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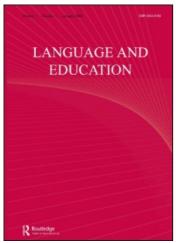
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# Dialogic Teaching: Discussing Theoretical Contexts and Reviewing Evidence from Classroom Practice

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# Dialogic Teaching: Discussing Theoretical Contexts and Reviewing Evidence from Classroom Practice

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Drawing on recent developments in dialogic approaches to learning and teaching, I examine the roots of dialogic meaning-making as a concept in classroom practices. Developments in the field of dialogic pedagogy are reviewed and the case for dialogic engagement as an approach to classroom interaction is considered. The implications of dialogic classroom approaches are discussed in the context of educational research and classroom practice. Dialogic practice is contrasted with monologic practices as evidenced by the resilience of the IRF as the default discourse structure in classrooms. Recent evidence suggests the IRF is resistant to attempts to introduce interactive approaches to whole class teaching. Discussion of dialogic practice as a vehicle for increasing pupil engagement at a deep level and raising the quality of classroom interaction is illustrated through a consideration of Philosophy for Children, which is identified as a dialogic approach to classroom practice which has transformative potential for children's learning. Philosophy for Children offers an approach to pedagogy which enables teachers to value pupil voice and promote reflective learning. As such it has much to offer the current debate on dialogic teaching and learning. Research evidence suggests it will promote improved pupil outcomes on a range of assessments.

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**Keywords:** classroom dialogue, dialogic, innovative pedagogy, participatory discourse, sociocultural theory, Bahktin

#### Introduction

Dialogic teaching has been the subject of increasing discussion in the last few years and a number of writers have suggested it holds the greatest cognitive potential for pupils, whilst at the same time demanding the most of teachers (Alexander, 2006; Nystrand *et al.*, 1997). Increasingly the term dialogic teaching is appearing in documents from the education community in England (see Bishop Grosseteste University College, 2007; National Literacy Trust, 2007; Teachernet, 2007). This suggests that dialogic teaching is a concept of growing importance in discussions of learning and teaching. In this paper, I draw together some common threads from recent discussions which advocate dialogic approaches to learning and teaching in classrooms.

I begin by considering the influence of Vygotsky and Bruner to the development of sociocultural approaches to learning which have prepared the ground for the introduction of dialogic practices. Secondly, I trace the discussion back to Bakhtin and consider his influence on the development of theory underpinning

0950-0782/08/03 222-19 \$20.00/0 LANGUAGE AND EDUCATION © 2008 S. Lyle Vol. 22, No. 3, 2008 dialogic approaches to pedagogy. I then discuss the work of two leading educationalists in the UK, Robin Alexander (University of Cambridge) and Chris Watkins (University of London) and consider their contributions to the development of dialogic teaching as a theoretical concept.

Dialogic approaches to classroom practice are contrasted with monologic approaches which dominate classroom practice in many parts of the world, but especially in the UK and USA. Evidence from recent research in England is drawn on to demonstrate that despite national strategies to promote more interactive approaches to teaching and learning, traditional teacher-centred practices predominate.

Finally, I identify features of dialogic teaching and consider what classroom approaches can be drawn on to provide exemplars of effective practice. I argue that Mathew Lipman's Philosophy for Children is a tried and tested approach to dialogic practice with whole classes of children that deserves to be more widely disseminated. I also draw on my own research into dialogic approaches to learning in small collaborative groups and put forward a rationale for considering dialogic engagement as a key concept for classroom pedagogy that has considerable implications for teacher education.

# The influence of Vygotsky (1896-1934)

Any discussion of dialogic approaches to learning and teaching owes a debt to the Russian psychologist Lev Vygotsky (1896–1934) who emphasised social and cultural influences on child development, and especially recognised language as the driving force behind cognitive development. Vygotsky (1978) emphasised that all learning is located in a social, cultural and historical context. He was interested in the relationship between children and others: their families, peers and teachers. He looked at what children could do with some assistance rather than on their own. Of importance in this discussion is his interest in the relationship between language and thought (Vygotsky, 1962). His ideas have had an enormous impact on research in the social sciences in general and educational research in particular. Vygotskyan-inspired concepts, the centrality of the sociocultural world and language as part of a culture's tool kit for mediating and shaping action, have contributed much to recent understanding of how children make sense of the world.

Vygotsky's work has stimulated a research paradigm within educational research which relies heavily on naturalistic observation and reflection in order to understand what is going on. By highlighting the social construction of the child and the child's active contribution to his or her learning, Vygotsky has helped educators to see the centrality of language in children's development; this, in turn, has stimulated research into the impact of language on learning. Lives are only understandable by virtue of cultural systems of interpretation mediated through language; it is *culture*, and not biology, that shapes human life and the human mind (Bruner, 1990). As a result of Vygotsky's influence, there is an increasing body of research that supports the view that talk is the key to learning. This interest in children's language has stimulated educational research into children's talk in collaborative interaction with others. Such work has laid the ground for a closer consideration of dialogic talk.

#### The work of Jerome Bruner

Vygotsky's ideas fell on fertile ground in the research of Jerome Bruner. Bruner (1986: 127) builds on Vygotsky's notion that all learning takes place in an historical, social and cultural context by claiming that 'most learning in most settings is a communal activity, a sharing of the culture'. Bruner's research into the interactional context of children's lives focuses on the child as a member of a family, a social group and a community, thereby adding culture and history as well as biology to the study of child development.

Bruner (1990) challenged the tendency of psychological research to examine human mental functioning as if it existed in a cultural vacuum and joined forces with the interpretive disciplines in the social sciences and humanities to create a cultural psychology, a psychology that recognises the centrality of human culture to children's development. Bruner (1986, 1990, 1996) has conducted extensive research that suggests educators have underestimated children's innate predispositions for particular kinds of interaction. Primarily a psychologist, Bruner (1996) makes it clear that his ideas have been influenced by other disciplines, and he acknowledges that what he calls *cultural psychology* is an inter-disciplinary hybrid with multi-disciplinary goals.

# Vygotsky's impact on linguistics

The Vygotskyan-inspired interest in language has also influenced linguistics. Halliday's work (1977) has shifted research in linguistics towards an interest in language as action, and how humans use language to make meaning. This emphasis on examining language in social and cultural contexts has led to the development of discourse analysis, which clearly has its roots in linguistics. Wells (1992: 287) defines discourse as the interactive and constructive meaningmaking that occurs in purposeful linguistic interaction with others. Language, thus seen as a cultural tool that shapes human action, has led Edwards (1990) to suggest researchers view learning itself as a 'discourse' between people.

#### The influence of Bakhtin

As the research focus in education has switched from the abstract, individual child to the contextualised, social child, whose competencies are interwoven with the competencies of others, the work of Mikhail Bakhtin (1895–1975) has become of interest to researchers. A contemporary of Vygotsky, his work was rediscovered in the 1970s and 1980s; it is in the work of Bakhtin that dialogic engagement as a concept has re-emerged. Any understanding of dialogic pedagogy will depend on analysis of classroom talk to discuss its dialogic quality.

Bakhtin (Holquist, 1981, 1990) is best known in the field of literary theory. In *The Dialogic Imagination*, he contrasts the dialogic and the 'monologic' work of literature; however, the term 'dialogic' does not just apply to literature. Like Vygotsky, Bakhtin sees language as a social practice; all language, indeed all thought, is dialogic. Bakhtinian constructs such as 'dialogicality', 'social language' and 'speech genre' provide concrete mechanisms for extending Vygotsky's claims about the social origins and social nature of human mental functioning (Wertsch & Smolka, 1993). Bakhtin's concept of 'dialogical meaning-making' allows the learner to play an active role in developing a personally constructed

understanding of the curriculum through a process of dialogic interchange. Dialogism stresses the intersubjective nature of language as a social system. According to dialogism we produce and organise social reality by talking and writing. Dialogism assumes knowledge is something people do together rather than an individual possession.

## Monologic talk

Bakhtin (1981) made a distinction between dialogic and monologic discourse. He uses the example of teacher–pupil discourse to illustrate the concept of monologic talk and argues that it precludes genuine dialogue (Skidmore, 2000). A monologic teacher is largely concerned with the transmission of knowledge to pupils and remains firmly in control of the goals of talk. Monologic discourse is an instrumental approach to communication geared towards achieving the teacher's goals. In contrast, dialogic talk is concerned to promote communication through authentic exchanges. There is genuine concern for the views of the talk partners and effort is made to help participants share and build meaning collaboratively. Baktinian notions of dialogic meaning encompass the view that dialogue is not simply between people but between the frames people use to categorise experiences (Gutierrez *et al.*, 1995).

Monologic and dialogic talk can be conceptualised as binary opposites and as such are proving useful for those engaged in classroom-based observational research, where, following Bakhtin, traditional patterns of classroom discourse are increasingly identified as monologic, and contrasted in the literature with the Bakhtinian concept of dialogism. Monologic talk focuses power on the teacher; it stifles dialogue and interactions between pupils and their ideas. Dialogic talk creates a space for multiple voices and discourses that challenge the asymmetrical power relations constructed by monologic practices.

Since the mid-1970s, classroom observational research from both sides of the Atlantic has produced a consistent picture: schools and classrooms are full of talk, but little collaborative talk between learners. It is generally accepted that what is now seen as a monologic style of discourse structure between teacher and pupils known as the IRF (Inititiation/Response/Feedback) is a fundamental feature of all official talk in classrooms, constituting around 60% of the teaching/learning process (Sinclair & Coulthard, 1975). This practice, often referred to as the Recitation, is understood well by teachers and plays a central part in the direction and control of student learning. There is widespread agreement, based on a large number of studies, that the IRF provides the basis of teaching by direct instruction and enables teachers to stay in control of events and ideas in lessons. Its effect is to emphasise the asymmetrical nature of relationships between teachers and taught and the epistemological dominance of the teacher.

The primary purpose of the Recitation is the accumulation of knowledge and understanding through teacher questions designed to test or stimulate recall, or to cue pupils to work out answers from clues in the question. The Recitation supports the traditional power relationships of the classroom which tend to reproduce a pedagogy based on the transmission of pre-packaged knowledge (Lyle, 1998). The movement to promote dialogic discourse styles has to compete against this dominant form of classroom interaction. It follows that

implementing a change from the traditional classroom to one that values talk is not a simple matter.

#### Whole class teaching

Recent trends in the UK, US and Australia have seen governments being increasingly prescriptive about classroom practice as well as establishing national curriculums. Whole class teaching has been identified as an important component of successful classroom practice. The potential value of whole class teaching to promote higher order questioning and explanations on the part of teachers has increasingly been the subject of discussion. Whole class teaching was endorsed by the UK government in a discussion of curriculum and classroom practice (DES, 1992). However, there was little guidance on how this might be achieved and little empirical data to support it.

More recently the introduction of national 'literacy' and 'numeracy' strategies in England (DfEE, 1998, 1999) raised hopes that more dialogic approaches to whole class interaction may be developed (Burns & Myhill, 2004). Such hope has not materialised in practice. Instead research suggests there has been an increase in traditional whole class teaching – the Recitation (Mroz *et al.*, 2000), where pupils have few opportunities to question or explore ideas to help them regulate their own thinking. In fact, the introduction of Literacy and Numeracy strategies often means that primary pupils spend all morning in tasks controlled by teachers. Although these approaches include the use of small group and individual work, the emphasis is on 'direct instruction and well-paced interactive oral work' (DfEE, 1997: 18). This style of interactivity imposes discursive patterns and functions which detract from genuine dialogue. These patterns of interaction mediate what counts as learning for pupils and construct power relations between learners and teachers.

The National Literacy and Numeracy Strategies were originally conceived as interactive approaches to whole class teaching; in reality, as noted above, observational research suggests practice is still dominated by the Recitation (Hargreaves *et al.*, 2003). Explanations for this are varied; Burns and Myhill (2004) suggest that teachers are concerned with 'pace' at the expense of discussion and extended responses from pupils. Watkins (2005) argues that the strategies have reduced the agency of teachers as well as that of pupils who are conceptualised as vessels into which a curriculum is poured.

Examination of classroom practice found that teachers' questions tended to be low level, designed to funnel children's responses towards a required answer and that children provided answers which were three words or fewer for 70% of the time, with children's exchanges lasting an average of five seconds (Hardman *et al.*, 2003). Contrary to apparent intention, in practice the national strategies have led to a reduction in pupil participation (Myhill, 2006). Furthermore, this is not only evident in whole class teaching; in a study of the literacy hour in primary schools, Skidmore (2000) argues that even when teachers work with small groups to lead guided reading, the IRF structure predominates.

A second initiative in the UK has focused around investment in ICT resources, in particular in interactive whiteboard technology (Kennewell *et al.*, 2007). Research in the field has investigated the impact of the interactive whiteboard (IWB) on pupil–teacher interaction. Practice incorporating the IWB was expected

to support a shift away from teacher control towards more pupil self-directed learning. However, a recent study of primary whole class teaching during the literacy and numeracy hours in England indicates that teacher-led IRF patterns of interaction are robust and not easily displaced by technology (Higgins *et al.*, 2005). In fact, IWB lessons were shown to contain more whole class teaching and less group work and a reduction in the length of pupil responses (Smith *et al.*, 2006). Such research has led Kennewell *et al.* (2007: 11) to claim that ICT has failed to transform pedagogy as early adopters of ICT had envisaged, and in fact, the advent of the IWB may be seen as a backward step, in that it gives new impetus to traditional, teacher-centred approaches.

It can be seen that research across a number of classrooms encompassing a range of subject areas come to similar conclusions: classrooms are full of talk, but little of that talk is used to promote pupil interaction. The dominant form of classroom practices emphasises whole class monologic interaction which constructs pupils as respondents only and limits their discourse. Such practices establish normative patterns of interaction which have been likened to a script followed by teacher and taught (Gutiernez *et al.*, 1995). The privileging of adult voice displaces children's voices and limits their expectations of classroom discourse. In addition, the dominance of the literacy and numeracy hours in primary schools in England means learners rarely get to work with their peers in pairs or groups independently of the teacher so that the 'shadow of whole class interaction falls heavily across the discourse' of pupils (Haworth, 1999: 114).

Implicit in the call for more dialogic engagement is criticism of the practice of the IRF in which the opportunity for learners to engage in dialogue is quite narrow and the amount of talk they contribute relatively small (Lyle, 2008; Mercer, 1995). As Erickson and Shultz (1996: 481) comment, in a review of students' experience of the classroom: 'Much of classroom life is a monologue followed by a test'. Advocates of dialogic engagement lament the absence of interchange, of genuine conversation in classrooms where children are prevented from developing voice and a critical awareness of their own ends, means and capacities in learning. Challenging such patterns of interaction requires much effort and commitment on behalf of teachers and presents a considerable challenge to those who wish to establish such processes in classrooms and schools. 'In these contexts, oppressive power relations often appear natural and neutral rather than socially constructed, political, and historical in origin' (Gutierrez and Larson, 1995: 450).

#### **Problems and Difficulties**

This overview of current thinking on dialogic teaching highlights the gap between mainstream practice and the growing recognition of the power of dialogue in the process of making meaning. One of the barriers to the implementation of dialogic teaching is the dominance of the teacher's voice at the expense of students' own meaning-making voices. The power relationship between teachers and learners is a stumbling block to genuine dialogue in classroom settings. In addition, many teachers lack the skills necessary for planning effective whole class dialogue and as a result the pedagogic potential of learning through dialogic talk is unrealised.

Evidence from observational studies support this: in a study of over 100 middle and high school classes Nystrand *et al.* (1997) found that dialogic discourse took up less that 15% of instruction time; when 'lower-track students' were considered there was a virtual absence of such talk. In a review of research into language and literacy, Myhill and Fisher (2005) found that children had little opportunity to question or explore ideas in classrooms. Often there is little constructive meaning-making and limited opportunity for pupil participation. The emphasis is on factual recall rather than higher order interactions involving reasoning.

The presence of a National Curriculum in many countries means teachers have an overriding practical concern with 'covering' the curriculum. Many teachers work to strict timetables and content-led curriculum requirements and struggle to see how dialogic talk can become a regular feature of classroom practice. This is particularly true of secondary (high) schools. Much will depend on how current trends towards the promotion of thinking skills which require collaborative talk, are actually embedded in the statutory curriculum. How teachers can move forward on this requires urgent attention by researchers and practitioners.

In a paper which seeks to address the question of why dialogue hasn't become a common form of classroom discourse, Lefstein (2006) criticises advocates of pedagogic dialogue as too idealistic and calls for a more pragmatic approach. He focuses on the imbalance in distribution of resources for the exercise of power in schools and reminds us that teachers are mandated to limit pupils' movement and speech, assign tasks and determine the quality of pupil activity as well as being vested with epistemological authority. We can't ignore the fact that schooling is compulsory, pupil attendance is coerced and teachers are bound by contractual and legal obligations. Taking all these things into account he doubts if teachers can dissolve or transcend their traditional roles. Nevertheless, dialogic pedagogy is moving forward, led by respected educators who wish to improve the quality of classroom interactive practice for the benefit of pupils.

### The emergence of dialogic engagement as a theme

It is important to establish understanding of what is meant by dialogic engagement and to clarify the claims made for this approach to classroom talk. Although the idea that dialogue plays a central role in cognitive development has been gaining ground, it is by no means new. Key arguments to support dialogic approaches can be traced back to the Socratic tradition of using questions to challenge pupils to think for themselves. In the 1980s Corson (1988: 66) claimed that children can be 'prompted towards more sustained levels of formal operational thinking by providing them with regular opportunities for dialogue with others', and cites several authors who have made similar claims. Embedded in the concept of dialogue is its mediational role to help children reach higher levels of cognitive development at an earlier age.

The concept of dialogue implies speaking and listening, research has therefore focused on the contribution of oracy to cognitive development. During the 1980s, substantial evidence of the value of speaking and listening to children's development was gathered by researchers and teachers taking part in

the National Oracy Project (NOP) in the UK. The project led the field in using transcripts from children's talk in small groups as research evidence (Norman, 1992). Following this, a number of researchers have found that the educational value of any classroom talk between children hinges on how well the teacher has set up activities (Galton & Williamson, 1992). The role of teacher as 'guide on the side' rather than 'sage on the stage' has challenged teacher-centred practices as the value of children's collaborative talk is recognised.

Major contributions to our understanding of collaborative talk and the conditions in which it can flourish come from researchers in the field. In the UK, the work of Neil Mercer and colleagues at the UK's Open University is seminal. Barnes' (1976) original concept of 'exploratory talk' has been extensively researched by the team, which has proved to be very influential on the work of other researchers and practitioners (Mercer, 2000). Robust evidence to support the value of collaborative talk in small groups to learning and cognitive development has emerged.

Research in the field of pupils' collaborative talk that has focused on analysis of transcripts from the natural setting of the classroom has increasingly been informed by the ideas of Bakhtin, in particular on the role of dialogicality in the construction of meaning (Haworth, 1999; Lyle, 1998; Skidmore, 2000). The concept of dialogical meaning-making allows the learner to play an active role in developing a personally constructed understanding of the curriculum through dialogic interchange; it is proving to be an important framework in which to investigate the impact of learners' collaborative talk, because it is the dialogue that occurs between learners in collaborative settings that supports the co-construction of meaning. The multiplicity of voices present in the classroom and the impact of social interaction on pupil outcomes has promoted research into intersubjectivity and the establishment of sociocultural as well as cognitive benefits of collaborative learning. There is now a considerable body of evidence to support the value of collaborative talk in small groups to cognitive development (for a review of the literature see Lyle, 2008).

#### Whole class teaching

Not all whole class teaching is monologic. There is a growing body of evidence on the development of collaborative talk through whole class discussion which challenges the established IRF pattern. The claims made for its efficacy in promoting communicative competence, as well as social and cognitive development are many (for an earlier review of such studies see Gall & Gall, 1990); but until the last decade there has been little research or empirical study of classroom practices to back up the claims (Dillon, 1994).

Mercer's (1995) earlier work on how teachers talk to pupils has helped us to see what techniques teachers use to elicit pupil talk and how pupils participate in classroom talk. More recently he has summarised these as follows (Mercer, 2000: 52–56):

- Recapitulations: summarising and reviewing what has gone before;
- Elicitation: asking a question designed to stimulate recall;
- Repetition: repeating a pupil's answer, either to give it general prominence or to encourage an alternative;

- Reformulation: paraphrasing a pupil's response, to make it more accessible to the rest of the class or to improve the way it has been expressed;
- Exhortation: encouraging pupils to 'think' or 'remember' what has been said or done earlier.

None of these functions are likely to stimulate dialogic engagement. Wells (1999), however, in a discussion of the educational functions of the IRF exchanges, suggests they can be made more dialogic if teachers take up pupil responses in their feedback. He argues that the teacher's feedback to the pupil response can be used to clarify, exemplify, expand, explain or justify a student's response. Feedback can ask the pupil to do any of these things and would engage with pupil voice.

There is no doubt that the character of classroom discourse has an enormous influence on pupil experience of learning in schools. Dialogic teaching favours a different pattern of interaction which is characterised by the use of authentic questions on the part of the teacher and the pupils, where answers are not prespecified but incorporated into subsequent dialogue so that pupil responses modify the topic of discourse (Nystrand *et al.*, 1997). Furthermore, this dialogic conception of teaching and learning challenges the power-relationships of the classroom and is therefore potentially threatening to teachers and emancipatory for their pupils.

Work in the field of dialogic whole class teaching is in its infancy, but if dialogic engagement is so important, its practical application in the classroom needs to be explicated, and interest in the ways in which dialogic engagement can be used to promote pupil learning is growing. Recent discussion has been stimulated by a major international study conducted by Robin Alexander (2001) that focused on whole class interaction. The study of classroom practice in five countries identified very different opportunities for structured talk and the associated deep learning. Alexander uses the term 'dialogic teaching' to describe what happens when teachers and pupils work together to build on their own and each others' knowledge and ideas to develop coherent thinking.

For Alexander, dialogic teaching reflects a view that knowledge and understanding come from testing evidence, analysing ideas and exploring values, rather than unquestioningly accepting somebody else's certainties. It therefore challenges the epistemological dominance of the teacher (2006: 35):

Dialogic teaching . . . explores the learner's thought processes. It treats students' contributions, and especially their answers to teacher's questions, as stages in an ongoing cognitive quest rather than as terminal points. And it nurtures the student's engagement, confidence, independence and responsibility.

Alexander argues that if we are to move away from the monologic towards the dialogic classroom and therefore begin to probe children's thinking and understanding more deeply, teachers need other repertoires. He summarises dialogic interactions as ones where pupils ask questions, state points of view and comment on ideas which arise in lessons. Teachers have to take account of pupils' ideas in developing the subject theme of the lesson and use talk to provide a cumulative, continuing, contextual frame to enable students' involvement

with the new knowledge that they are encountering and creating. He identifies essential features of the dialogic classroom as:

- Collective: teachers and children address learning tasks together, whether as a group or a class, rather than in isolation;
- Reciprocal: teachers and children listen to each other, share ideas and consider alternative viewpoints;
- Supportive: children articulate their ideas freely, without fear of embarrassment over 'wrong' answers, and they help each other to reach common understandings;
- Cumulative: teachers and children build on their own and each others' ideas and chain them into coherent lines of thinking and enquiry;
- Purposeful: teachers plan and facilitate dialogic teaching with particular educational goals in view. (Alexander, 2006)

Such practices value pupils' knowledge and make it a resource for learning and disrupt teachers' monologic construction of what counts as knowledge, opening up the space for dialogue. Following this exemplification of dialogic teaching a number of projects have emerged.

Alexander is now leading a project to introduce dialogic teaching initiatives in England. He calls for a greater focus on teacher questioning which seeks to prompt and probe pupil thinking, to promote deep learning through skilful scaffolding, whilst acknowledging that such a shift in practice will require sustained professional development and support for teachers. Forty-three schools are taking part in a five-year 'Talk for Learning Project' (TLP) aiming to promote dialogic talk in primary classrooms (TES online, 2007).

In a two-year project to explore how talk with a teacher can help students develop their understanding of science, Mercer and Scott (2007) contrast dialogic teaching with teacher-presentation and claim that through dialogue: 'Teachers can elicit students' everyday, "common sense" perspectives, engage with their developing ideas and help them overcome misunderstandings'. In this project dialogue is a tool for learning in which teachers explain, clarify and 'model' scientific ways of thinking to help students acquire scientific ways of describing the world. The goal of dialogue in science education is thus conceptualised differently from other curriculum areas. Understanding in science is often derived from tasks that rely on cognitive conflict to contrast pupils' 'common-sense' understanding of scientific concepts with a principled understanding of these ideas. It would appear that dialogic teaching may have different goals in different curriculum areas and call for different pedagogic approaches to create meaningful contexts for learning.

#### Communities of learners

Chris Watkins, a reader in education at London Institute of Education argues for the development of schools as learning communities and leads CPD for teachers who wish to create communities of learners in their schools. He has identified what he calls a co-construction model where learning is conceptualised as 'creating knowledge as part of doing things with others' (Watkins, 2005). He identified key aspects of his model as follows:

- Students operate together to improve knowledge
- Students help each other to learn through dialogue
- Learning goals emerge and develop during enquiry
- Students create products for each other and for others
- Students review how best the community supports learning
- Students show understanding of how group processes promote their learning
- The classroom social structures promote interdependence
- Students display communal responsibility including in the governance of the classroom
- Assessment tasks are community products which demonstrate increased complexity and a rich web of ideas.

This list has much in common with the features identified by Alexander as discussed earlier. Underpinning this model are key concepts which are worth exploring as they exemplify a more holistic approach to dialogic engagement. Watkins identifies dialogue as essential for effective human relations and believes dialogic practices underpin the community. At the core of a community of learners is enquiry which is used to capture interest and promote questioning in a way which supports engagement between pupils and highlights the process of making connections between ideas and between areas of knowledge. For Watkins, knowledge generation is what people create when they get their heads together and build understanding together. Knowledge is not found in books or other sources but is what people create when they go to those sources 'both the grasping of what others have already understood and the sustained, collective effort to extend the boundaries of what is known' (Watkins, 2005: 37). Reflection is essential to the community if they are to make their experience an object of knowledge. Both collective reflection about the enquiries in hand and the community processes for enquiring and learning are important. Metacognition is also essential not just for the individual to understand their own learning, but for the community to learn about its own learning. In addition, what Watkins calls 'meta-learning' denotes learning about learning and encompasses learning about goals, strategies, feelings, effects and contexts of learning. Meta-learning requires collective reflection which generates new meaning, understanding and knowledge for the learning community. Watkins has identified important goals for teachers' professional development which provide important signposts for ways forward.

Overall, the concepts underpinning dialogic approaches to classroom practice discussed here call for teachers to engage with children as co-collaborators in meaning-making by planning tasks that generate genuine dialogue between pupils and interventions that are dialogically responsive. Each of the modules discussed suggest that when they do this, pupils will be engaged in deep learning.

# Evidence for impact of dialogic teaching

Whilst much of the research evidence focuses on improved outcomes for individual pupils, dialogic pedagogy has far more to offer than improved results on standardised tests. Monologic classroom practices do not engage the social collective, pupils are seen mainly as a collective of disconnected individuals (Watkins, 2005). If, as Watkins recommends, classrooms are to become 'Communities of Learners', we must address the affective as well as the cognitive and create learning opportunities through enquiry.

Early results from Alexander's (2006) 'Talk-to-Learn' project suggest that a dialogic approach can achieve this as it promotes a more inclusive classroom where pupils who normally do not compete to speak in class gain the confidence to contribute. Dialogic teaching is valued as a process that can promote inclusion of all pupils and has much to contribute to the establishment of communities of learners. Increasingly such learning is recognised as central to personal and social education. The EPPI review of evidence on citizenship education (Deakin *et al.*, 2005) found, for example:

The quality of dialogue and discourse is central to learning in citizenship education. Dialogue and discourse are connected with learning about shared values, human rights and issues of justice and equality ... Transformative, dialogical and participatory pedagogies complement and sustain achievement rather than divert attention from it.

In a discussion of pedagogy and dialogue, Skidmore (2006) identifies 'the affective conditions for learning created by different patterns of teacher–student interaction as a neglected line of enquiry'. What is important here is the tradition of seeing cognition and affect as discrete entities rather than interdependent concepts (Egan, 1983). Egan wants us to question methods of teaching and testing which see education as 'a process of accumulating knowledge and skills uninvolved with emotions, intentions, and human meaning' (Egan, 1983: 51). He stresses the difference between 'knowing a lot' and knowledge which is meaningful in the lives of learners. Egan wants children to use their imaginations to understand there are different 'truths' in the world which depend on historical, social and cultural settings. In addition, Egan (1992: 70) points out that making sense of experience is profoundly mediated by our emotions. Egan's work therefore provides support for the proponents of emotional intelligence (Gardner, 1993; Goleman, 1996) widely acknowledged as a greater indicator of success in life than scores on standardised tests.

The role of dialogue in pupil learning is therefore about more than just promoting better thinking and raised standards. It has the potential to enable student voice to be accessed and legitimated. A programme which values both reason and imagination, where teachers are trained to be 'attentive' to what children say, and listen to pupil 'voice' is philosophy for children (P4C) (Lipman, 1988). In the next section I argue that the practice of P4C exemplifies good practice in dialogic teaching and learning.

# Philosophy for Children

P4C is a well established and researched classroom practice having been implemented and monitored for over 30 years. P4C makes use of whole class interaction as well as pair and small group work. Widely used in over 50 countries, it is an approach to classroom practice which sees development and understanding best achieved in dialogue between peers, facilitated by their teacher. An impressive body of research evidence suggests the impact of P4C on

improved pupil outcomes in a range of assessments is considerable (for a review of quantitative studies see Trickey & Topping, 2004). Grounded in the Socratic tradition, P4C sees the task of the educator is to challenge pupils to think for themselves. Success in P4C therefore depends on the quality of teacher questioning to promote higher order contributions from learners including exposition, explanation, justification, speculation and hypothesising: a dialogical approach to pedagogy.

Philosophy for Children challenges the Piagetian view that it is not until children have reached the stage of formal operational thought (12–14 years) that they are capable of abstract, hypothetical thinking. The programme sets out to question the notion that children's thinking styles and capacities are a matter simply of age or maturity. As a philosopher, Lipman rejects the idea that knowledge is fixed. He wants children's subject 'knowledge' to careful scrutiny, to question why their world is as it is and ask how it could be improved. To learn to do *philosophy* entails a dialogue, in which a group of people engage together in deliberative inquiry, thereby providing a model instance of distributed thinking. It is exemplary because the moves made by the participants have a logical as well as a persuasive aspect (Lipman, 1998). It stands in contrast to the notion that a teacher should test, recall and cue answers from pupils.

Philosophy for children is a thinking skills programme but in contrast to other such programmes, for Lipman, attention to children's emotional development is as important as the cultivation of rational thinking. P4C proponents claim that the creative use of the imagination requires human beings to draw on their emotional understanding, whereas the exercise of critical reflection involves the use of rational understanding. The P4C programme suggests that imagination can be harnessed to work with rational faculties to increase children's understanding of the world and its people, thus combining the critical and creative. It seeks to help pupils understand what it means to be human and to learn to be an ethical human. It acknowledges that critical thinking is not enough. A safe space has to be created for dialogue which requires high levels of trust among participants and adds caring thinking to the critical and creative. Ethical considerations are therefore central to P4C. The way pupils speak and listen to each other is governed by practices predicated on respect for each other by creating a space for all voices to speak and be listened to. Difference is valued and alternative interpretations welcomed. Dialogue is valued as a key to self-knowledge and mutual understanding but does not seek consensus. Unlike Alexander's model which values the attainment of common understanding, and science which requires it, plurality of meanings is expected and welcomed.

The stimulus for generating this holistic approach is philosophical narrative. Lipman (1988) believes that human beings in their action and practice are essentially storytellers. Narrative reflects the structure of human existence and helps people enter into the lives and experiences of others; stories have the power to generate imaginative thinking (for a discussion of narrative understanding as a primary meaning-making tool see Lyle, 2000).

The mechanism through which critical, creative and caring thinking is achieved is the 'community of enquiry' (COE), in which collaborative talk is the key dialogic mechanism. Unlike most classroom discourse where teachers ask the questions (Cazden, 1988), in P4C it is the children who generate the

questions they wish to explore following presentation of a story. In this way pupils are treated as 'active epistemic agents and participants in their own knowledge' (Skidmore, 2006). A dialogical enquiry into the children's questions is encouraged by the teacher through appropriate facilitation. The kind of questions teachers ask are those which require pupils to think more deeply, not ones to promote recall or provide 'right' answers. Fisher (1995), a leading UK exponent of P4C, suggests that the aim of the COE is to uncover, through dialogue, personal understanding and knowledge in order to discover the truth. This links to Bakhtin's notion that truth is not to be found inside the head of an individual, '... it is born between people collectively searching for truth, in the process of their dialogic interaction' (Bakhtin, 1984: 110). Such dialogic interaction requires a teacher to suspend his or her own views and focus on helping or encouraging the children's discussions. In so doing, children will need to define common concepts more clearly, learn how to question, how to reason and how to articulate their ideas and subject them to examination. Through a COE, pupils are encouraged to formulate and defend their own points of view, aided by teachers who are concerned to help them. In a COE, teachers' questions focus on asking pupils to define words, speculate on alternative interpretations, give reasons for their views and provide evidence to support them. Pupils are asked to give examples or counter-examples of their ideas, to make connections between each other's ideas and consider the assumptions that lie behind them. Teachers encourage pupils to build criteria to support their views that are consistent and to summarise key points during the progress of the dialogic interaction. In this process the teacher is no longer the sole source of knowledge in the classroom. Questions are no longer designed to elicit what they already know, but to build new knowledge together. The sum of knowledge created by the class in dialogue is greater than that of any one individual in the class, including the teacher. Following Vygotsky (1978), the COE is a 'socially meaningful mediated activity' that can generate higher order mental processes. When pupils are part of a community of learners (Watkins, 2005) involved in questioning and dialogue on fundamental concepts there are no correct answers to their questions. Individuals may not know what they know or don't know about the ideas or concepts being explored, the role of the teacher is to enable the learners to share ideas and insights and support and challenge each other's ideas and thinking, thus supporting affective and cognitive development.

P4C practice has much to offer proponents of critical pedagogy. However, it also raises a number of questions about the capacity of P4C to genuinely challenge authoritarian structures and empower all pupils. Many pupils come from disadvantaged and subordinated groups, societal inequalities which are commonly reproduced in the classroom. Relationships outside the classroom clearly impact on class interaction and need to be problematised. Power relations distort communication and will be influenced by pupils' concrete experiences of privilege and oppression (Ellsworth, 1989).

Research evidence to support the value of P4C comes from both qualitative and quantitative studies. Qualitative studies which focus on analysis of classroom transcripts of children engaged in communities of enquiry challenge assumptions about what children know and are capable of thinking and can exemplify teacher moves (see, for example, Lipman, 2003; Lyle, 1996).

Nevertheless the practice of P4C is associated with cognitive gains for pupils. Quantitative studies focus on experimental designs using pre- and post-testing. In a systematic and critical review of 10 controlled outcome studies of the Philosophy for Children method in primary (elementary) and secondary (high) schools, Trickey and Topping (2004) demonstrate measurable outcomes in norm-referenced tests of reading, reasoning, cognitive ability and other curriculum-related activities and positive outcomes by measures of self-esteem and child behaviour, and by child and teacher questionnaires. More recently, Topping (2006) in a study of the impact of P4C on pupils in Clackmannackshire in Scotland found that a whole population of children in the last year of primary school gained on average six standard points on a measure of cognitive abilities after six months of weekly enquiry. This gain was sustained in pupils two years later, even though they had not continued with P4C on transfer from primary to secondary school.

The evidence therefore suggests that Philosophy for Children is an established approach to dialogic teaching that has the potential to raise cognitive levels of attainment as determined by standardised tests and to raise the quality of pupil discourse as indicated in qualitative analysis of transcript data as well as provide a more inclusive approach to classroom practice. The holistic approach of P4C would appear to deserve more attention.

#### **Conclusions**

The recognition of the importance of dialogic approaches to teaching and learning and their potential for raising standards appear to be permeating the literature. Despite the evidence of positive impact, however, there is a well-established and long line of research which suggests that the establishment of dialogic approaches to classroom discourse will not be easy.

Dialogic engagement represents a challenge to monologic approaches to class-room practice. However, if dialogic practices are to be taken seriously as important pedagogic tools, the robustness of monologic practices must not be under-estimated. As Alexander notes (2006: 46): 'The sheer staying power of recitation, as the default mode of British and American pedagogy has become very apparent'. In his research he gathered video data which shows that, despite training, it doesn't take much for 'test' questions to reassert their historic dominance and for feedback to focus on evaluation of pupil response. This is not surprising; most teachers have served long apprenticeships in this model as pupils themselves. Implications for initial teacher training and continuing professional development for practicing teachers is immense.

The full implication of introducing dialogic pedagogies in the classroom needs to be explored. Research is needed into what classroom processes best support dialogic practice in classroom settings. In particular we need to see how dialogic approaches with whole classes can achieve some of the gains documented for collaborative group work. We need transcripts of interaction to exemplify effective practice to provide models for teachers wishing to adopt dialogic approaches. We also need to investigate the potential downside of dialogue where non-dialogic forces such as the 'strain', 'tension' and 'silence' that can occur where talk is used to manipulate, coerce, shame or embarrass (Gurevitch, 2000).

Research into pupil outcomes as measured in standardised tests and examinations is also important but is not sufficient. This must be qualified by detailed analysis of actual discourse to better understand how talk can be used to promote meaning-making. This will require a serious commitment to research. The danger, as discussed in the *Times Educational Supplement*, the leading newspaper for teachers in the UK, is that dialogic teaching will be 'jargonized before it is understood, let alone implemented' (Teachernet, 2007).

If we are committed to promoting dialogic engagement in our classrooms, then we need to understand what professional development strategies will best support teachers in making the change from monologic to dialogic teaching. It is important that training for teachers is monitored and evaluated carefully. A project to evaluate the Level 1 P4C training course (SAPERE, 2007) is currently being implemented by Swansea School of Education. For a report on the impact of the training on teachers and discussion of how head teachers in seven primary schools intend to embed P4C into their school practices, see Lyle *et al.*, 2007. This training encompasses a very different model of teacher development to that established by the TTA (Teacher Training Agency, now the Teacher Development Agency) to train teachers to implement the national literacy and numeracy strategies. Level 1 courses are designed to promote critical, reflective practice through engagement in communities of enquiry and examination of pupil and teacher questioning and facilitation skills. The 3Cs of critical, creative and caring thinking are important aspects of this training.

Exploration of the role of the teacher is important, in particular the epistemological task of helping pupils decide what counts as knowledge in enquiries, to assist them in a search for truth by helping them to revise what is already known so they can know it better. Truth in a P4C COE is the quest for personal understanding which comes from practice that is caring and shows empathy and respect for others' views and a willingness to self-correct, and where participants are expected to build on each other's ideas and use the critical skills of reasoning to progress towards truth. The goal is not a mere exchange of experiences or ideas but a rigorous quest for improved understanding.

In P4C facilitation of enquiry as a means of learning and coming to know must capture pupil interest and allow them to raise questions in a way which supports communication and engagement. It must invite communication and welcome diversity of opinion. The teacher needs skill to highlight connections between pupil ideas and areas of knowledge.

In sum, in an era where governments are calling for evidence-based practice to inform policy, it is essential that dialogic teaching approaches are properly investigated. We know a great deal about monologic practices, we need to exemplify dialogic practices to get a better understanding of how best to prepare teachers to use such approaches and monitor the impact of continuing professional development on classroom practice and pupil outcomes.

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#### Note

1. Bishop Grosseteste University held a conference on dialogic teaching in 2006.

#### References

Alexander, R.J. (2001) Culture and Pedagogy: International Comparisons in Primary Education. Oxford: Blackwell.

Alexander, R.J. (2006) Towards Dialogic Teaching (3rd edn.) New York: Dialogos.

Bakhtin, M.M. (1981) *The Dialogic Imagination: Four Essays by M. M. Bakhtin.* Austin, TX: University of Texas Press.

Bakhtin, M. M. (1984) Problems of Dostoevsky's Poetics (ed. and trans. by C. Emerson). Manchester: Manchester University Press.

Barnes, D. (1976) From Communication to Curriculum. Harmondsworth: Penguin.

Bishop Grosseteste University College (2007) http://www.bishopg.ac.uk/?\_id=10052&page=6. Accessed 01.04.07.

Bruner, J. (1986) Actual Minds, Possible Worlds. Cambridge, MA: Harvard University Press.

Bruner, J. (1990) Acts of Meaning. Cambridge, MA: Harvard University Press.

Bruner, J. (1996) The Culture of Education. Cambridge, MA: Harvard University Press.

Burns, C. and Myhill, D. (2004) Interactive or inactive? A consideration of the nature of interaction in whole class teaching. *Cambridge Journal of Education* 34 (2), 35–49.

Cazden, C.B. (1988) Classroom Discourse: The Language of Teaching and Learning. Portsmouth, NH: Heinemann.

Corson, D. (1988) Oral Language Across the Curriculum. Clevedon: Multilingual Matters. Deakin, R., Crick, R., Taylor, M., Ritchie, S., Samuel, E. and Durant, K. (2005) A Systematic Review of The Impact of Citizenship Education on Student Learning and Achievement.

London: EPPI-Centre.

Department of Education and Science (1992) Curriculum Organization and Classroom Prac-

tice In Primary Schools: A Discussion Paper. London: DES

Department for Education and Skills (1998) The National Literacy Strategy. London: DEEE.

Department for Education and Skills (1999) The National Numeracy Strategy. London:

Dillon, J.T. (1994) *Using Discussions in Classrooms*. Buckingham: Open University Press. Edwards, D. (1990) Classroom discourse and classroom knowledge. In C. Rogers and P. Kutnick (eds) *The Social Psychology of the Primary School* (pp. 49–67). London: Routledge.

Egan, K. (1983) Education and Psychology: Plato, Piaget and Scientific Psychology. New York: Teachers' College Press.

Egan, K. (1992) Imagination in Teaching and Learning. New York: Routledge.

Ellsworth, E. (1989) Why doesn't this feel empowering? Working through the repressive myths of critical pedagogy. *Harvard Educational Review* 59 (3), 297–324.

Erickson, F. and Shultz, J. (1996) Students' experience of the curriculum. In P.W. Jackson (ed.) *Handbook of Research on Curriculum* (pp. 465–485). New York: Macmillan.

Fisher, R. (1995) Teaching Children to Learn. Cheltenham: Stanley Thornes.

Gall, M. and Gall, J. (1990) Outcomes of the discussion method. In W. Wilen (ed.) *Teaching and Learning through Discussion* (pp. 25–44). Springfield, IL: Thomas.

Galton, M. and Williamson, J. (1992) *Group Work in the Primary Classroom*. London: Routledge.

Gardner, H. (1993) Frames of Mind: The Theory of Multiple Intelligences. London: Fontana Press.

Goleman, D. (1996) *Emotional Intelligence: Why it is a Greater Guide to Success Than IQ.* London: Bloomsbury.

Gurevitch, Z. (2000) Plurality in dialogue: A comment on Bakhtin. *Sociology* 34 (2), 243–263.

Gutierrez, K. and Larson, J. (1995) Script, counterscript, and underlife in the classroom: James Brown versus Brown v. board of education. *Harvard Educational Review* 65 (3), 445–471.

- Halliday, M.A.K. (1977) Language as Social Semiotic: The Social Interpretation of Language and Meaning. Baltimore, MD: University Park Press.
- Hardman, F., Smith, F. and Wall, K. (2003) Interactive whole class teaching in the National Literacy Strategy. *Cambridge Journal of Education* 33 (2), 197–215.
- Hargreaves, L., Moyles, J., Merry, R., Paterson, F., Pell, A. and Estarte-Sarries, V. (2003) How do primary school teachers define and implement 'interactive teaching' in the National Literacy Strategy in English. *Research Papers in Education* 18, 217–236.
- Haworth, A. (1999) Bakhtin in the classroom: The dialogic text. *Language and Education* 13 (2), 99–117.
- Higgins, S., Falzon, C., Hall, I., Moseley, D., Smith, F., Smith, H. and Wall, K. (2005) Embedding ICT in The Numeracy and Literacy Strategies. http://www.becta.org.uk/ page documents/research/univ\_newcastle\_evaluation\_whiteboards.doc. Accessed on 09.03.07.
- Holquist, M. (1990) Dialogism: Bakhtin and His World. London: Routledge.
- Kennewell, S., Tanner, H., Jones, S., and Beauchamp, B. (2008) Analysing the use of interactive technology to implement interactive teaching. *Journal of Computer Assisted Learning* 24 (1), 61–73.
- Lefstein, A. (2006) Dialogue in schools: Towards a pragmatic approach. *Working Papers in Urban Language and Literacies 33*. London: King's College.
- Lipman, M. (1988) Philosophy Goes to School. Philadelphia, PA: Temple University Press.
- Lipman, M. (1998) Teaching students to think reasonably: Some findings on the Philosophy for Children programme. *Clearing House* 71 (5), 277–280.
- Lipman, M. (2003) Thinking in Education (2nd edn.) Cambridge: Cambridge University Press.
- Lyle, S. (1996) Making meaning: The voices of children talking about a dramatised story. *Educational Studies* 22 (1), 83–97.
- Lyle, S. (1998) Collaborative talk and making meaning in primary classrooms. PhD dissertation, University of Reading, UK.
- Lyle, S. (2000) Narrative understanding: Developing a theoretical context for understanding how children make meaning in classroom settings. *Journal of Curriculum Studies* 32 (1), 45–63.
- Lyle, S. (2008) Learners' collaborative talk. In M. Martin-Jones, A-M. de Mejia and N. Hornberger (eds) Encyclopaedia of Language and Education Vol. 3: Discourse and Education (pp. 279–290). New York: Springer.
- Lyle, S., Thomas-Williams, J. and Turner, C. (2007) Dialogic practice in primary schools: How primary head teachers plan to embed Philosophy for Children into the whole school. (Currently under review. Copies available from the authors).
- Mercer, N. (1995) *The Guided Construction of Knowledge: Talk amongst Teachers and Learners*. Clevedon: Multilingual Matters.
- Mercer, N. (2000) Words and Minds: How We Use Language to Think Together. London: Routledge.
- Mercer, N. and Scott, P. (2007) Dialogic teaching in science classrooms. http://www.educ.cam.ac.uk/dialogic/main.htm. Accessed March 2007.
- Mroz, M., Smith, F. and Hardman, F. (2000) The discourse of the literacy hour. *Cambridge Journal of Education* 30 (3), 379–390.
- Myhill, D. (2006) Talk, talk, talk: Teaching and learning in whole class discourse. *Research Papers in Education* 21, 19–41.
- Myhill, D. and Fisher, R. (2005) Informing practice in English: A review of recent research in literacy and the teaching of English. London: Her Majesty's Inspectorate.
- National Literacy Trust (2007) http://www.literacytrust.org.uk/Database/resources2. html. Accessed 28.03.07.
- Norman, K. (ed.) (1992) *Thinking Voices: The Work of the National Oracy Project.* London: Hodder & Stoughton.
- Nystrand, M., Gamoran, A., Kachur, R. and Prendergast, C. (1997) *Opening Dialogue: Understanding the Dynamics of Language and Learning in the English Classroom.* New York: Teachers College Press.

- Sinclair, J.M. and Coulthard, R.M. (1975) *Towards an Analysis of Discourse*. Oxford: Oxford University Press.
- Skidmore, D. (2000) From pedagogical dialogue to dialogical pedagogy. *Language and Education* 14 (4), 283–296.
- Skidmore, D. (2006) Pedagogy and dialogue. *Cambridge Journal of Education*. 36 (4), 503–514.
- Smith, F., Hardman, F. and Higgins, S. (2006) The impact of interactive whiteboards on teacher-student interaction in the national literacy and numeracy strategies. *British Education Research Journal* 32, 437–451.
- Teachernet (2007) http://www.teachernet.gov.uk/CaseStudies/casestudy.cfm?id=306. Accessed 01.04.07.
- Times Educational Supplement (2007) http://www.tes.co.uk/section/story/?section= Archive&sub\_section=TES±Teacher&story\_id=389939&Type=0. Accessed 02.04.07.
- Trickey, S. and Topping, K.J. (2004) Philosophy for children: A systematic review. *Research Papers in Education* 19 (3), 365–380.
- Topping, K.J. (2006) Thinking skills project raises children's IQ by 6.5 points http://sapere.org.uk/2005/08/04/research-project/. Accessed 11.03.07.
- Vygotsky, L.S. (1962) Thought and Language. Cambridge, MA: MIT Press.
- Vygotsky, L.S. (1978) Mind in Society: The Development of Higher Psychological Processes. Cambridge, MA: Harvard University Press.
- Watkins, C. (2005) Classrooms as Learning Communities: What's in It for Schools? London: Routledge.
- Wells, G. (1992) Oracy and the national curriculum. In K. Norman (ed.) *Thinking Voices: The Work of the National Oracy Project* (pp. 283–310). London: Hodder & Stoughton.
- Wells, G. (1999) *Dialogic Inquiry: Towards a Sociocultural Practice and Theory of Education*. Cambridge: Cambridge University Press.
- Wertsch, J.V. and Smolka, A. (1993) Continuing the dialogue: Vygotsky, Bakhtin and Lotman. In H. Daniels (ed.) *Charting the Agenda: Educational Activity after Vygotsky* (pp. 69–91). London: Routledge.