Usage guidelines

Teaching Academics to Teach: About Pedagogy

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Abstract

Higher education institutions have become increasingly concerned about retaining students largely because they are penalised financially for losing them. Whilst much has been written about the impact factors such as finances, family support and previous education has upon students' withdrawal from higher education, much less focus appears to be on actual 'classroom' practices. Student-centred approaches to teaching and learning produce 'higher quality learning outcomes' in students and thereby facilitate students' retention at university. For these reasons, this research sought to assess pedagogical practices at a University in the North of England. Six first-year tutors were interviewed and their teaching observed. Findings indicate that whilst tutors recognised the challenges their students faced in learning and staying-power at university, and despite some pockets of exemplary teaching practices, most tutors lacked 'proper pedagogical knowledge' about teaching and learning in higher education. The research has implications for university infrastructures, namely teacher-training and creative teaching strategies.

Pedagogy and the Retention of Students

Universities are penalised financially if they struggle to retain recruited students (Crosling, Thomas and Heagney, 2008). First-year students are particularly vulnerable to dropping-out of university (Yorke, 2000; McInnis, 2001; Haggis and Pouget, 2002; Christie, Munro and Fisher, 2004; Baderin, 2005; Wilcox, Winn and Fyvie-Gauld, 2005). Many factors have been identified in the literature as integral to understanding why students withdraw (voluntary or involuntary) from university. These include financial pressures, family commitments, lack of preparedness for higher education, difficulties settling-in, wrong choice of course, lack of support from teaching staff, difficulties with the assessment methods used and seeing the relevance of what they are studying (Thomas, 2002; Rhodes and Nevill, 2004; Harrison, 2006; Longden, 2006). Often students leave university because of a number of these factors (Longden, 2006). Research has also indicated that the quality of education can impact on retention rates. Meeuwisse, Severiens and Born (2010, p.105) found that students 'withdrew more often because of poor educational quality and less often because of lack of ability'. Similarly, Georg (2009) found that the quality of teaching influences students to drop-out of higher education. Research the author carried out in 2009 at the same University in the North of England with first-year students found some of them did not attend classes/lectures because they were 'boring', a waste of time, and the teaching was difficult to understand. Spending less time in class has been correlated with higher drop-out from university (Georg, 2009).

Some authors have stressed the importance of teaching 'threshold concepts' to first-year students. Threshold concepts 'bind a subject together' and they are 'fundamental to ways of

thinking and practising in that discipline' (Land, Cousin, Meyer and Davies, 2005, p.54). Meyer and Land (2003, p.1) note that 'a threshold concept can be considered as akin to a portal, opening up a new and previously inaccessible way of thinking'. Once a student has grasped a threshold concept they are better equipped to assimilate different parts of the subject to analyse salient problems germane to that discipline. Students who struggle to grasp threshold concepts learn new ideas of the discipline in a more fragmented way (Land et al., 2005). There is no transformation in the ways these students view or interpret the discipline and as such they cannot progress with their studies (Meyer and Land, 2003). Authors have documented how students have dropped out (Cousin, 2010) or nearly left university because they have found 'the programme too conceptually difficult' (Land et al., 2005, p.59). The teaching of threshold concepts is inextricably linked to constructivist pedagogy. The aim of this paper is to assess the extent to which a constructivist approach to teaching and learning is used by tutors because this might also help to explain why some students fail to progress through university, as the following delineates.

A Constructivist Approach to Teaching and Learning

In their article on the implications of teaching threshold concepts for course design, Land et al. (2005, p.57) write about the importance of 'active student engagement with, and manipulation of, the conceptual material' recommending 'that tutors ask students to explain it [threshold concept], to represent it in new ways, to apply it to new situations and to connect it to their lives'. This is synonymous with student-centred approaches where the focus is on students' acquiring, developing and changing their conceptions (Trigwell and Prosser, 1996; Trigwell, Prosser and Waterhouse, 1999), using facilitative techniques or active learning methods that 'focus on the direct involvement of the student with the learning material' (Lammers and Murphy, 2002, p.62). Student-centred approaches produce better quality learning outcomes in students (Trigwell et al., 1999) because they are often aligned with deep-level processing where the student gains understanding of concepts (Marton and Saljo, 1976a). This is in contrast to teacher-centred approaches where the teacher transmits knowledge via instruction for students to acquire, the focus is not on learning but on teaching and the delivery of the content, and students are viewed as passive recipients (Barr and Tagg, 1995; Trigwell and Prosser, 1996; Kember and Kwan, 2000).

Student-centred approaches are embedded in a constructivist perspective to teaching and learning. This view suggests that learners actively construct their own understandings of the world (Cowan, 2006), assimilating new knowledge by drawing on prior learning and existing knowledge (Vygotsky, 1978; Shuck, Albornoz and Winberg, 2007). Baxter Magolda's (1999, p.27) 'constructive-developmental pedagogy' is constructivist in nature. She argues that in such a pedagogy students are validated as 'knowers', learning is situated in students'

experiences (because it is a context they can understand), and meaning is mutually constructed - both student and tutor are active in learning. Recognising that students can have a point of view, and supporting them in explicating that, and acknowledging that they

are able to construct meaning drawing on their own experiences, are fundamental to students' perceptions of themselves as 'knowers' and as influential beings in the learning process, which all in turn, increases their engagement in learning. This pedagogy intentionally seeks to 'involve students early on in their studies in an inquiry-based and dialogical process of learning' (Kreber, 2010, p.189) where 'students feel free to discuss their beliefs with their peers' and tutors 'encourage students to ask questions about course content' to create powerful learning environments to facilitate student retention (Schulte, Thompson, Hayes, Noble, and Jacobs, 2001, pp.6-8). With this put forward as the optimum approach to teaching and learning, this research asked two questions:

i) To what extent do tutors teach/interact with students drawing upon constructivist pedagogy?

ii) What are the implications of the pedagogies used by tutors?

Methodological Approach

The aims of this research were then to assess the worthwhileness of pedagogies in teaching and learning, and to recognise the implications of this on university infrastructures. The sample consisted of six tutors who delivered teaching to first-year students in the social sciences. These tutors were accessed for two reasons. Firstly, some of the social science programmes, on which some of these tutors taught, lost a sizeable portion of students by the end of their first-year in higher education. Secondly, this research follows-on from a study carried out a year previous where the author interviewed fourteen first-year social science students about the factors related to their attendance at university. The two samples in each study (of students and tutors) dovetail somewhat to facilitate understanding about the usefulness of pedagogies, generally, and specifically at this university. The tutors had between one and seventeen years experience of teaching in higher education.

The tutors were interviewed, individually (the average interview time was fifty-five minutes). Drawing on, even borrowing some of the questions in the relevant literature (see Barr and Tagg, 1995; Kreber, 2010), tutors were asked questions about teaching in higher education, such as: 'what do you think is the purpose of higher education'; 'how do you think students learn'; 'what do you think is the best way to teach students'; and 'what challenges do you think students today face'. Interviewing tutors seeks to realise the aims of the research, but the process served (in some respects) as a vehicle for tutors to critically reflect about themselves as teachers and the pedagogies they use. As Brookfield (1995) notes this should fill scholars with an invigorated sense of the value of their work, which should drive them to better their 'classrooms' and teaching practices.

Each tutor was also observed teaching one-session to first-year students. Four seminar classes and two lectures, almost nine hours of observations, were documented to help situate what tutors said in interviews with their actions in practice. Schon (1983, p.50) states that 'reflection-in-action' helps tutors deal with situations of uniqueness and uncertainty in

the 'classroom', since they need to constantly assess the classroom situation, respond quickly to (critical) incidents, and decide on the next best course of action (Eraut, 1995). It was in part, these 'classroom' incidents and responses to them that the author wanted to capture through the observations, as well as assessing how a tutor organises the environment and context of teaching for students to learn.

All interviews were fully transcribed, the transcripts of which and the observational field notes were imported into NVivo, and managed and analysed. Assessing the extent to which tutors taught/interacted with students drawing upon constructivist pedagogy, requires a methodology that considers tutors' experiences of their world as central. Data was analysed through the lens of the interactionist tradition where narratives that emerged from the transcripts and observational field notes 'come of out of worlds that exist outside of the [text]' (Miller and Glassner, 2004, p.130). The data was systematically and thematically analysed, by initially open-coding for concepts and categories, then progressing to axial and selective coding to view how categories relate to sub-categories, and how the categories integrate, respectively (Strauss, 1987). The data analysis captured interpretative and subjective elements of tutors' experiences of teaching and learning in higher education to assess the worthwhileness of their pedagogies.

Findings

Shared Narratives about Teaching in Higher Education

Drawing on data from the interviews, many tutors believed that the purpose of higher education is about broadening minds and developing critical thinking as Alan (a pseudonym name) says:

> *"[...] higher education is about providing the opportunity for some sort of intellectual stimulation and allowing students to think a bit differently, to think more critically about things that they're interested in [...]."*

"Allowing students to think a bit differently" is the premise of teaching threshold concepts: to 'open[ing] up a new and previously inaccessible way of thinking' (Meyer and Land, 2003, p.1). It can be surmised then that many tutors would be amenable to this way of teaching.

It was clear that tutors understood the challenges students face in their learning. As Lisa illustrates when asked why students might leave university:

> *"Many personal reasons with family problems and relationship or moving away or having a baby. Having an accident or, you know, parents divorcing."*

Many of the issues such as lack of motivation, financial difficulties, employment/paid-work, family problems, identified by tutors as why students might leave university are peppered throughout the literature on student retention in higher education. Tutors' recognition and accommodation of the difficulties faced by students is likely to enhance students' learning and retention at university (Thomas, 2002). Pedagogy, as discussed, is also important in retaining students.

When tutors were asked how students learn, their responses indicated that students learn because they're interested, they learn instrumentally for the assessment, and they learn in many different ways. As Karen illustrates:

> *"Different ways. That's why you need to do different things with them and different activities. Everyone's different. Um some people may pick things up really quickly, go away and read it really quickly. Some people really need to engage and even maybe have one-to-one talks with you because they don't pick it up quickly. Um some people may learn more from doing the activity, doing something which engages them. Um some people might pick it up quite good in lectures."*

Most tutors did not draw on the pedagogical literature when talking about how students learn. Only one tutor made reference to a theorist and the ensuing perspective of student learning. None of the tutors had an up-to-date qualification to teach in higher education, such as a post-graduate certificate. This should not be alarming since most academics are not trained to teach in higher education (see Hativa, 2000). Hativa (2000, p.517) found though that students perceived teaching as poor because tutors lacked 'proper pedagogical knowledge' of 'what makes teaching effective' (see also Cowan, 1998 cited in Davis, 2003, p.249).

All tutors taught within the standard weekly lecture followed-by seminar format but they were asked *"if you weren't constrained by the way the environment is currently for you, would you*

teach in any different or any other way", or at least a variation of this question. Half of the tutors still saw the benefits of the lecture followed-by seminar/workshop format as Alan says:

> *"[...] a lecture/seminar format is a good way of doing it. I do think they [students] [...] need to listen to what people have got to say. [...]. They [students] do at some point need to engage themselves [...]."*

5

Only one tutor implied over-hauling the current format, increasing the intensity and duration in which students are taught emphasising 'second-hand' and real-life innovative teaching strategies for students to understand threshold concepts (which the author does not explicate to protect the anonymity of the tutor speaking); albeit lecture and workshop are still part of this envisioned set-up. As Melissa says:

"I'd have a whole module running from Monday to Thursday and I would bring them in and we'd spend Monday morning looking at films and then we'd go on trips on Tuesdays. [...]. When I say a trip, to somewhere relevant or um connected to the syllabus. And then we'd have a lecture input and then we'd have a workshop and discussion. And I would have people doing projects which meant that they went out maybe with a camera and made films, if we had the resources to do film-making. I would love to get students to do like ten minute films or, you know, work with media to do a little 20 minute documentaries on issues that interested them [...] I would love to have say Monday to Thursday for ten weeks and we just work on that Monday to Thursday".

When this tutor was asked further about the trips, her responses indicated that she was inspired by what she was saying, as she said *"now I've said it, I think I might try and build a couple of those visits in next year".* This was partly an implicit anticipated outcome of this research to invigorate tutors to better their 'classrooms' and teaching practices (see Brookfield, 1995). But when she was subsequently asked what was stopping her from implementing such teaching practices the response was clear: *"we're under-resourced and quite pressured in terms of the amount of delivery that we're expected to do."*

From the interview data, it can be gleaned that all tutors saw the benefits of both instructional and facilitative approaches to teaching. As Lisa said *"you can get all knowledge and information from at the touch of your finger."* Still, half of the tutors viewed the lecture as a vehicle primarily for instruction, as Alan explained *"so in terms of a lecture, it's very much me talking".* This does not fit-well with debates about the inefficacy of the didactic lecture, pointing towards more interactive lectures as benefiting students' learning (Huxham, 2005). But tutors' narratives about teaching in higher education seemed anecdotal rather than steeped in any pedagogical literature and research. To assess further how much tutors drew on constructivist pedagogy, it is important to consider how tutors 'reflect-in-action'.

Teaching in Higher Education: 'Reflecting-in Action'

Drawing on the observational field notes, two of the teaching sessions, one a seminar class and one a lecture, drew on constructivist pedagogy. Both sessions encouraged student

engagement by allowing an inquiry-based dialogue about the threshold concepts. The field notes illustrate this.

> *The tutor puts another slide up with text [...]. S/he then asks the students a question and draws-on the module reminding students of the exercise we did. A student responds. The tutor calls the student by her name and says can you speak louder so they can hear at the back [...]. The tutor reflects further on this discussion and the exercise carried out earlier in the module, and continues asking questions of the students by drawing-on previous exercises they've done on the module. Students continue to respond to the tutor's questioning [...]. The tutor confirms, clarifies and summarises students' responses. Real-life examples are used in the tutor's explanations to help students understand, albeit in a 'second-hand' way [Lecture].*

In both sessions, tutors listened for understanding, as Land et al. (2005) recommend. The field notes explain.

> *The tutor says get reading, and s/he returns to the front of the class, facing the students. [...]. The quantity of the text given out by the tutor seems manageable. The tutor gets-up and asks students of a particular group if there is anything they don't understand. They seem fine. S/he returns to a seat at the front of class. The tutor is reading at the front, then s/he gets up again. [...] s/he approaches the two students together and asks them if they know what they are meant to do. They engage and talk to him/her and s/he responds to them. The students ask further questions then the tutor engages and chats about a particular part of the text s/he has given them. Then s/he goes to another group asking about the sort of impression they get from the text. S/he sits down on a chair with the group of*
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> *three students and talks to them. S/he looks relaxed, and leans forward when listening to them, nods and says yes to a student's response. S/he sits with them for quite a while, about five minutes [...]. [Seminar class].*

In some of the other sessions where there was little student engagement and minimal use of teaching-resources, the tasks set were drawn-out, the pace was laboured, and threshold concepts were skated over. The field notes illustrate.

> *The tutor asks the students if they can tell him/her a bit more about what they are discussing. [...]. The two students who came in late, appear to be listening, but look a little distant. The tutor is furthest away from them. The two students in the*

middle of the class are reading the text and seemingly following it. The dominant student is still talking, and another student is also joining in the discussions. The tutor confirms what the student says. The tutor continues to unpack the text in piecemeal fashion. I don't think the two students who came in late have a copy of the text that is being discussed - I can't see it in front of them on the desk. These two students (without the work) do look bored, in my opinion [...] [Seminar class].

Such factors work together to disengage students (see Hativa, 2000) as the field notes taken from a different seminar class illustrate.

The students sat at the back of the class are still messing about: they are quite loud. The tutor now responds to them. [...] One of the students has to leave forty minutes before the class is due to end. [...] The group of students sat at the back of the class are having a separate chat, whilst the tutor is addressing the whole class. One of the students at the back of the class is eating [...]. The tutor is listening to one of the students as part of a whole-class discussion and s/he asks the group at the back of the class to not talk 'while people are talking'.

'Lack of sufficient pedagogical knowledge', as Hativa (2000, p.491) says, reduces 'students' ability to pay attention'. Sadler (2008) saw it important to develop tutor's pedagogical knowledge so that they are better equipped to deal with challenges they face when attempting to increase student interaction.

Discussion

The less facilitative sessions leant towards a teacher-centred approach where the tutor transmits knowledge for passive students to acquire (see Trigwell and Prosser, 1996; Kember and Kwan, 2000). The tutor can assume in such sessions that students understand the teaching because of nods and this did appear to be the case, but research suggests that such a gesture does not equate to student understanding (Collins and O'Toole, 2006). If teaching is to be effective 'as a process of guiding and facilitating learning' tutors need to 'actively seek how the student perceives and understands reality' (Matusov and Smith, 2007, p.705). Otherwise students stuck in a '[liminal] space' of 'conceptual difficulty' may find it difficult to progress with their studies without tutors 'redesigning activities and sequences' through for example 'peer-collaboration', 'provision of support materials or technologies' (Meyer and Land, 2005, p.375-377), as the more facilitative sessions illustrated.

Both tutors in the facilitative sessions drew on students' previous knowledge or prior learning, made links between this, the literature and relevance to students' own experiences by discussing and illustrating real-life examples, to teach difficult concepts, as Land et al. (2005) recommend (see also Baxter Magolda, 1999). Whilst the other tutors also did this,

8

the teaching of threshold concepts germane to the discipline/s, in the more facilitative sessions, was clear, in sequence and progressive (see Land et al., 2005), albeit implicitly (and not documented here to protect tutors' anonymity). The tutors in the facilitative sessions *engaged* students by asking them questions and encouraging them to ask questions (see Schulte et al., 2001), supporting them in constructing meaning and discussing their views relating to this (see Baxter Magolda, 1999), their students showed signs of attentiveness, and the tutor's tone of voice, their movement throughout the room, the pace at which he or she moved the session along (see Hativa, 2000), were all integral to engaging students in their learning. This is a student-centred approach to teaching where an environment is created for students to acquire, develop and change their conceptions to facilitate deep-level processing to produce 'higher quality learning outcomes' (Trigwell et al., 1999, p.68). Some of the tutors then used constructivist pedagogy, and opened-up an 'inaccessible way of thinking' for students about their disciplines, without which students would not progress in higher education (Meyer and Land, 2003, p.1).

Implications

Teaching Academics to Teach

Theoretically, drawing on constructivist pedagogy, there were some exemplary pockets of good teaching practice, which created powerful learning environments for students, and thus possibly facilitated student retention. It was beyond the scope of this research to gather empirical evidence to link this pedagogy with actual student progression, but such an area warrants further research. This paper argues that tutors, for the most part, lacked 'proper pedagogical knowledge' of 'what makes teaching effective' (see also Hativa, 2000, p.517). A

tutor can have two hours to organise the environment, but if he or she does not have the pedagogical 'tools' to arrange a teaching-format, including planning the sequencing and content of the curriculum, towards a student-centred approach to teaching the threshold concepts of a discipline to produce deep-level processing within students, using facilitative techniques (Lammers and Murphy, 2002, p.62) where students develop and alter their conceptions (Trigwell and Prosser, 1996) and ways of thinking (Meyer and Land, 2003) then the amount of contact-time is irrelevant. Herein is the problem, evident in most tutors' responses and teaching-practices in this research, they did not know anything other than what they were already constrained by! This included the liking for and leaning towards teacher-centred approaches and the transmission of knowledge to passive students. If tutors were trained, educated and qualified to teach in higher education they might not perceive they were hampered by resources and the quantity of delivery although there is some evidence that unstable factors such as large class sizes, heavy teaching workloads, and rooms that are not conducive to the format of teaching preferred by a tutor can influence the teaching approach adopted (Kember and Kwan, 2000). But as Kember and Kwan (2000) also argue here, it is tutors' conceptions about teaching that strongly influences the teaching approach adopted. They argue that altering such thoughts about teaching is paramount if changes are to be made in the quality of learning and teaching. Trigwell et al. (1999, p.68) similarly argue that it is necessary to alter tutors' thoughts about teaching to

9

facilitate changes in tutors' pedagogies to a student-focused approach that centres on changing students' conceptions (see also Hativa, 2000).

Sadler (2008, p.208) found that teacher-training in higher education such as the 'post-graduate teaching certificate helped to enhance the teacher's pedagogical knowledge but also encouraged them to think more about using approaches which were more student-focussed in their nature' and thus improve the 'quality of student learning outcomes' (see also Gibbs and Coffey, 2004, p.98). Sadler (2008) recommends that the delivery and design of teacher-training courses are embedded in student-centred approaches. He argues that such programmes need to draw on the specific interactions 'trainee' teachers have with students and to use these as a developmental base for critical reflection and assessment. In other words, teacher-training programmes need to show and lead by example, as one of the 'trainee' teachers commented on Northumbria University's teacher-training programme: "*delivery could have been more interesting. Too much of lecturer standing at the front of the class. I'm not sure that inspires us when it comes to our thinking about how we should deliver sessions*" (Gannon-Leary, 2007, p.14). So teaching academics to teach is important and this should include creative teaching strategies, as the final section illustrates.

Creative Teaching

Tutors' use of creative and innovative teaching-strategies particularly those that embed teaching in real-life, rather than just discussing and illustrating real-life scenarios in a 'second-hand' format (the latter of which all tutors relied on in this research) need to be

enhanced. In one of the sessions in this research, a tutor creatively used a DVD to virtually illustrate the link between threshold concepts and real-life. Such 'second-hand' examples are often argued to be the next best-thing, and sometimes the only solution to getting close to real-life (see Salmon, 2010). But the tutors in this research are social scientists and social sciences as a discipline lends itself to student-centred approaches to teaching (Lindblom-Ylanne, Trigwell, Nevgi and Ashwin, 2006). This is because real-life scenarios are there for tutors to immerse students in to create powerful learning environments and facilitate their learning, as Melissa illustrated above.

The Learning Enhancement Conference: Innovation in the Curriculum in 2010 at the University of Sunderland smacked of creative teaching and learning strategies, of fragmenting the traditional view and challenging the status quo of what teaching in higher education is and how it should be delivered to the 21st Century student to learn. As Dr. Sally Brown suggested here, the lecture will survive but how it's used as a mode of instructional delivery (of knowledge where recipients are passive) is likely to change. This is crucial because Marton and Saljo (1976b) argue it is the demands of the tasks that are set, which determines the approach of learning (deep or surface) that students adopt. More alternative tasks such as journals, portfolios, peer and self-assessment (see Struyven, Dochy and Janssens, 2005) are thought to enable better quality learning because students try to

10

understand the material studied, and in doing so, they engage in deep-level processing to gain overall conceptual understanding. Peer-assessment, for example, facilitates students' engagement with the assessment criteria because they have to make sense of it in order to assess their peers. This in turn deepens their own learning (Juwah, Macfarlane-Dick, Matthew, Nichol, Ross and Smith 2004; QAA, 2006). As such, students said they could play a more active role in peer-assessment strategies (Sambell, McDowell and Brown, 1997). Building-in such tasks in the 'classroom' *and* as assessment methods is an integral step in developing a bank of innovative and creative teaching and learning strategies to facilitate students through university.

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12

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