learning Approach and Self Efficacy in a Psychology Postgraduate Sample

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The current study examined approaches to teaching in a postgraduate psychology sample. This included considering teaching-focused (information transfer) and student-focused (conceptual changes in understanding) approaches to teaching. Postgraduate teachers of psychology (N = 113) completed a questionnaire measuring their use of a teacher or student-focused approach, deep and surface approaches to learning and teaching, and research self-efficacy. Standard multiple regressions revealed that the manner in which postgraduate students approached their own studies (i.e. deep or surface learning approach) predicted the use of a teacher or student focused approach in their teaching practice. Specifically, postgraduates adopting a deep approach to their own learning were more likely to adopt a teaching focused approach to their teaching practice. Those adopting a surface approach to their own studies were most likely to adopt a student focused approach. Furthermore, postgraduates with a high level of teaching self-efficacy were more likely to adopt a student focused approach to teaching practice. Additionally, postgraduates who had received formal teaching training scored higher on teacher self-efficacy than those who had not received such training. Taken together, the findings suggest the key role of formal training in enhancing self-efficacy in teaching, and demonstrate an association between the learning styles adopted by postgraduate teachers and their approach to teaching.

Introduction

Higher Education Institutions are increasingly providing opportunities for postgraduate students to engage in departmental teaching duties and for many postgraduate students teaching responsibilities, may be a condition of their funding agreement (National Postgraduate Committee, 2001). The integration of postgraduate teachers may have a number of benefits for the individual tutor, institution, student experience, and subject discipline. For example, teaching provides valuable experience (Lantz, Smith & Branney, 2008), and the opportunity to develop a range of important skills (Myers, 2000). It is of course important to provide suitable training and support for postgraduates who teach (Burgess, 1995; Lantz et al., 2008) to ensure that they are fully prepared for the role.

The availability and quality of training provided to postgraduate tutors has increased in recent years (Gibbs & Coffey, 2004). Some postgraduates, however, do not receive adequate training prior to teaching (Lantz et al., 2008), and consistent with the experience of graduate teaching assistants, may be poorly prepared for their teaching role (Luft, Kurdziel, Roehrig, & Turner, 2004). A lack of adequate training may impact on postgraduates' familiarity with the formalities of teaching (e.g., departmental regulations), the availability of relevant pedagogic knowledge (e.g., teaching delivery, integration of course material), and attitudes or beliefs about teaching (e.g., self-confidence).

It has also been suggested that the teacher training provided has relatively little impact on teaching practice or student learning (Gilbert & Gibbs, 1999; Weimer & Lenze, 1997). Therefore, factors relating to the individual tutor, such as self confidence and the tutor's attitudes towards teaching, knowledge and learning, may exert an important influence on their practice, and it cannot be assumed that training (when provided) sufficiently prepares postgraduates for their teaching role. There is, however, a lack of pedagogic research investigating the experiences of postgraduates who teach. The current study investigates the potential influence of the postgraduate tutor's own approach to studying and self efficacy in relation to their teaching practice.

Teaching practice may vary in a number of important ways. Teaching style in particular, may impact on the student experience and understanding (Gow & Kember, 1993; Kember & Gow, 1994). According to Prosser and Trigwell (1999), teaching approaches range from 'teacher-focused teaching', in which instructional style is largely characterised by information transfer from teacher to student, to 'student-focused teaching', which is characterised by the teacher's focus on conceptual change in their students' understanding of a topic. These different approaches may be associated with distinctive teaching methods and

teaching philosophy. Furthermore, approaches to teaching are associated with the students' approach to learning (Trigwell, Prosser & Waterhouse, 1999). It is conceivable that students experiencing a teacher-focused approach to learning are more likely to display surface learning whilst students experiencing the student-focused approach are more likely to develop deep learning. Further benefits for learners who experience a student-focused approach include: greater opportunities for active learning, enhanced autonomy, and greater ownership in learning (Lea, Stephenson & Troy, 2003). This suggests that enhancing practices which encourage more student-focused approaches can provide greater benefit for the student learning experience, compared to more traditional, teacher-focused approaches.

It is possible that a teacher's own experience of education and in particular their own approach to studying may impact on the way in which they teach and interact with students. For example, teachers that are deep learners themselves and continually strive to develop their own knowledge and understanding may place a greater emphasis on student learning and conceptual change. Similarly, teachers who focus on information-transfer type teaching may represent a category of learner that adopts a surface or strategic study approach. It is also possible, however, that the competing demands of their own postgraduate study and teaching responsibilities lead to the opposite pattern, with those individuals immersing themselves in their own study (i.e. a deep learning approach), preferring a more structured and less time intensive approach (i.e., teacher-focused teaching) to their practice.

At present there is little research investigating the relationship between the teachers' own approach to learning and their teaching practice. Zhang (2004) indicates that different thinking styles are largely associated with different teaching approaches. This research addresses thinking styles rather than approaches to education, however, and findings are limited to an undergraduate student sample. The association between the approaches to learning and teaching adopted by the tutor may be more pertinent for postgraduate tutors than other practitioners. Postgraduate teachers are actively engaged in a programme of study with specific deadlines and responsibilities. Indeed it may be difficult for postgraduate students to balance the demands of their own education and their teaching duties. Whilst the potential conflict between teaching and research interests has been frequently discussed (Astin & Chang, 1995), there has been little acknowledgement that this issue may also be pertinent for postgraduate teachers. In addition to previous teaching training and postgraduate teachers' approaches to their own study, there are also a range of personal variables which may influence the way in which postgraduates approach teaching. One conceivable variable is self-efficacy.

Self-efficacy is characterised as a belief or judgement about one's own capability or skills to accomplish a task (Bandura, 1997). It comprises two components: efficacy expectations (i.e., belief in personal capacity to affect behaviour); and outcome expectations (i.e., belief that the behaviour will result in a desired outcome). Perceptions of self-efficacy have been found to influence individuals' decisions, goals and investment in particular tasks (Khorrami-Arani, 2001); and may influence motivation for learning. That is, individuals with high self-efficacy may be characterised as being more motivated, striving towards higher goals, and investing greater amounts of time and effort in their learning experiences, compared to those of lower self-efficacy.

Self-efficacy has been investigated both as a general concept, and also as a domain-specific concept. Specifically within educational research, studies have examined the impact of teachers' perceptions of their teaching self-efficacy on a number of positive outcomes in trainee teachers and graduate teaching assistants. Outcomes measured include: subject performance (Bates, Kim & Latham, 2011); motivation (Schunk, 1991); job satisfaction (Viel-Ruma, Houchins, Jolivette & Benson, 2010); innovative teaching methods (Ghaith & Yaghi, 1997; Wertheim & Leyser, 2002); and teaching effectiveness and performance (DeChenne, 2011). Taken together, these studies provide cumulative evidence of the importance of positive perceptions of teaching self-efficacy on key professional and personal outcomes. Specifically, this suggests that teachers' enhanced perceptions of their self-efficacy may be related to teaching approaches characterised by greater innovation and a focus on students' conceptual and learning processes.

These findings highlight the importance of self-efficacy for teachers and the development of teaching practice. Existing research has however focused on the experience of trainee teachers and graduate teaching assistants, who may represent a different demographic to those of postgraduates. The current study addresses the role of teaching self-efficacy in the development of a teacher-focused or student-focused teaching approach in a sample of postgraduate teachers. As previously outlined, the student or researcher role that postgraduate tutors also fulfil may impact on practice. Therefore, the current study also measures research self-efficacy.

It was predicted that postgraduates with higher levels of self-efficacy would be more likely to adopt a student-focused and less likely to adopt a teacher-focused approach to their teaching practice. Postgraduates who had received formal instruction in teaching were predicted to score higher on measures of teacher self-efficacy than those who had not

received such training. It was also predicted that there would be an association between the learning style adopted during the postgraduate programme (deep or surface learning approach) and the teaching approach (teacher or student-focused). The paucity of research in this area prevented a more specific prediction.

Method

Participants

Participants (N = 113) were postgraduate students (on a taught or research based psychology degree programme) undertaking teaching or demonstrating duties at the Institute at which they were enrolled. Participants completed either a paper (N =21) or online (N = 92) version of the questionnaire. The majority of participants were female (87 female, 27 male, 2 undisclosed), were registered on full-time studentships (61.1%), and undertook teaching duties through choice rather than being contractually obliged to do so (57.5%). Approximately half of the participants indicated they had received formal instruction on teaching (54.9%), and approximately one quarter of the sample had been assigned a teaching mentor (23.9%).

Materials and Procedure

Participants completed several questionnaires assessing their current position (e.g. mode of study), the *Revised Two-Factor Study Process Questionnaire* (Biggs, Kember & Leung, 2001), the *Approaches to Teaching Inventory* (Prosser & Trigwell, 1999), the *Teacher Self-Efficacy Scale* (Schwarzer, Schmitz & Daytner, 1999) and the modified *General Self-Efficacy Scale* (Schwarzer & Jerusalem,1995). Individuals attending Postgraduates who Teach Network (PGwT) and Psychology Postgraduate Affairs Group (PsyPAG) events were invited to complete paper copies of the questionnaire. An online version of the questionnaire was advertised to postgraduate teachers via PGwT and PsyPAG mailing lists and associated social networking websites. All participants were required to be registered on a postgraduate psychology degree programme at a British Higher Education Institute in which they undertook teaching or demonstrating duties.

The *Revised Two-factor Study Process Questionnaire (R-SPQ-2F)* developed by Biggs, et al., (2001) measures the extent to which respondents adopt a deep or surface approach to studying. Participants rate on a 5 point scale (*1 = never or only rarely true of me, 5 = always or almost always true of me*), the extent to which statements are reflective of their study approach. The measure contains 20 items (10 items: deep approach subscale; 10 items

surface approach subscale). An example statement is: "*I work hard at my studies because I find the material interesting*". Each subscale demonstrates acceptable reliability (Biggs et al., 2001) with Cronbach's Alphas for the current study .70 (deep approach subscale) and .78 (surface approach subscale).

The *Approaches to Teaching Inventory (ATI)* (Prosser & Trigwell, 1998, 1999; Trigwell & Prosser, 1996, 2004) measures the extent to which teachers adopt a teacher or student-focused approach to teaching. The Inventory was originally developed as a means of examining the associations between teachers' approaches to teaching and the learning approaches of their students. Participants are asked to indicate on a 5 point scale (*1 = rarely or never true for me in this subject, 5 = almost always or always true for me in this subject*), the extent to which they agree with 22 statements. For example: "*I set aside some teaching time so that the students can discuss, among themselves, key concepts and ideas in this subject*". Scores are calculated for two subscales (i.e., teacher and student focused approaches). Previous research documents the reliability of the Inventory (Prosser & Trigwell, 2006) although there has been some criticism in respect of its development (Meyer & Eley, 2006. In the current study Cronbach's Alphas were .75 (teacher-focused approach subscale) and .83 (student-focused approach subscale).

The *Teacher Self-Efficacy Scale* (Schwarzer, et al., 1999) was developed from Bandura's (1997) Social Cognitive Theory of self-efficacy to measure teachers' perceptions of self-efficacy. Participants indicate on a 7 point scale (*1 = strongly disagree, 7 = strongly agree*), the extent to which they agree with ten statements. For example: "*I am confident in my ability to be responsive to my students' needs even if I am having a bad day*". In the current study the Cronbach's Apha was .86 consistent with previous assertions of Scale reliability (Schwarzer et al., 1999).

The *General Self-efficacy Scale* (Schwarzer & Jerusalem, 1995) measures optimistic self-beliefs (i.e., personal agency) to cope with life stressors. For the purposes of the current study, the scale was modified to specifically assess self-efficacy in research. Participants rated ten items on a 7 point rating scale (*1 = strongly disagree, 7 = strongly agree*), indicating the extent to which they agree with each statement. For example, "*I can remain calm when facing difficulties because I can rely on my coping abilities*". The Scale demonstrates acceptable reliability in both previous research (Scholz, Dona, Sud, & Schwarzer, 2002) and the current study (Cronbach's Alpha: .91).

Results

Overall, participants were more likely to adopt a surface approach to their own learning (M = 2.97, SD = .46) than a deep approach (M = 2.65, SD =.37) and rated themselves as being more student-focused (M = 43.31, SD = 5.92), rather than teacher-focused (M = 37.96, SD = 5.52) in their teaching practice. Scores for teaching (M = 53.56, SD = 7.80) and research (M = 53.74, SD = 8.45) self-efficacy were similar.

Standard multiple regressions were conducted to assess the influence of personal study processes (deep and surface approaches to learning) and self efficacy (teaching and research) on the adoption of teacher and student-focused approaches to teaching. A model predicting the development of a teacher focused approach to teaching was significant (F (4,93) = 4.09, p < .01). The adjusted R^2 value indicated that 12% of the variance in teacher-focused approaches could be accounted for by the model. Deep studying (β = .26, t = 2.56, p < .05) was a significant individual predictor of a teacher-focused approach, with those adopting a deep approach to their own learning more likely to adopt a teaching-focused approach to their teaching practice. Surface studying (β = .14, t = 1.33, p = .19), research self-efficacy (β = .10, t = .80, p = .42), and teacher self-efficacy (β = .06, t = .56, p = .56) however were not significant individual predictors.

A model predicting the development of a student-focused approach to teaching was also significant (F (4,90) = 10.30, p < .001). The adjusted R^2 value indicated that 29% of the variance in student-focused approaches could be accounted for by the model. A surface approach to learning (β = .44, t = 4.77, p < .001) and teacher self-efficacy (β = .34, t = 3.31, p < .01) were significant individual predictors of a student-focused teaching approach. Those adopting a surface approach to their own studies and with a high level of teaching self-efficacy were most likely to adopt a student-focused approach to their teaching practice. Deep studying (β = .01, t = .10, p = .922), and research self-efficacy (β = -.11, t = -1.01, p = .314), did not significantly predict student-focused teaching approaches. Together these analyses demonstrate an association between the learning styles adopted by postgraduate teachers and their approach to teaching.

To further explore the role of formal teaching training on measures of self-efficacy, independent t-tests were conducted. Results showed that postgraduates who had received formal training (M = 55.17, SD = 7.42) scored more highly (t (104) = 2.47, p < .05) on teacher self-efficacy than those who had no prior training (M = 51.50, SD = 7.88). No significant differences were found between these groups for general self-efficacy. These

findings suggest the importance of adequate teacher training in enhancing perceptions of self-efficacy, specifically in relation to teaching.

Discussion

The findings reveal that the approach adopted by postgraduate students to their own learning influenced the approach taken to their teaching practice. Those with a deep approach to their own studies displayed a teacher-focused approach to teaching and those with a surface learning approach to their work employed a student-focused approach to teaching. The results may at first appear to show that postgraduates have an inconsistent attitude towards learning, knowledge and education. Additionally, these somewhat counter-intuitive results may be as a result of the self-reported nature of the measures. Concerns over data collection methods for research of this nature is highlighted by Kane, Sandretto and Heath (2002), who suggest the use of multiple data sources in enhancing the validity of research. On a more conceptual level, however, the findings may reflect the competing demands (teaching and study) experienced by postgraduate students who may feel pressurised to prioritise either their own studies or their teaching practice. This experience is reminiscent of the tension between teaching and research previously reported in the pedagogic literature (Astin & Chang, 1995).

In recent years there has been a greater appreciation of the inter-relationship between teaching and research in Higher Education and it is argued that we should "move beyond the tired old teaching versus research debate" (Boyer, 1990). In part this progression reflects a greater awareness and acceptance of research informed practice (Elton, 2001; Jenkins, Breen, Lindsay, & Brew, 2003). Academics may develop a number of strategies to promote the integration of teaching and research. For example, supervision of dissertations may lead to publication and teaching may be based within a particular subject specialism.

The current study indicates that the tension between teaching and research and / or study is an issue for postgraduate students with teaching responsibilities. Furthermore, the approach to research adopted may impact on teaching practice and the subsequent student experience. This is particularly important as a substantial amount of teaching is delivered by postgraduates and these individuals may not receive the same level of institutional support as other teachers. Furthermore, postgraduates may have fewer opportunities to integrate their teaching and research, for example little opportunity to supervise undergraduate research in their area of interest. Promoting greater integration between these demands by, for example,

ensuring that postgraduates are able to teach in their own subject specialism may help to address the apparent tension.

Postgraduates with higher levels of teacher self-efficacy were more likely to adopt a student focused approach to teaching practice. This is consistent with original predictions and previous research detailing the positive impact of teacher self-efficacy (Ghaith & Yaghi, 1997; Wertheim & Leyser, 2002). Further it was revealed that those postgraduates who had received formal instruction on teaching scored more highly on measures of teacher self-efficacy. This is consistent with previous research (Tuchman & Isaacs, 2011), and the suggestion that insufficient teaching training can result in teachers holding negative perceptions of their own competencies and confidence in their teaching practices (Bartel, Cameron, Wiggins & Wiggins, 2004).

Therefore whilst the effectiveness of teaching training has been criticised (Gilbert & Gibbs, 1999; Weimer & Lenze, 1997), the programmes that increase teacher self-efficacy appear to positively impact on the teaching approach adopted. These findings reinforce the importance of providing training to postgraduate teachers (Lueddeke, 1997; Lantz et al., 2008) and it is recommended that these training programmes be made available to all postgraduate students with teaching responsibilities. Furthermore, a more flexible approach in which the training provided is informed by teacher self-efficacy and learning styles (Lueddeke, 1997) may be beneficial.

The current research utilised both traditional paper based and online data collection methods as a means of recruiting suitable samples of postgraduate teachers. This approach resulted in greater access to a wider population of postgraduates across the UK, compared to more traditional paper-based methods, and helped prevent the possibility of a geographical bias in the results, given that different UK Institutions or regions may operate different policies in postgraduate teaching provisions. This methodology represents a strength of the current study which gains insight into the learning and teaching experiences of postgraduates across a range of Institutions. Further research may consider the variation that exists between institutions or the extent to which the approach to teaching developed during postgraduate studies continues during more advanced positions.

To conclude, the findings provide evidence of a relationship between teacher's own approach to learning, self-efficacy and approaches to teaching practice; relationships that have not been sufficiently addressed in the educational literature. Although the current results relate to a psychology postgraduate sample, the findings may have a cross-discipline relevance, particularly to other subjects in which postgraduates are commonly used as

demonstrators. However, this remains speculative, and suggests the need for further research to address the extent to which these relationships are relevant in other subject areas. Further, additional research is required to further understand the manner in which approaches to learning impact on attitudes towards, learning, knowledge and education. It may be particularly important to investigate these associations within a postgraduate sample as these teachers must balance a range of competing demands, may receive less training or support than other practitioners and are often excluded from traditional pedagogic research..

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