Promoting Human Capital: The Importance of Dialogic Teaching in Higher Education

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ABSTRACT

Over the last 30 years, university education has undergone major changes due to the growing numbers of home and international students, the introduction of information and communication technology and an increasingly managerial approach that evaluates education in terms of cost, efficiency and measurable outcomes. In the face of these changes, universities are charged with the responsibility of providing students with a rich learning environment in which they are taught to reason and think critically, and to develop a range of attributes needed by employers such as team working and enterprise so they can fully participate in the workplace. In addressing these challenges, this paper explores current approaches to learning and teaching in higher education and the role that a dialogic pedagogy can play in shaping thinking and to secure engagement, learning and understanding in university study. It concludes by arguing for more powerful professional development programmes in higher education so as to enhance the pedagogic knowledge of the university teaching community in order to promote higher levels of joint lecturer-student activity in both face-to-face and online interactions.

Introduction

Many people would argue that the main purpose of universities is to create and transmit knowledge, culture and values so as to drive innovations in the wider economy and help to improve the quality of life.

Therefore, it is argued that universities have a responsibility to challenge and lead on change and to provide students with a rich learning environment in which they are taught to reason and think critically, and to develop a range of attributes needed by employers such as team working and enterprise so they can fully participate in the workplace (Garrick, 1998).

This paper is about work in progress exploring the role of 'dialogic teaching' in higher education. I shall draw on my research into pedagogy which exploits the power of talk to shape student thinking and to secure their engagement, learning and understanding in university study. My line of enquiry began in the UK covering various phases of education (Edwards et al., 1997; Hardman & Leat, 1998a; Hardman & Williamson, 1998; Hardman & Mroz, 1999; Mroz et al., 2000; Hardman et al., 2003; Hardman et al., 2005; Smith et al., 2004; Smith et al., 2006; Smith et al., 2007). Three national UK studies funded by the Economic and Social Research Council and Nuffield Foundation yielded somewhat depressing findings about the character of classroom talk from primary school through to post-16 education. From these studies, it was found that one kind of talk predominates: the so-called 'recitation script' of closed teacher questions, brief student answers and minimal feedback which requires students to report someone else's thinking rather than think for themselves, and to be evaluated on their compliance in doing so.

From this work, the concept of dialogic teaching, where teachers are helped to break out of the limitations of the recitation script through higher order questioning and feedback strategies which promote a range of alternative discourse strategies, has developed. I have worked closely with Professor Robin Alexander from Cambridge University on this emerging pedagogy. Alexander (2006) has describe the essential features of dialogic talk as being collective (teachers and students address the learning task together), reciprocal (teachers and students listen to each other to share ideas and consider alternative viewpoints), supportive (students articulate their ideas freely without fear of embarrassment over 'wrong' answers and support each other to reach common understandings), cumulative (teachers and students build on their own and each others' ideas to chain them into coherent lines of thinking and enquiry), and purposeful (teachers plan and facilitate dialogic teaching with educational goals in mind). Most importantly, it can take place in whole class, group-based and individual interactions between teacher and students.

Recently, I have turned my attention to higher education to explore whether the school-based findings are replicated in university teaching,

or whether it provides learning and teaching opportunities that are more dialogic in nature to allow for a greater emphasis on joint lecturer-student activity and higher-order thinking through a more interactive pedagogy.

Challenges Facing Universities

Over the last 30 years, university education has undergone major changes arising from growing numbers of home and international students, the introduction of information and communication technology and an increasingly managerial approach that evaluates education in terms of cost, efficiency and measurable outcomes (Hardman, 2005). When I went to university in the mid-1970s in the UK, higher education was still an elite activity: only 12 per cent of my age group received a university education. Information was also rationed through the books available in the university library and often resulted in a mad scramble to get there first after a lecture or seminar to acquire the recommended texts on a reading list. Now, nearly 40% of young people in the UK go to university and many other countries in the developed world have achieved 50%. Information and communication technology is also seen as changing the way students can access information and interact with tutors and their peers. The internationalisation of higher education means that universities are catering for a much greater diversity of students in terms of linguistic and cultural backgrounds. The question I would like to address is: how are universities meeting the challenges posed by such changes in order to promote human capital through learning and teaching?

In order to answer this question I will:

1. examine the current profile of, and theory underpinning, learning and teaching in higher education;
2. outline what I mean by dialogic teaching in higher education;
3. discuss the potential of dialogic teaching for enhancing the quality of learning and teaching in higher education.

Four Propositions

Four key propositions frame what follows.

Proposition 1: While recognising that learning and teaching in higher education is a cultural activity and acknowledging the influence of

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contextual factors on the learning and teaching process, pedagogy is a transnational response to common circumstances and universities around the world appear more alike than different.

Proposition 2: Talk should be central to the learning process, enabling students to become more adept at using language so they can express their thoughts and engage with others in joint intellectual activity to develop their communication skills and to advance their individual capacity for productive, rational and reflective thinking.

Proposition 3: While most university educators would subscribe to this argument in broad terms, and universities are places where a great deal of talking goes on, talk which cognitively engages students and scaffolds their understanding is much less common than it should be in higher education.

Proposition 4: It follows that there is a need for an alternative 'universalistic' pedagogy in higher education which emphasises joint teacher-student activity and higher-order thinking through a dialogic pedagogy and curriculum which is relevant to the lives and linguistic profile of the communities from which the students come.

Theoretical Framework of Dialogic Teaching

Vygotsky was one of the first psychologists to acknowledge the role of talk in organising learners' understanding of the world. In his book *Thought and Language,* first published in Russia in the 1930s and published in English in 1992, Vygotsky suggested that using language to communicate helps in the development of new ways of thinking: what students learn from their 'inter-mental' experience (communication between minds through social interaction) shapes their 'intra-mental' activity (the way they think as individuals). More importantly, Vygotsky argued that the greatest influence on the development of thinking would come from the interaction between a learner and a more knowledgeable, supportive member of a community. In what became known as the 'zone of proximal development', the zone between what a learner can do unaided and can manage with expert assistance, social interaction was seen as being central to instruction. The guided co-construction of knowledge, in which a tutor talks with students in whole class, group and individual settings to guide their thinking, is therefore seen as being central to the educational process (Hardman, in press).

Out of Vygotsky's work developed the social constructivist view of learning which suggests that meaningful learning does not take place through the addition of discrete facts to an existing store of knowledge or schemata, but when new information, experiences and ways of understanding are related to an existing understanding of the matter in hand One of the most important ways of working on this understanding is through talk, particularly where students are given the opportunity to assume greater control over their own learning by initiating ideas and responses. In this way, they can contribute to the shaping of the verbal agenda and introduce alternative frames of reference which are open to negotiation and where the criteria of relevance are not imposed.

The main pedagogic implication of this theory of learning for university teaching emphasises the importance of social learning through tutor-student and student-student dialogue. In such settings, tutors can model academic thinking processes and discourse practices, provide scaffolding that breaks learning down into manageable tasks, and provide formative feedback that suggests directions for improvement (Driscoll, 2000; McAlpine; 2004). Similarly, Ridley (2004) argues that interaction with peers and tutors encourages more students to participate in and practise academic forms of discourse normally dominated by the tutor; that is, sharing, comparing, contrasting and arguing from different perspectives, providing opportunities for instructional conversation or the shared construction or negotiation of meaning.

Building on Vygotsky's notion of inter-mental experience and intra-mental activity, Gorsky & Caspi (2005) developed a framework of instruction in higher education in which they suggest that student learning activities be investigated in terms of the kinds of dialogues engaged in and the resources that enable these dialogues. Intrapersonal dialogue is the interaction between student and the subject matter he or she is trying to learn from texts, lectures, web-based resources etc. Interpersonal dialogue is the interaction between tutor and student: it can be face-to-face or mediated by communications media such as telephone, e-mail, synchronous and asynchronous forums. Therefore, all learning activities can be analysed in terms of the dialogues students engage in and the resources (either structural or human) that enable the dialogues.

In their research to document what dialogue types, mediated through which resources, were used by distance and campus-based university students, Gorsky et al. (2006) found that, not surprisingly, distance learning students and students in large lecture classes reported using intrapersonal dialogue mediated through all the available structural resources (texts,

web-based material, exercises) as the primary means of learning. Interpersonal dialogue was utilised for working through conceptual difficulties and problems that could not be worked out on an individual basis. Most university students regarded lectures as a resource for intrapersonal dialogue as the large majority reported they did not ask any questions at a lecture. In tutorials, however, one-third to one-half of the university students reported that they asked a question of the tutor so that for these students tutorials were opportunities for interpersonal and intrapersonal dialogue.

When confronted with a difficult or unsolvable problem, Gorsky et al. (2006) found that both distance education students and campus-based students turned to interpersonal dialogue for help, with the majority turning first to peers. A second course of action was to ask a question at a tutorial. Most did not turn to asynchronous forms of dialogue because of the lack of immediacy in getting a response and preferred the use of telephones for interpersonal dialogue as it offered synchronous communication without the need for good written communication skills. The only significant difference between the two groups of student populations was in the use of structural resources that enabled intrapersonal dialogue: campus-based students generally *listen* to lectures and distance students generally *read* text. Overall, it was found that the kinds and amount of interpersonal dialogue in tutorials was heavily dependent on the tutor's willingness to interact with students and answer questions. Many students turned to peers for help rather than lecturers as they reported that face-to-face tutorials were often lecture-based with few opportunities for tutor-student dialogue.

Learning in Lectures

While the lecture method has a long history in academe, there have been increased efforts in the past 25 years to explore alternative approaches to learning and teaching (Brown and Atkins, 1987; Ramsden, 2007). A growing body of research into learning and teaching in higher education supports the conclusion that lectures are a poor way of developing critical thinking and developing graduate attributes required by employers (Bligh, 1998). Studies also point to the unpopularity of lectures amongst students, particularly as they move through their degree courses (Maloney & Lally, 1998; Sander et al., 2000; Pennington, 2001). However, with increasing student numbers in higher education, research suggests the use of lectures

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(where dissemination is the priority) continues to be the main mode of undergraduate teaching (Van Dijk et al., 2001; Lammers & Murphy, 2002). In an attempt to address some of these concerns, research has started to explore the use of 'interactive windows' during lectures where students are asked to spend a few minutes discussing a question or solving a problem with a few of their peers (Huxham, 2005). Huxham found that the greater opportunities for interactive and reflective exercises in lectures proved popular with the students and enhanced recall and understanding.

Outside of traditional, large lecture formats, research has been exploring the effectiveness of active forms of learning in laboratories, workshops and tutorials in which students actively participate in their learning rather than sit as passive listeners. Examples of active learning include the use of problem-solving activities in pairs or groups, student presentations and performances, and the use of information and communication technology. Such opportunities for more interactive forms of teaching are seen as providing greater opportunities for students to actively participate in a discussion with their tutor and peers (and so where dialogical teaching can be encouraged) and promoting a 'deep' approach to learning (Brown & Atkins, 1988; Giles et al., 2006; Ramsden, 2007). Brown and Atkins (1988) characterise a deep approach as an active search for meaning, and found that this approach to learning often resulted in a greater understanding of the material and better recall of detail over a longer period of time (more than 5 weeks). In contrast, students using a 'surface' approach to learning were often relying on the memorisation of specific, and often unrelated, facts resulting in a limited conceptual understanding. Research by Trigwell et al. (1999) and Richardson (2000) suggests a tutor's approach to teaching can influence the study of their students: student-focused tutors using interactive activities are more likely to encourage students to take a deep approach (attempting to make sense of content) rather than a surface approach (attempting to remember content) to their learning. Students who use a deep approach have been shown to have higher learning outcomes, particularly in terms of understanding and developing new and more sophisticated conceptualisations of the subject (Gibbs & Coffey, 2004).

The Impact of Technological Changes on Learning and Teaching

The potential of new technologies to provide more active and personalised forms of learning has been seen as a way of fundamentally changing pedagogic practice in higher education. With the growing realisation that effective teaching entails a student-centred approach that promotes the skills of independent thinking, team work and enterprise so highly valued by employers, there has been the growth of information and communication technologies to support online collaboration and access to resources (Falconer & Littlejohn, 2007). The Internet enables two-way communication to be enhanced making dialogue between tutors and students possible and providing access to an extensive bank of knowledge to support the learning process. Email and computer conferencing have also enabled asynchronous dialogue between tutors and fellow students not previously possible in distance education. Therefore information technology is seen as supporting what has become known as 'blended' learning delivered on or off campus through face-to-face or distance learning approaches using real time or asynchronous activities (MacDonald, 2006).

However, large-scale studies of Open University students in the UK taking the same course when tutorial support was provided conventionally (using limited face-to-face with some contact by telephone and email) or online (using a combination of computer-mediated conferencing and email) provides a cautionary tale for those who see information and communication technology as a quick fix to the problems faced by higher education (Kirkwood & Price, 2005; Price et al., 2007). Students receiving on-line tuition reported poorer experiences and attained lower academic results than those receiving face-to-face tuition. Face-to-face tutoring was also highly valued as a pastoral activity. One of the main conclusions of the studies was that the quality of tutor-student interaction was crucial to the learning process and that the impoverishment of online communication, due to the lack of paralinguistic information through explicit verbal feedback, needs to be addressed through better training of both students and tutors before online tuition can be seen to be as effective as face-to-face tuition. Staff training also needed to focus on the pedagogic and communicative aspects of online tutoring rather than the technical aspects as the medium itself is not the most important factor in any educational programme: what really matters is how it is creatively used and aligned with pedagogic practice (Kirkwood & Price, 2005).

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Dialogic Teaching

From the above review of learning and teaching in higher education, I would argue there is strong evidence of the need for a greater concentration on dialogic teaching in universities, whether it is delivered through a large-lecture format, tutorial-based classes or blended learning, in order to promote human capital. However, my work in schools has shown that 'deep structure' pedagogical change in the realm of teacher-student interaction is extremely slow and that basic interactive habits are extremely resilient. Is the same true of higher education?

While extensive research in the USA by Nystrand et al. (1997) in high schools found managing the quality of classroom discourse to be the most important factor if there is to be genuine dialogic teaching, leading to significant gains in learning outcomes, my research of the UK's national primary literacy and numeracy strategies revealed that traditional patterns of whole class interaction have not been dramatically transformed by the strategies (Hardman et al., 2003; Smith et al., 2004; Smith et al., 2006). Using a computerised systematic observation system and discourse analysis of video recorded lessons, it was found that in the whole class section of literacy and numeracy lessons, teachers spent the majority of their time either explaining or using highly structured question and answer sequences. Far from encouraging and extending student contributions to promote higher levels of interaction and cognitive engagement, most of the questions asked were of a low cognitive level designed to funnel pupils' response towards a required answer. Open questions (designed to elicit more than one answer) made up 10% of the questioning exchanges and 15% of the sample did not ask any such questions. Probing by the teacher, where the teacher stayed with the same students to ask further questions to encourage sustained and extended dialogue occurred, occurred in just over 1% of the questioning exchanges. Uptake question (building a pupil's answer into a subsequent question) occurred in only 4% of the teaching exchanges and 43% of the teachers did not use any such moves. Only rarely were teachers' questions used to assist students to more complete or elaborated ideas. Most of the students' exchanges were very short, lasting on average 5 seconds, and were limited to three words or less for 70% of the time. It was also very rare for students to initiate the questioning. Teachers were also found to be replicating these discourse practices in group-based and individual interactions with students (Hardman et al., 2005).

In their analysis of more than 200 eighth and ninth-grade English and social studies classes in a variety of schools in the Midwest of America, Nystrand et al. (2003) also found that whole-class discussion in which there is an open exchange of ideas averaged less than 50 seconds in the eight grade and less than 15 seconds in the ninth grade. Using markers of interactive discourse such as open-ended questions, uptake questions, student questions, cognitive level and level of evaluation, Nystrand and his colleagues found that shifts from recitational to dialogic discourse patterns were rare: in 1,151 instructional episodes that they observed (i.e. when a teacher moves on to a new topic) only 66 episodes (6.69%) could be described as dialogic in nature.

My work in the post-16 sector also revealed that the teaching of students about to embark on university study is also dominated by teacher explanation and recitation (Edwards et al., 1997; Hardman & Leat, 1998; Hardman & Williamson, 1998; Hardman & Mroz, 1999). There was an overwhelming predominance of teacher-directed question and answer and presentation accounting for 63% of the total teaching exchanges in post-16 English lessons. The findings challenged the general assumption about the nature of classroom interaction where 'good practice' is often conceived as being a seminar in which the teacher is no more than a leading participant and mediating influence in a process of discovery. Such a notion assumes students have the right to challenge and question as they acquire some of the working practices of the subject and participate in the subject discourse in preparation for university study. However, student questions accounted for just 4% of the teaching exchanges, suggesting that exploration of a topic through student initiations so as to allow an interchange of ideas was rarely practiced.

Is the same true of university face-to-face teaching? My preliminary findings from a small-scale study of 10 university tutors during face-to-face graduate teaching in a Faculty of Education in the UK suggests the teaching is mainly directive in nature, with little use of effective questioning techniques and not enough engagement with students in terms of the oral feedback. Observations of teaching methodology classes ranging from 20 to 45 students were carried out using systematic observation and discourse analysis of video recorded lessons, thereby replicating the school-based studies. While discussion was expected it was not always forthcoming: over 60% of class time was taken up with lecturing and during question-answer sequences open questions made up just over a quarter of the questioning exchanges; probing by the tutor occurred in just over 18% of the questioning exchanges. Uptake question occurred

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in only 8% of the teaching exchanges and 34% of the lecturers did not use any such moves.

Similarly, a case study of nine tutors teaching English in a Chinese university revealed that lecturing and closed questions eliciting short answers was the main form of discourse. The lecturers controlled the pace and content of the discourse through a didactic style in which there was little opportunity for students to initiate their own ideas and use the target language so as to develop their pragmatic competence (Yang, 2006). Both studies support the earlier findings of de Klerk (1995/1997) who in her analysis of tutor-student interactions during seminar teaching revealed that the discourse was dominated by tutor monologues and short question-answer sequences.

Embedding Dialogical Teaching in Higher Education

My research therefore suggests major challenges have to be overcome if learning and teaching in higher education are to be transformed from recitation into dialogue so as to promote the guided construction of knowledge between teachers and students. It suggests the need for the exploration and researching of alternative teaching and learning strategies so as to raise the quality of tutor' interactions with their students, and promote broader participation beyond the role of listeners or respondents. The research also suggests the need for dialogic principles to inform the professional learning and training of university teachers.

Research into professional learning in higher education has started to explore the link between discourse patterns and teachers' theories of learning, arguing that the use of particular discourse strategies reflects certain pedagogical epistemologies (Gibbs & Coffey, 2004). It is suggested that the choices tutors make about the kinds of discourse patterns and pedagogical strategies they use in their teaching are linked to pedagogical beliefs, and that the most effective tutors are those who can theorise their teaching so as to make confident and professionally informed pedagogic decisions (Trigwell & Shale, 2004). University teachers therefore need training in how to more effectively interact with students in large-lecture formats, tutorial groups and on an individual basis in campus-based and distance learning contexts. If university learning and teaching is to take a variety of forms and functions as suggested by advocates of dialogic talk, leading to different levels of student participation and engagement, tutors will need to pay close attention to their use of

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questions and feedback strategies so as promote the use of alternative discourse strategies (e.g. probing, student questions, uptake questions, teacher statements).

By paying more attention to the way in which they evaluate student responses, tutors can incorporate student answers into subsequent questions. In this process of uptake, questions can be shaped by what immediately precedes them so that they are genuine questions. When such high level evaluation occurs, the lecturers can ratify the importance of a student's response and allow it to modify or affect the course of the discussion in some way, weaving it into the fabric of an unfolding exchange. Such high level evaluation can therefore be used to chain together tutor questions and student responses so that the discourse gradually takes on a reciprocal quality, thereby encouraging more student-initiated ideas and responses, and consequently promoting higher-order thinking. In addition to such follow-up moves, tutors should make more use of authentic questions that are open-ended in nature and speculative statements, thereby promoting a range of responses and encouraging student questions and statements in response to the topic under consideration.

However, such approaches require fundamental changes to underlying pedagogic practices in higher education in order to enhance interaction between those taught and the tutor. Research into the professional development of teachers in the compulsory phases of schooling suggests monitoring and self-evaluation will need to become a regular part of in-service training so as to give teachers a degree of ownership of the process of school improvement. Reflection on teachers' intentions and beliefs about their practice is seen as a way of enhancing expert thinking and problem-solving so as to bridge the gap between theories and actual classroom practice. Teachers also need opportunities to theorise their teaching so as to make confident and professionally informed decisions about the way they interact with students so as to encourage greater participation and higher levels of cognitive engagement. My preliminary findings suggest the same is true of university teachers.

Studies looking at dimensions of teacher development (e.g. Tharp & Gallimore, 1988; Costa & Garmston, 1994; Joyce & Showers, 1995; Showers & Joyce 1996) suggest that because instructional behaviours of teachers cannot be influenced until their internal thought processes have been altered, it is essential that teachers have supportive interactions with peers through modelling and feedback if dialogic teaching is to be

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promoted. Within higher education, Hatzipanagos & Lygo-Baker (2006) found peer observation to be a valuable source of information for enhancing professional practice and understanding of learning and teaching when undertaken by staff from an educational development unit who provided timely feedback in a supportive manner. Dillon (1994) suggests that coaching and talk-analysis feedback are useful tools for professional development whereby sympathetic discussion by groups of teachers of data derived from their own classrooms could be an effective starting point. Similarly, Moyles et al. (2003) found using video clips of lessons selected by the teacher a powerful means of promoting critical reflection on professional practice by encouraging teachers to articulate and demonstrate their own understanding of their interactive styles and provided opportunities for monitoring and self-evaluation.

If we are to embed the concept of dialogic teaching in higher education, it should be placed at the centre of what Boyer (1990) calls the scholarship of teaching in universities whereby research and teaching are put on a more equal footing so as to enhance the quality of student learning. Dialogic teaching places an increasing emphasis upon a learner-centred vision of university teaching so as to help all students develop as independent thinkers. As suggested above, it requires the enhancement of the pedagogic knowledge of the university teaching community and focus on a key central value: student-focused teaching practice.

Looking to the Future

Naturally, I will conclude with the customary acknowledgement of the need for further research. Given the tentative nature of my research, further work needs to address the nature and organisation of the interactions that occur in lectures, tutorial groups, online and in blended forms of learning. In addition to the provision of more powerful professional development programmes in higher education and a more enhancement-led approach to quality, there is the need for more research to provide comprehensive evidence, for both university tutors and policy makers, that dialogic styles of teaching encouraging more active student involvement in the guided co-construction of knowledge can produce significant gains in cognitive learning as well as social and emotional benefits through more personalised forms of learning.

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