

Paper submitted to Special Focus issue of
Research Papers in Education

Talking to Learn: Dialogic Teaching in conversation with
educational linguistics

Title of Paper: Dialogic space: Intersections between dialogic
teaching and systemic functional linguistics

Author: Jennifer Hammond

Affiliation: University of Technology, Sydney

Email: jenny.hammond@uts.edu.au

Address

Faculty of Arts and Social Science,
University of Technology, Sydney
PO Box 123, Broadway, 2007
NSW Australia

A b s t r a c t

The aim of this paper is to foster dialogue between proponents of Alexander's notion of dialogic teaching and those working with educational linguistics – in particular those working with systemic functional theory. To this end, the paper begins by highlighting important points of alignment between dialogic teaching and systemic theory: their shared emphasis on learning as a social and cultural construct; the priority they accord to language in education and its role in mediating learning; and their shared emphasis on the nature of positive educational interventions. Major sections of the paper, however, address two issues identified by Alexander as posing particular challenges in the implementation of dialogic teaching: the difficulty of achieving a 'perfect marriage' between pedagogical form and content; and the need for students to have opportunities to talk to learn as well as learn to talk. Discussion of these issues draws on recent research into the needs of English as an Additional Language (EAL) students, and the nature of pedagogical practices designed to address those needs, to explore the possible contribution of systemic theory. While the paper is written from the perspective of someone more familiar with systemic theory than dialogic teaching, it highlights points of similarity and difference between the two perspectives in their approaches to education, and suggests an ongoing dialogue is likely to be mutually beneficial.

Key words: dialogic teaching, systemic functional theory; scaffolding; knowledge about language; explicit teaching of language; metalinguistic development

Introduction

This paper is conceived as a dialogue between dialogic teaching (Alexander 2001, 2008a, 2008b, 2012) and systemic functional linguistics (Christie and Martin 2007; Halliday 1978; Halliday and Matthiessen 2004, 2014). It is situated within a substantial body of socio-cultural research that, in recent years, has focused attention on the role of talk in learning (Boyd and Markarian 2011; Mercer, Dawes, and Kleine Staarman 2009; Mercer and Littleton 2007; Myhill 2006; Myhill and Warren 2005; Nystrand 1997, 2006; Skidmore 2006; Wells 1999). A common thread in this work is an emphasis on the importance of dialogic interaction between teacher and students, where students have opportunities to engage in extended in-depth exploratory talk about substantial curriculum knowledge. As Nystrand (1997) and others have argued, there is evidence that opportunities for students to engage in classroom talk that is characterised by authentic teacher questions, where students' responses are incorporated into subsequent questions, and where students are treated as genuine participants in knowledge construction, have a positive impact on students' learning. There is also evidence that opportunities for students to engage in talk that is genuinely exploratory supports deep learning (Mercer et al. 2009; Myhill 2006). Different researchers have framed their focus on dialogic interaction within classrooms in slightly different terms: dialogic inquiry (Wells 1999); dialogic instruction (Nystrand 1997, 2006); dialogic teaching (Alexander 2008a, 2008b); dialogic pedagogy (Skidmore 2006); dialogic stance (Boyd and Markarian 2011). However, as Skidmore (2006, 510) argues 'what the various dialogic approaches have in common is a well articulated case for valuing the character of classroom discourse as one of the most important influences of students' experiences of learning in schools'. What they also have in common, is the argument that opportunities for extended and in-depth dialogic talk about curriculum concepts play a pivotal role in supporting students' thinking and learning, and in opening up genuine opportunities for learning.

Implementation of school programs where classroom discourse could be considered genuinely dialogic, however, presents significant challenges. A number of researchers point to the persistence and dominance of restrictive patterns of classroom interaction (Myhill and Warren 2005; Nystrand 1997), most notably the sequence of Initiation, Response, Feedback (IRF) exchanges. While, as Wells (1999) argues, there is a place in classroom interactions for IRF sequences, where this is the dominant pattern of classroom discourse, there are limited opportunities for more dialogic classroom interactions that are likely to support students' deep learning. As Howe and Abedin (2013, 341) note, a recurring theme in research into

classroom dialogue is that teachers find it extremely difficult to promote exploratory talk in classrooms.

In this paper I aim to address the role of talk in learning by exploring the possible contribution of a more linguistic 'take' on the notion of dialogic interaction. As a way of focusing discussion, and in line with the theme of the special focus issue, I frame discussion of this notion primarily in relation to Alexander's work on dialogic teaching. I also approach the topic as someone who has worked over a number of years with systemic functional theory and its educational implications. Thus my interpretation of linguistic 'take' is very much shaped by my understandings of systemic linguistics.

Dialogic teaching and systemic theory

There are many points of alignment between dialogic teaching and systemic theory. Most obviously, these include the location of talk in social and cultural contexts; the priority accorded to language in education; a shared emphasis on learning as a social and cultural construct; and an emphasis on the role of language in mediating learning. Educators working within the two perspectives relate to similar 'fellow travellers' - including Vygotsky (1978) and neo-Vygotskian theories of learning (Bruner 1983, 1990) but also those who have worked with the metaphor of scaffolding (Maybin, Mercer, and Stierer 1992; Mercer 1994; Wells 1999). Proponents also share a deep concern with the impact of education on students' lives. Alexander's work, for example, reveals his very robust engagement with (UK) policy and curriculum developments and the active political stance he has taken in regard to these developments. Australian educators working with systemic theory have a similar history of active engagement with policy and curriculum developments (Christie and Martin 2007; Derewianka 2011). While obviously educational activism is not restricted to systemicists or to those working with dialogic teaching, their proposals regarding what constitutes positive interventions have much in common. They share an assumption that education is about more than facilitating students' development. As Alexander (2012, 6) writes: *education is about intervening and accelerating development, not merely 'facilitating' it, otherwise why do we need schools*. Systemicists engaged for many years in debates around the need for more active intervention in language and literacy education would strongly agree with these words.

In addition to points of agreement, the two perspectives bring different strengths to a potential dialogue.

Like other proponents of dialogic approaches, Alexander makes a powerful case for the importance of talk in learning. He (2008b, p.92) writes:

Of all the tools for cultural and pedagogical intervention in human development and learning, talk is the most pervasive in its use and powerful in its possibilities. Talk vitally mediates the cognitive and cultural spaces between adult and child, among children themselves, between teacher and learner, between society and the individual, between what the child knows and understands and what he or she has yet to know and understand. Language not only manifests thinking but also structures it, and speech shapes the higher mental processes necessary for so much of the learning that takes place, or ought to take place at school. ... It follows that one of the principal tasks of the teacher is to create interactive opportunities and encounters that directly and appropriately engineer such mediation.

Alexander (2008b, p.10) addresses, not only the importance of talk, but the importance of talk that can support students' developing abilities to *think and learn even more effectively than they do*. He (2008a, p.112) argues programs that include such talk, that are dialogic, and that 'provide the best chance for children to develop the diverse learning talk repertoire on which different kinds of thinking and understanding are predicated', share five characteristics. Thus dialogic teaching is:

- **collective**: teachers and children address learning tasks together, whether as a group or as 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.

While there is a strong tradition of analysis of classroom discourse and classroom interaction within systemics, most notably through the work of Christie and colleagues (Christie 2002; Christie and Derewianka 2008), this tradition has tended to prioritise the demands faced by students in their engagement with curriculum knowledge and in their academic literacy development. Recent work within systemic theory addresses ways in which classroom talk mediates educational knowledge, however, the emphasis here lies particularly in the nature of

cumulative knowledge building and curriculum-specific uses of literacy (Martin and Maton 2013). The priority within dialogic teaching that is accorded to talk in learning, and to articulation of what classrooms would look like that appropriately prioritise talk in learning, constitutes a significant contribution to a potential dialogue with systemic theory. Conversely, while there is an extensive emphasis on the conduct and ethos and content of classroom talk within dialogic teaching (Alexander 2008a, p.118), there appears to be relatively little detailed focus on the nature and demands of different kinds of language interaction. The emphasis within systemics of close analysis and teaching of academic language and literacy thus offers a potential contribution to understanding and implementation of dialogic teaching – for example, in implications of different interactional patterns for ‘coherent lines of thinking and enquiry’ (Alexander 2008a, p.9) within classrooms, and in implications for students of greater metalinguistic awareness.

My purpose in this paper is to address ways in which systemic theory might complement dialogic teaching (and other dialogic approaches). While I consider a dialogue between these perspectives as mutually enriching, as previously indicated, my own perspective is as someone more familiar with systemic linguistics. In pursuing this purpose, I draw on research that my colleagues and I completed in recent years that focused on the education of English as an Additional Language (EAL) students who were beyond the initial and obvious stages of learning English and who were located in mainstream Australian schools (Gibbons 2008; Hammond 2008, 2014; Hammond and Gibbons 2005). It was (and is) our contention that, while many of the cognitive and linguistic demands faced by these students may be shared by their English speaking peers, the double challenge of learning academic English while also learning through English places special demands on them. It is also our contention that pedagogical practices designed to provide students with equitable access to education, while important for all students, are critical for EAL students. Our research thus prioritised procedures for planning and implementing programs that were designed to identify and address EAL students’ needs.

In the paper, I highlight two areas where my colleagues and I specifically drew on our understandings of systemic theory. In an attempt to engage with the notion of dialogic interaction, and in particular with dialogic teaching, I have framed my discussion of these areas in response to specific pedagogical challenges identified by Alexander in his writing about implementation of dialogic teaching. These are:

- working toward a ‘perfect marriage’ of pedagogical form and content;
- ‘Talking to learn as well as learning to talk’: implications for teaching of and about language.

In framing the discussion of these areas in response to some of Alexander's writings, I hope to promote further interaction between those working with dialogic approaches in education and those working with educational linguistics.

Toward a marriage of pedagogical form and content

The relationship between pedagogical form and educational content has long been debated in education. Questions about choice of pedagogical forms that require, for example, whole class, group and individual participation, and the relationship of these pedagogical forms to students' educational achievement, have concerned teachers as well as researchers for many years (Freeman 2002; Shulman 1987). At issue here is the relationship between what teachers plan, do and say in classrooms, and the extent and nature of learning that is thereby facilitated (or not). At issue also are the kinds of interactions between teacher and students that become possible within different organizational structures, and the extent to which they support students' learning of curriculum content. Further, in his discussion of dialogic approaches, Skidmore (2006, p.511) argues 'a number of major independent investigations have drawn attention to the manner in which different patterns of classroom talk afforded different structures of opportunity for students to participate in the construction of knowledge within the curriculum'. In focusing on form and content, we are thus addressing the relationship between *how* classroom interactions are planned and organized, *what* curriculum content and knowledge is being taught; and how that content and knowledge is mediated through patterns of classroom talk.

In line with other proponents of dialogic approaches, the relationship between pedagogical form and content is given considerable prominence by Alexander in his writing on the implementation of dialogic teaching - most notably in his 2008 publications (Alexander 2008a, 2008b). Here he explains that while educational interventions in two major research sites resulted in positive changes that facilitated more genuine, thoughtful and extended dialogue, they also raised a number of dilemmas. Some of these dilemmas related to organizational matters of whole class and group dialogues, others related to changing patterns of classroom discussion, and some addressed the nature of dialogic talk itself (for example, *is extended talk dialogic talk*). But of the various dilemmas, Alexander (2008a, p.50) identified the relationship between form and content as being the toughest to get right, and of coming 'to the heart of the challenge of transforming talk from recitation into dialogue'. He (2008a,

p.51) argues 'of all the dilemmas of dialogic teaching, therefore, we suggest that the ultimate one is how to achieve the perfect marriage of pedagogical form and content'.

Alexander (2008a, p.50, and 2008b, p.118) elaborates the challenge of achieving this *perfect marriage* in terms of implementation of the five key principles of dialogic teaching. He (2008a, p.118) writes:

The first three (collectivity, reciprocity and support) are essentially concerned with the *conduct* and *ethos* of classroom talk. The other two (cumulation and purposefulness) are concerned no less with its *content*.

He (2008b, p.118) suggests that implementation of the first three principles of *collectivity*, *reciprocity* and *support* require rethinking of classroom organisation and relationships. That is they require rethinking of the pedagogical form of classrooms. Outcomes from two research sites implementing dialogic teaching, he (2008a, p.50) writes, show that by making talk more collective, reciprocal and supportive, and by setting out rules for speaking and listening, the conduct and ethos of the classroom can be changed with resulting positive transformations in classroom culture and increased confidence of students.

But, he continues:

we must know where talk is going, and do what is required to lead it there. That requires we have a clear sense of purpose and a firm grasp of the content to be covered so that talk is indeed cumulative, rather than just extended. (Alexander 2008a, 50)

The principle of cumulation thus addresses the content and meaning of pedagogy, as opposed to its dynamics (2008b, p.118). Alexander argues that cumulation is the toughest of the five principles of dialogic teaching to implement, but also the most important. He writes:

It (cumulation) is rooted no less in the structure and sequencing of subject matter. It requires a conceptual map of what is to be taught, the ability to think laterally within and beyond that map and an appreciation of where children are 'at' cognitively and what kind of intervention will scaffold their thinking from present to desired understanding. (Alexander 2008a, p.50)

Its implementation, writes Alexander (2008b, p.118):

simultaneously makes demands on the teachers' professional skill, subject knowledge, and insight into the capacities and current understanding of each of his/her pupils. ... cumulation requires the teacher to match discourse to the learner while respecting the form and modes of enquiry and validation of the subject being taught, seeking then to scaffold understandings between the child's and culture's ways of making sense. ...

The challenge for teachers that Alexander lays out is substantial. To assist teachers meet this challenge, he proposes an initial focus on pedagogical form, followed later by a focus on content. He writes:

If we want to make the transformation of classroom talk achievable for other than the most talented teachers, we might concentrate first on getting the ethos and dynamics right, that is, making talk collective, reciprocal and supportive. In those classrooms where these conditions and qualities are established, we can then attend more closely to the other two principles. .. We can consider how ideas can not merely be *exchanged* in an encouraging and supportive climate but also *built upon*. (Alexander 2008b, p.119)

Alexander's proposal to separate an initial focus on pedagogical form from an emphasis on curriculum content makes intuitive sense. The complexity of the task of implementing dialogic teaching and, in particular, of implementing the principle of cumulation (that is so clearly spelled out by Alexander), suggests an initial emphasis on conduct and ethos of classroom talk would make the task more realistically achievable. It would allow teacher and students time to explore what it means to make talk more collective, reciprocal and supportive, and to sort out procedures and rules for facilitating such talk. This work could then form the basis for a more systematic focus on how talk could contribute to learning that is both purposeful and cumulative.

Although proposed as a temporary and practical measure, the separation of form and content raises questions regarding what might constitute a 'perfect marriage'. Is it pedagogically useful to separate a focus on form, and in particular a focus on the different kinds of talk that are possible within different pedagogical forms, from a focus on what that talk is about? As Alexander (2008b, p.92) himself writes 'Language not only manifests thinking but also structures it, and speech shapes the higher mental processes necessary for so much of the learning that takes place, or ought to take place at school'. Is there a danger that a focus on

dynamics of classroom talk will become an end in itself? Is there a related danger that questions about what students are learning, and the extent to which that learning is purposeful and cumulative, may be postponed or lost? Would an alternative approach that takes its departure point as a focus on educational content provide a more constructive way forward? Could such an approach assist teachers to develop 'a conceptual map' of what is to be taught while also providing space to address classroom dynamics and ethos? Could it assist teachers to address the very real challenges laid out outlined by Alexander?

In seeking to answer such questions, I turn to systemic linguistics. In what follows, I argue that ways of theorising language within systemic theory have implications for how we might perceive the relationship between form and content and how we might then work towards their 'perfect marriage'.

Contribution of systemic theory toward a 'marriage' of form and content

Although not immediately connected to questions about the relationship of pedagogical form and content, I suggest that ways in which we understand language have implications for how we conceive this relationship, and consequently, how we think about program planning and teaching.

A pervasive view within education and within society more generally is that language is simply a system for transmitting information – a neutral technology for encoding and decoding of messages. As Reddy (1979) pointed out many years ago, this 'conduit' view of language sits comfortably with widely held assumptions about the nature of language, and thus, either implicitly or explicitly, it is prevalent in our society. Evidence of this view of language can be seen in much teaching across the curriculum, where the domain of teaching in disciplines such as history, science or geography is seen as curriculum 'content', and where the language interactions that are made possible by different pedagogical forms within these disciplines receive scant, if any, attention. From such a perspective, the separation of pedagogical form from educational content is non problematic. The separation of language teaching and educational content is also seen as non-problematic – the language teacher's task to teach the technology of the system (especially in regard to literacy), but the, often implicit, assumption is once that technology has been mastered, ideas and information can be conveyed or transmitted efficiently and accurately and students can get on with the job of learning curriculum content.

An alternative way of thinking about language is as social semiotic system (Halliday 1978, 2008). The notion of language as social semiotic has very different implications: as speakers or writers, we make choices that are centrally involved in constructing, rather than transmitting, meanings. Further, language itself is seen as a powerful mechanism whereby social and cultural values and attitudes are constructed, preserved and contested. Far from being a neutral technology, language is regarded as ideologically loaded. From this perspective, the role of language in constructing educational knowledge becomes crucial. A semiotic view of language implies that educational knowledge is a social construct - constructed in and through the patterns of language interaction that take place in classrooms, and through the talking, reading and writing with which students engage. Thus pedagogical forms (and the language interactions that become possible within different pedagogical forms) cannot be conceived independently of the content about which students talk, read and write.

Such a view of language underpins systemic linguistics, but it is not unique to systemic theory. It has a substantial history in linguistics from Saussure to Halliday and beyond (Halliday 1978; Halliday and Hasan 1989; Halliday and Matthiessen 2004, 2014; Saussure 1960). It also highlights the role of language in education. As Halliday (1993, p.93) has argued 'when children learn language, they are not simply engaging in one kind of learning among many; rather they are learning the foundation of learning itself'. Such thinking also informs work in critical literacy (Luke 2004) and multimodality (Unsworth 2011), and is consistent with understandings within dialogic teaching of language as manifesting and structuring thinking. However, systemic theory adds a further dimension to understandings of language as social semiotic.

A key tenet of systemic theory is the argument that there is a systematic and mutually predictable relationship between form of language and the context in which it occurs (Christie and Martin 2007; Eggins 1994; Halliday and Matthiessen 2004, 2014). Via register theory, proponents argue that as speakers or writers, we make selections from the entire lexical and grammatical system of language, but that those selections are constrained by three major contextual variables of field, tenor and mode. Common glosses of these terms include:

field: what the language is being used to talk or write about; the subject under discussion;

tenor: the roles and relationships between the language participants (degree of familiarity; relationships of equality or power;

m o d e: the role language (or other semiotic systems) is playing in the situation; the channel of communication (spoken, written, multimodal).

Proponents further argue that every time we use language, we make meanings about something, by representing our experiences of the world (ideational meanings); we make meanings to someone else, by establishing or reinforcing a relationship with them (interpersonal meanings); and we make meanings that are relevant in the context in which they occur (textual meanings) (Eggins 1994; Martin 1992). Contextual variables are linked to these meanings (or metafunctions) through a relationship of realization. In its simplest form the relationship of realization can be glossed as ‘expressed by’ (Halliday and Hasan 1989) or ‘resonates with’ (Halliday and Matthiessen 2014). Thus the field of discourse is realized (or expressed) by ideational meanings; the tenor of discourse by interpersonal meanings and the mode of discourse by textual meanings. In turn, the three metafunctions are realized through (or expressed by) specific choices within systems of vocabulary and grammar. Register theory suggests that when we speak or write we are making three kinds of meanings simultaneously, and that while it may be possible, and indeed desirable at times, to foreground one rather than the others, they cannot be separated in any meaningful way.

This conceptualization, I suggest, has implications for how we think about classroom interactions, and the relationship between pedagogical form and content. I return to Alexander’s key principles of dialogic teaching to tease out some of these implications. As indicated previously, Alexander (2008b) distinguishes collectivity, reciprocity and support, (concerned with the *conduct* and *ethos* of classroom talk) from cumulation and purposefulness (concerned with educational content). In systemic terms the first three principles fall within the domain of the interpersonal metafunction, while the last two fall within the domain of the ideational metafunction. Thus Alexander’s proposal to focus first on the conduct and ethos of classroom talk can be seen as privileging the interpersonal metafunction, while postponing the ideational. Systemic theory provides a theoretical basis for arguing that program planning and implementation would ideally address both at the same time – that is, educational content would be addressed at the same time as conduct and ethos of classroom talk. The theory also provides a theoretical justification, via the textual metafunction, for a close focus not only on the role of language in learning, but also on the nature of language itself – that is it provides a theoretical justification for teaching of and about language. (This point is addressed further in the later sections of the paper.)

If we accept such implications from systemic theory, what would processes of program planning and implementation look like, and to what extent would such processes address the very real challenge, outlined by Alexander, of achieving a 'perfect marriage' of form and content? In what follows, I offer an approach to program planning that attempts to address these questions.

An alternative approach to program planning

To explore the above questions, I turn to research that my colleagues and I were involved with over a number of years (Gibbons 2008; Hammond 2008, 2014; Hammond and Gibbons 2005). As indicated earlier, the context of our research was concern with the education of students for whom English was an additional language (EAL students). Our focus was on students who were beyond the initial stages of English language development, and who were working in mainstream classes. Such students, while often quite fluent in oral conversational English, typically required ongoing support in developing academic English (Cummins 2000; Gibbons 2002). The research itself was located in schools with high proportions of EAL students. Experienced middle year teachers (Years 5 – 8) in six schools were invited to work with researchers to plan and implement programs designed to meet the needs of these students. The research included cycles of professional and theoretical input, collaborative program planning, documentation and analysis of the impact of programs, and shared reflection on teaching practices. Documentation of programs involved video recording of lessons, collection of students' written texts, and collection of key curriculum and teaching resources. As indicated, our contention was that equitable education required all students, including EAL students, to have access to the full curriculum, and that modified or simplified programs did not serve the needs of any students. Our concern therefore was with the kinds of pedagogical practices that would enable students to engage fully with key concepts in the mainstream curriculum while at the same time providing support for their development of academic English.

The research was informed by Vygotskian theories of learning (Mercer 1994; Vygotsky 1978; Wells 1999) and by the assumption that learning, at least initially, occurs primarily in collaborative social interactions between learners and more knowledgeable others. It was also informed by systemic linguistics. Within the research team (of teachers and researchers) there was broad agreement that learning environments characterised by high challenge and high support were most likely to promote effective learning, but also recognition that our major challenge was to articulate what such learning environments looked like in practice. Key

questions addressed in the research were: what did teachers need to know in order to plan for and enact dimensions of high challenge and high support; and what teaching practices were required in order to implement these dimensions in ways that addressed their EAL students' needs?

In many ways the research reflected assumptions similar to those that underpin dialogic teaching: in the priority accorded to talk in classrooms interaction; in the assumption that such talk has the potential to structure and support students' thinking and understanding; and in the assumption that classroom tasks should be selected and sequenced to provide interactive opportunities that facilitate students' higher order thinking and engagement with cognitive development. In terms of program planning, however, it differed in its emphasis on identification of key curriculum constructs as a starting point.

Although the research team agreed on the importance of learning environments that were characterised by high challenge and high support, the task we faced was how to achieve such environments. In addressing this task we needed to identify processes for planning and implementing programs that would provide students with access to key curriculum concepts while also engaging them in deep levels of learning. Our starting point was not just with the curriculum content to be 'covered' (often manifested as descriptions of what students would *do* in a program), but with the key learning constructs that teachers wanted students to engage with. The initial identification of key educational constructs provided a planning framework whereby scaffolding could be designed-in (Hammond and Gibbons, 2005) to support students to achieve specific learning purposes. It also enabled us to address and plan for interpersonal dimensions of classroom interaction in ways that were integrated with learning of key curriculum constructs, rather than separated from them.

Although our overall planning processes were informed by our understanding of systemic theory and of the relationship between form and content, we also looked more broadly to work in curriculum development and in particular to initiatives that have focused in various ways on the notion of 'quality teaching' (Newmann and Associates, 1996; *Productive Pedagogies*, 2002; *Quality Teaching in NSW*, 2003). These initiatives share descriptors of intellectual quality (and what constitutes high challenge) that we found useful, including an emphasis on key educational concepts; deep understanding of those concepts; and higher order thinking involving manipulation and transformation of knowledge. We also worked with some of the 'tools' associated with the quality teaching initiatives – specifically 'Essential Questions' and 'Rich Tasks'. While not new, the notion of Essential Questions offered us was a way of clarifying which key learning constructs students needed to engage

with and why (Wiggins and McTighe 2005). They also helped identify the ‘big ideas’ that were central to understanding curriculum content of specific programs. Rich Tasks are substantial, and (usually) culminating tasks that require students to draw on understandings of key curriculum concepts that they have developed over a period of time (for example during a specific unit of work). They are described in the ‘quality teaching’ literature as representative of an educational outcome of demonstrable and substantial intellectual and educational value; they should be problem based, with relevance beyond the school program; and they should be recognisable by educators, parents and community stakeholders as being significant and important (*New Basics*, 2001).

The Essential Questions and Rich Task developed for an upper primary year 6 Science program illustrate the nature of these tools. In the Science program students were engaged in a unit of work on Vision. (See also Hammond, 2014, for discussion of this and other programs within the research.) Essential Questions and Rich Task in the year 6 Science program were as follows:

Table 1: Essential Questions and Rich Task in a Year 6 Science program

Essential Questions	Rich Task
<p>Key concepts</p> <ul style="list-style-type: none"> - what are the basic properties of light and the relationship of light to eyesight? - what are the parts and functions of human and animal eyes <p>Relevance</p> <ul style="list-style-type: none"> - how can an understanding of light help us understand what it would be like to be blind or have a visual impairment - what ethical issues to do with blindness and inequalities exist for visually impaired people? 	<p>The task: to undertake group research to answer the following questions:</p> <ul style="list-style-type: none"> - what is the nature and what re the implications of one type of visual impairment? <p>(Procedure: oral explanation to be presented to your class, followed by written explanation)</p> <ul style="list-style-type: none"> - what are some of the ethical issues that arise in funding of programs addressing visual impairment (such as the Fred Hollows program)? <p>(Procedure: oral and then written exposition).</p> <p><i>Note: The late Fred Hollows established a foundation which is active in providing cost effective programs for treating visual impairments in developing countries.)</i></p>

As Table 1 shows, the Essential Questions addressed curriculum concepts related to the unit topic of Vision, but they also addressed questions about the relevance of this knowledge to the broader world. By framing educational knowledge as questions, the Science teacher, like other teachers who participated in the research, was pushed to clarify what she regarded as key understandings and essential curriculum knowledge in the unit. The Rich Task was then designed to engage students, and to consolidate their developing understandings of scientific concepts, including the broader relevance of these concepts to the world beyond school.

The tools of Essential Questions and Rich Tasks enabled teachers, and the researchers working with them, to identify key curriculum constructs and to design culminating tasks to support students' engagement at a deep level of understanding. In Alexander's (2008b, p.92) terms, these tools offered the possibility of developing 'a conceptual map of what is to be taught', and a way of clarifying both the purpose of educational programs, and the curriculum content that was central to those purposes. While the tools themselves were not derived from systemic theory, our decision to work with them was informed by our understanding of the theory and particularly by our understanding of the text-context relationship. The tools provided a way of foregrounding the ideational metafunction in the program planning process, thereby providing a framework that enabled scaffolding to be designed-in to facilitate cumulative and purposeful learning. This framework thus enabled us to plan the kind of intervention that would 'scaffold students' thinking from present to desired understandings' (Alexander 2008a, p.50).

As indicated, the metaphor of scaffolding played an important role in our research. We found it resonated with teachers and captured the nature of support we agreed was needed to enable students, including EAL students, to develop a deep understanding of high challenge educational concepts. Our understanding of this metaphor was very much shaped by Vygotskian theories of learning, and by the work of Mercer and others (Maybin et al., 1992; Mercer, 1994; van Lier, 1996, 2004; Wells, 1999). We therefore understood scaffolding as involving more knowledgeable others in supporting students to work just beyond their current capabilities, as being temporary, and as involving handover of responsibility of learning to students. Like van Lier (2004), we found we needed to distinguish different levels of scaffolding, thus early in our research we made a distinction between scaffolding that is 'designed-in' at the program planning stage, and the more 'contingent' scaffolding that is provided within each lesson and in the moment by moment unfolding of classroom interactions (Hammond and Gibbons, 2005). In the overall emphasis on scaffolding, our research was very much in line with the work of Alexander and others (Alexander, 2008a, 2008b; Myhill and Warren, 2005; van Lier, 2004; Wells, 1999) who have similarly looked to

the metaphor of scaffolding as a way of articulating the kind of support that will enable students to engage in ‘the higher mental processes necessary for so much of learning’ (Alexander, 2008b, p.92). Our work differed, however, in its additional emphasis on scaffolding of students’ language and literacy development as a necessary component of students’ learning. In systemic terms, it differed in the extent to which it foregrounded the textual metafunction – through explicit and systematic teaching of language and literacy in conjunction with the curriculum constructs.

I suggested earlier that resources available within systemic theory for close analysis of academic language and literacy and of students’ language development offer a potential contribution to a dialogue with dialogic teaching. To pursue this argument, I turn now to the second major area of discussion within the paper: talking to learn as well as learning to talk.

‘Talking to learn as well as learning to talk’: implications for teaching of and about language

As students progress through school, academic language and literacy becomes increasingly challenging. What is involved here is not just a linear process of acquiring more language, but rather a *functional diversification* of students’ communicative abilities (Baynham 1993, p.5). Within the school context, this diversification involves being able to function within, and move between, what Macken-Horarik (1996, p.236) refers to as domains of the *everyday*, the *specialised* and the *reflexive*. That is, it requires students to be able to move between their everyday (and primarily spoken) world, and the more specialised domains of formal school education where language constructs and disseminates knowledge and, whether spoken or written, where texts are more ‘written-like’ in character. As students move between these domains, they are required to take up different roles and relationships, deal with different kinds of knowledge, move between different registers and also move between spoken and written modes of language.

From the perspective of systemic linguistics, learning academic language and literacy also involves learning different ways of meaning. It involves developing understandings of ways in which registers and genres differ across different curriculum disciplines (Christie and Derewianka, 2008); it involves developing the ability to read texts where information and arguments are organised in ways that differ from spoken language (Halliday, 1989; Hammond, 1990); and it involves developing insights into the increasingly abstract and

metaphorical language of academic spoken and written texts (Christie and Martin 2007). In related work, Cummins (2008) has used the terms Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP) to refer to the distinction between everyday language and the more academic registers of school.

A key component of the functional diversification of academic English is developing control of what Gibbons (2009, p141) amongst others, refers to as *literate talk*. Literate talk introduces educational concepts to students and provides discipline specific ways of talking about these concepts. Although spoken, it differs from everyday spoken language. In science for example, it introduces technical vocabulary, but also the grammar that will enable students to engage in scientific ways of thinking and talking about phenomena: of classifying; of discussing cause and effect; of explaining. Literate talk enables students to move from everyday understandings and ways of talking about phenomena (*lights need electricity to make them work*) to increasingly scientific ways of thinking and talking about phenomena (*under the globe is a concave mirror which reflects the light up to the Fresnel lens*). Literate talk provides an important basis for exploration of educational knowledge. It also provides a basis for developing control of academic literacy.

The notion of literate talk resonates with descriptions of talk in dialogic teaching. The role of talk in learning and the importance for students of 'talking to learn as well as learning to talk' constitute central themes in Alexander's (2008a, p.26) work. He (2008a, p.9) writes that talk is 'arguably the true foundation of learning and that children need to talk and to experience a rich diet of spoken language in order to think and to learn'. To achieve this rich diet, he (2008a, p.26) argues for the importance of transforming classroom talk:

from the familiar closed question/answer/feedback routine into purposeful and productive dialogue where questions answers and feedback progressively build into coherent and expanding chains of enquiry and understanding.

Key challenges for teachers then are how to provide and promote the right kind of talk, and how to strengthen the power of talk to help children think and learn more effectively than they do (Alexander 2008a, p.10). Much subsequent discussion of dialogic teaching is directed to addressing these challenges and to identifying characteristics within classrooms that are most likely to provide opportunities for students 'to develop the diverse learning talk repertoire on which different kinds of thinking and understanding are predicated' (Alexander 2008a, 112). As indicated earlier, these characteristics are identified as collective, reciprocal,

supportive, cumulative and purposeful, and classrooms that exhibit these characteristics are considered to be dialogic.

Dialogic teaching is thus centrally about supporting students' language development, and in particular students' developing abilities with literate talk – the kind of talk necessary for deep thinking and understanding and for engagement with key curriculum concepts. It is also centrally about planning pedagogical interventions to promote such talk. As Alexander (2008a, p.12) argues 'children must think for themselves before they truly know and understand, and ... teaching must provide them with those linguistic opportunities and encounters which will enable them to do so'. As part of this emphasis on intervention, there is considerable attention paid to the quality, dynamics and content of talk (2008a, p.23) and to the importance of teacher talk that includes open and authentic questions, and that encourages extended in depth discussion and dialogue (2008a, p.15).

Although his focus is primarily on the nature of pedagogical interventions likely to promote discussion and dialogue, Alexander also acknowledges the importance of students' and teachers' knowledge about language (KAL). He (2012, p.7) writes, for example:

For pupils, KAL is an essential part of their language curriculum. For teachers it is a precondition for their teaching English, or using language to teach any subject, with anything approaching competence.

Recent UK policy on oral language also acknowledges the value for students of developing metalinguistic understandings, for example:

If talk and learning of talk are to be investigated and considered with the rigour that the written language is, then a metalanguage to describe and define its components should be useful to teachers and pupils alike. Such a metalanguage and grammar of talk would enable fruitful discussion and investigations of talk (The National Strategies nd).

In Alexander's descriptions of dialogic teaching, however there is relatively little emphasis on the systematic teaching of language, or detail of ways of developing either knowledge about language or 'a metalanguage and grammar of talk' with either teachers or students. That is, there is little emphasis within dialogic teaching on actual teaching of and about language, including literate talk.

From the perspective of systemic theory, this is a significant gap. In addition, there is consistent evidence in Australia and elsewhere that, while many teachers identify academic language and literacy development as their students' greatest need, they lack confidence in their knowledge about language and their ability to teach it (Jones and Chen 2012; Macken-Horarik, Love, and Unsworth, 2011; Watkins et al., 2013). This is especially the case for teachers working with EAL students. So what can systemic theory offer in this area and how might the theory contribute to a dialogue with dialogic teaching?

Contribution of systemic theory: talking to learn and learning to talk

Like dialogic teaching, systemic theory highlights the role of language in mediating the construction, rather than transmission, of knowledge in classrooms. It differs from dialogic teaching, however, in the framework and resources it provides for analysis of the language system itself. As indicated earlier, resources within the theory enable analysis of the interrelationship between text and context: they provide insights into the ways in which speakers' or writers' language choices are constrained by the contextual variables of field, tenor and mode. Through notions of genre and register, the theory also enables detailed analysis of predictable patterns of spoken and written language texts. Such analysis provides insights into overall text level organization and cohesion, and into the relationship between rhetorical structures of specific genres and the language choices that realise different stages in the genre. It also enables insights into the relationship between different levels of language: including whole text, grammar and vocabulary. Thus through its resources, the theory can provide insights into the nature of language interactions that occur between teacher and students, and into the 'functional diversification' required of students as they engage with academic language and literacy. It can thus also contribute to a 'metalanguage and grammar of talk' that is shared between teacher and students.

An important implication of systemic theory is that while specific language choices made by speakers or writers cannot be predicted, patterns of language features can be predicted, and therefore can also be taught. For EAL (and other) students in the process of learning academic English, the implications here are significant – insights into the rhetorical structures and lexico-grammatical of patterns of spoken and written educational genres contribute significantly to students' abilities to engage with and talk about educational concepts, and hence contribute directly to students' educational success. For EAL students, an understanding of this relationship is especially important. To operate effectively in a second language, learners need to know more than words and grammar – they must know which

words and grammar are appropriate in different situations. Further, as a number of researchers have argued, it is impossible to separate the learning of curriculum concepts from learning the language that enables students to talk, read and write about such concepts (Coffin, 2006; Schleppegrell, 2004). Indeed, in relation to science, Lemke (1990) has argued that learning science is learning to talk science – and that the two are inseparable. For EAL students, opportunities to ‘experience a rich diet of spoken language in order to think and to learn’ (Alexander, 2008a, p.9), while important, are unlikely to be enough to enable them to develop the level of control of academic English necessary for deep engagement with curriculum knowledge. More explicit teaching of and about language is required.

So what might a program that is informed by systemic theory look like? How would explicit teaching of language be incorporated into cross curriculum programs? To explore these questions, I return to the example of Year 6 Science program introduced earlier in the paper.

Embedding explicit teaching of language

As indicated, the Year 6 Science program focused on the topic of Vision. As also indicated, initial planning processes for teachers in the research involved identification of Essential Questions and Rich Tasks to articulate the high challenge dimension of their programs (in systemic terms, initial planning foregrounding the ideational metafunction). Planning also involved analysis of where students ‘were at’, in terms both of their existing curriculum knowledge in relation to scientific understandings of Vision, and of their relevant language and literacy abilities.

By first identifying challenge and needs, the year 6 teacher, like others in the research, was well positioned to *design-in* opportunities for students to develop the knowledge, skills and academic language necessary for them to talk, read and write about the scientific concepts central to the unit on Vision. The process assisted her to take account of students’ existing knowledge and abilities, and to plan sequences of lessons and tasks to address their needs, including language needs, while also building knowledge of relevant scientific concepts. In Alexander’s terms, this process assisted teachers to ‘scaffold students’ thinking from present to desired understandings’ (Alexander 2008a, p.50).

Tasks selected for the Year 6 Science unit included: (for brevity not all unit tasks are included here).

- hands-on experiments and simulations of visual impairments
- oral reconstruction of procedures and outcomes from experiments

- library research about specific visual impairments;
- preparation for oral explanations of visual impairment
- presentations of oral explanations (Part 1 of Rich Task)
- negotiation to prepare questions for forthcoming visiting speaker
- review of structure and language features of genre of explanation
- drafting of written explanation of specific visual impairment
- completion of written explanation (Part 2 of Rich Task)

In themselves, individual tasks within the Science program were not unusual (such tasks would likely be found in many science programs for young students). Their greater significance lay in the way they were selected and sequenced within and between lessons to build students' understanding of relevant scientific concepts, while at the same time to building their knowledge of language and literacy. Within the program, for example, the inclusion of hands-on science experiments early in the unit introduced key scientific concepts – of transparent, translucent and opaque materials; convex and concave lens; and simulations of various visual impairments – concepts that were central to the unit. The experiments thus established a basis of shared scientific knowledge and talk that was built upon in subsequent tasks. While final tasks required students to engage in extended and independent scientific writing, prior tasks provided a basis for consolidating and extending students' understanding of the concepts and of their abilities to engage in the literate talk necessary for such engagement.

Explicit teaching of academic language and literacy was embedded with the teaching of curriculum content. Table 2 summarises the relationship within the program between individual tasks and language teaching. (For brevity, only a sample of the unit tasks is included in the Table.)

Table 2: Year 6 Science program: Tasks and teaching of language and literacy

Classroom task	Language use and teaching of language (implicit and explicit)
Science experiments: context embedded task; physical manipulation of objects; proforma to support brief written notes <i>Group work</i>	language accompanying action; peer interactions; teacher modelling of new scientific vocabulary (+ reference to wall charts that listed and explained scientific terms); teacher mediation of written responses to proforma
Oral reconstruction of	language used to reconstruct processes and outcomes of

<p>procedures and outcomes of experiments</p> <p><i>Whole class activity with individual contributions</i></p>	<p>experiments; wall charts with definitions of key scientific terms;</p> <p>teacher mediation to support students' oral reconstructions;</p> <p>modelling of grammar of cause and effect in sentences + subsequent explicit focus on grammar of cause and effect</p>
<p>Library research: books, videos, internet; reading information about specific visual impairments;</p> <p><i>Whole class and group work</i></p>	<p>librarian and students discussion of research skills of finding specific information; skimming and scanning; reading for detail;</p> <p>peer discussion and agreement on key points; summary notes supported by proforma</p>
<p>Preparing oral explanations of visual impairment</p> <p>Consolidating understanding of selected visual impairment;</p> <p>organisation of information in preparation for oral presentations</p> <p><i>Group discussions with teacher support</i></p>	<p>reminder of grammar of cause and effect; reminder of text structure and language features of oral presentations (including reference to a wall chart that summarised these features)</p>
<p>Presentation of oral explanations to class – involving extended explanations of visual impairment</p> <p><i>Group presentations</i></p>	<p>further review of structure and language features of oral explanations (through whole class analysis of strengths and any possible areas for improvement of students' group presentations)</p>
<p>Negotiation of questions for forthcoming visiting speaker (who had a visual impairment);</p> <p><i>group negotiation then, whole class agreement on questions</i></p>	<p>teacher input on structure of questions; discussion of appropriate level of politeness (tenor), and of required language choices</p>

As Table 2 shows, the teaching of language was woven through the program and addressed, as relevant, different levels of text organisation (structure and language features of oral explanations, and subsequently written explanations); grammar (structure of sentences of cause and effect); and vocabulary (technical terms of concave, convex, transparent, translucent, opaque, macular degeneration). It also addressed research strategies of skimming, scanning, reading for gist and detail; strategies for locating information through use of table of contents, index, internet searches. Other programs within the research included teaching of

language that similarly ranged across different levels: of text organisation, cohesion, paragraph structure; sentence grammar, vocabulary and spelling; as well as strategies for reading and researching as relevant.

Within the Science program, the major teaching focus primarily addressed science concepts, but at certain times and for specific purposes, the 'teaching lens' shifted to language (and the teaching of aspects of grammar, vocabulary, text structure) before returning again to science. In this way, within the Science program, students were supported to learn the language that was necessary for them to engage with the science concepts. Thus while the organisation and form of program tasks enabled and facilitated certain kinds of oral interactions, the additional emphasis on teaching **about** language focused students' attention on the role of language itself. Outcomes from the research indicate that explicit teaching of language supported students' appropriation of scientific terminology and their abilities to engage in extended discussion of scientific phenomenon. They were thus better placed to *talk science* (Lemke, 1990) and to engage intellectually with scientific concepts. Their increasing metalinguistic awareness meant they were also better placed to understand the role of language in learning and to reflect on their own and others' use of language.

I argued earlier, that the majority of school students are likely to benefit from the kind of focus on language that was evident in the Science program (and other research classrooms). However, for the EAL students, such teaching was crucial. While opportunities to engage in extended and dialogic talk are necessary for learning, for these students such opportunities are not sufficient. As Cummins and others have argued, EAL students are likely to require around five to seven years to achieve levels of competence in academic English that are equivalent to their English speaking peers (Cummins, 2000, 2008). If educational programs are to assist students to address that gap, then they must provide interventions that explicitly support and guide students in their development of academic English. I suggest the theoretical framework and resources available within systemic theory can facilitate such support. They can therefore complement the very important emphasis in dialogic teaching on the role of talk in mediating learning.

C o n c l u s i o n s

My purpose in this paper has been to promote dialogue between dialogic approaches in education and educational linguistics. To this end, I have explored the possible intersection

between Alexander's notion of dialogic teaching and systemic linguistics. While I have argued that these two perspectives are mutually enriching, my approach in the paper has been as one who is more familiar with systemic theory, and hence it has primarily focused on ways in which systemic theory might complement dialogic teaching.

Discussion in the paper has addressed two pedagogical challenges identified by Alexander in his writing on dialogic teaching:

- working toward a perfect marriage of pedagogical form and content, and
- talking to learn as well as learning to talk.

In addressing the first of these challenges, the marriage of form and content, I have suggested that conceptualisations within systemic theory of language as semiotic system where speakers and writers are seen as constructing (rather than transmitting) meanings; and where, as speakers or writers, we simultaneously construct ideational, interpersonal and textual meanings, have implications for how we understand the relationship between pedagogical form and content. From this perspective, Alexander's proposal (although temporary) to separate the conduct and ethos of classroom interaction (the interpersonal metafunction) from educational content (the ideational metafunction) seems flawed.

While agreeing with the nature of the challenge outlined by Alexander, I have proposed an alternative approach to program planning – one that draws both on systemic theory and Vygotskian theories of learning - in an attempt to reframe the complex relationship between pedagogical form and content. I have proposed program planning processes that begin, in systemic terms, by foregrounding the ideational metafunction, to focus on educational content in ways that both challenge and support students. In Alexander's terms, such processes begin with a *conceptual map* of what is to be taught, and involve analysis of curriculum demands and needs of student; they also involve identification of key curriculum constructs, and planning of high challenge tasks to ensure deep levels of student engagement. I have argued that such processes can provide a framework whereby classroom talk can be directed towards specific educational ends and towards specific purposes for learning – that is, where classroom talk can be 'cumulative, rather than just extended' (Alexander, 2008a, p.50), and where scaffolding can be designed-in to support students thinking from 'present to desired understanding'.

Alexander's second challenge: the importance for students of *talking to learn while also learning to talk* goes to the heart of his proposals for dialogic teaching. He prioritises the need for students to talk and to experience 'a rich diet of spoken language in order to think

and to learn' (Alexander, 2008a, p.9); and 'to develop the diverse learning talk repertoire on which different kinds of thinking and understanding are predicated' (Alexander, 2008a, p.12).

From the perspective of systemic theory, such priorities are totally justified, and are consistent with theoretical understandings regarding the role of language in mediating learning in educational contexts. However, within dialogic teaching, the major emphasis is on the nature of interventions that provide opportunities for students to engage in interactions that are exploratory and dialogic and that build into 'coherent and expanding chains of enquiry and understanding' (Alexander, 2008a, p. 26). That is, the emphasis is primarily on *talking to learn*. Educators working with systemic theory would argue that, despite the importance of opportunities for *talking to learn*, these are not sufficient to ensure that students will *learn to talk*, and in particular will learn the 'literate talk' necessary to enable them to engage in substantial dialogic talk about educational knowledge. Those who draw on systemic theory prioritise learning to talk, and learning **about** academic language and literacy, in different curriculum programs to a far greater extent than is evident in descriptions of dialogic teaching.

I have argued that the resources available in systemic linguistics enable analysis of students' needs and curriculum demands, and also provide insights into ways in which teaching of and about language can be incorporated into programs. I have also argued that the framework provided by an initial focus on the ideational metafunction, enables scaffolding that includes explicit and systematic teaching of language and literacy to be designed-in in response to specific purposes for learning.

I have attempted to ground discussion of the two challenges posed by Alexander through reference to research that my colleagues and I conducted into the needs of EAL students and the pedagogical practices designed to support them, and I have drawn, in particular, on an example from an upper primary Science program in the discussion. In many ways the Science program described in the paper is consistent with Alexanders' description of dialogic teaching classrooms. The overall design of the program that took account of students' abilities and needs as well as curriculum demands, that both challenged and supported students, and that selected and sequenced tasks in ways that enabled extended classroom interaction, I suggest, provided a plan where learning could be *cumulative* and *purposeful*. Through its design, and through its emphasis on constructive group participation, learning could also be *collective*, *reciprocal* and *supportive*. Thus, the features described in the Science program would seem to be consistent with Alexanders' descriptions of dialogic

teaching classrooms that address both ethos and content of the classroom interactions.

However, that the program differed from dialogic teaching in two important ways:

- in its initial planning processes and in the resulting conceptual framework that shaped selection and sequencing of tasks within the program (with implications for ways in which intellectual challenge was conceived in the program); and
- in the nature and extent of teaching of and about language that was embedded with the teaching of science (with implications for the nature of support that was available to students).

While, as indicated, the paper has primarily proposed ways in which systemic theory might complement dialogic teaching, it is important to highlight the potential contribution of dialogic teaching (and other approaches to dialogic interaction in classrooms) to systemic theory and to educational linguistics more generally. This contribution lies most obviously in the priority accorded to classroom talk and to the relationship between students' access to particular kinds of classroom talk and their educational outcomes – areas that to date have been under-researched from a systemic perspective. As I have attempted to argue, an ongoing dialogue between dialogic approaches to education and educational linguistics in relation to the role of talk in learning is likely to prove mutually enriching. The discussion in this paper, that has addressed challenges posed by Alexander regarding the marriage of form and content and of the need for students to talk to learn as well as learn to talk, represents one attempt to contribute to such a dialogue.

References

- Alexander, R. J. 2001. *Culture and Pedagogy: International Comparisons in Primary Education*. Oxford, UK: Blackwell.
- Alexander, R. J. 2008a. *Towards Dialogic Teaching: Rethinking Classroom Talk*. 4th ed. York: Dialogos.
- Alexander, R. J. 2008b. *Essays on Pedagogy*. London: Routledge.
- Alexander, R. J. 2012. "Improving Oracy and Classroom Talk in English Schools: Achievements and Challenges." Extended version of a presentation given at the *DfE seminar on Oracy, the National Curriculum and Educational Standards*, 20 Feb, 2012.
- Baynham, M. 1993. "Literacy in TESOL and ABE: Exploring Common Themes." *Open Letter* 2 (2): 4-16.
- Boyd, M. O., and W. C. Markarian. 2011. "Dialogic Teaching: Talk in Service of a Dialogic Stance." *Language and Education* 25 (6): 515-534.
- Bruner, J. 1983. *Child's Talk: Learning to Use Language*. New York: W.W. Norton.
- Bruner, J. 1990. *Acts of Meaning*. Cambridge, Massachusetts: Cambridge University Press.
- Christie, F. 2002. *Classroom Discourse Analysis: A Functional Perspective*. London: Continuum.
- Christie, F., and B. Derewianka. 2008. *School Discourse: Learning to Write across the Years of Schooling*. London: Continuum.
- Christie, F., and J. Martin. 2007. *Language, Knowledge and Pedagogy: Functional Linguistic and Sociological Perspectives*. London: Continuum.
- Coffin, C. 2006. *Historical Discourse: The Language of Time, Cause and Evaluation*. London: Continuum.
- Cummins, J. 2000. *Language, Power and Pedagogy: Bilingual Children in the Cross-fire*. Clevedon: Multilingual Matters.
- Cummins, J. 2008. "BICS and CALP: Empirical and Theoretical Status of the Distinction." In *Encyclopedia of Language and Education, Volume 2: Literacy*. 2nd ed, edited by B. Street and N. Hornberger, 71-83. New York: Springer Science + Business Media LLC.
- Derewianka, B. 2011. *A New Grammar Companion for Teachers*. Sydney: Primary English Teaching Association.
- Eggs, S. 1994. *An Introduction to Systemic Functional Linguistics*. London: Pinter.
- Freeman, D. 2002. "The Hidden Side of the Work: Teaching Knowledge and Learning to Teach. A Perspective from North American Educational Research on Teacher Education in English Language Teaching." *Language Teaching* 35: 1-13.
- Gibbons, P. 2002. *Scaffolding Language, Scaffolding Learning: Teaching ESL Children in the Mainstream Classroom*. Portsmouth, US: Heinemann.
- Gibbons, P. 2008. "'It was Taught Good and I Learned a Lot': Intellectual Practices and ESL Learners in the Middle Years." *Australian Journal of Language and Literacy* Special Issue 31 (2): 155-173.
- Gibbons, P. 2009. *Challenging Expectations: Literacy, Intellectual Quality and English Language Learners in the Middle Years*. Portsmouth, NH: Heinemann.
- Halliday, M. A. K. 1978. *Language as Social Semiotic: The Social Interpretation of Language and Meaning*. London: Edward Arnold.
- Halliday, M. A. K. 1989. *Spoken and Written Language*. NY: Oxford University Press.
- Halliday, M. A. K. 1993. "Towards a Language Based Theory of Learning." *Linguistics and Education* 5: 93-116.
- Halliday, M. A. K. 2008. "Three Aspects of Children's Language: Learning Language, Learning through Language, Learning about Language." (original work published 1980). In *The Language of Early Childhood - M.A.K. Halliday*, edited by J. Webster, 308-326. New York: Continuum.
- Halliday, M. A. K., and R. Hasan. 1989. *Language, Context and Text: Aspects of Language in a Social-Semiotic Perspective*. Oxford: Oxford University Press.
- Halliday, M. A. K., and C. M. I. M. Matthiessen. 2004. *An Introduction to Functional Grammar*. 3rd edition. London: Edward Arnold.

- Halliday, M. A. K., and C. M. I. M. Matthiessen. 2014. *Halliday's Introduction to Functional Grammar*. 4th edition. London: Routledge.
- Hammond, J. 1990. "Is Learning to Read and Write the Same as Learning to Speak?" In *Literacy for a Changing World*, edited by F. Christie, 26-53. Melbourne: ACER.
- Hammond, J. 2008. "Intellectual Challenge and ESL Students: Implications of Quality Teaching Initiatives." *Australian Journal of Language and Literacy* Special Issue 31 (2): 128-154.
- Hammond, J. 2014. "An Australian Perspective on Standards-Based Education, Teacher Knowledge and English as an Additional Language Students." *TESOL Quarterly* 48 (3): 507-532.
- Hammond, J., and P. Gibbons. 2005. "Putting Scaffolding to Work: The Contribution of Scaffolding in Articulating ESL Education." *Prospect* Special Issue 20 (1): 6-30.
- Howe, C., and M. Abedin. 2013. "Classroom Dialogue: A Systematic Review across Four Decades of Research." *Cambridge Journal of Education* 43 (3): 325-356.
- Jones, P., and H. Chen. 2012. "Teachers' Knowledge about Language: Issues of Pedagogy and Expertise." *Australian Journal of Language and Literacy* 35 (2): 147-168.
- Lemke, J. 1990. *Talking Science: Language, Learning and Values*. Norwood, NJ: Ablex Publishing Corporation.
- Luke, A. 2004. "Two Takes on the Critical." In *Critical Pedagogies and Language Learning*, edited by B. Norton and K. Toohey, 21-29. Cambridge: Cambridge University Press.
- Macken-Horarik, M. 1996. "Literacy and Learning across the Curriculum: Towards a Model of Register of Secondary School Teachers." In *Literacy in Society*, edited by R. Hasan and G. Williams, 232-278. New York: Addison Wesley Longman.
- Macken-Horarik, M., K. Love, and L. Unsworth. 2011. "Grammatics Good Enough for School English in the 21st Century." *Australian Journal of Language and Literacy* 34 (2): 9-23.
- Martin, J. R. 1992. *English Text: System and Structure*. Amsterdam: John Benjamins.
- Martin J. R., and K. Maton. 2013. "Cumulative Knowledge Building in Secondary Schooling: Guest Editors' Introduction." *Linguistics and Education*, 24 (1): 1-3.
- Maybin, J., N. Mercer, and B. Stierer. 1992. "Scaffolding Learning in the Classroom." In *Thinking Voices: The Work of the National Oracy Project*, edited by K. Norman, 186-195. Sevenoaks, Kent: Hodder & Stoughton.
- Mercer, N. 1994. "Neo-Vygotskian Theory and Classroom Education." In *Language, Literacy and Learning in Educational Practice*, edited by B. Stierer and J. Maybin, 92-110. Clevedon: Multilingual Matters.
- Mercer, N., L. Dawes, and J. Kleine Staarman. 2009. "Dialogic Teaching in the Primary Classroom." *Language and Education* 23 (4): 353-369.
- Mercer, N., and K. Littleton. 2007. *Dialogue and the Development of Children's Thinking: A Sociocultural Approach*. London: Routledge.
- Myhill, D. 2006. "Talk, Talk, Talk: Teaching and Learning in Whole Class Discourse." *Research Papers in Education* 21 (1): 19-41.
- Myhill, D., and P. Warren. 2005. "Scaffolds or Straitjackets? Critical Moments in Classroom Discourse." *Educational Review* 57 (1): 55-69.
- Queensland State Education 2001. *New Basics: The Why, What, How and When of Rich Tasks*. 2001. The New Basics Project. Queensland State Education.
<http://education.qld.gov.au/schools/about/assessment.html#newbasics> [accessed 18/09/15]
- Newmann, F. M., and Associates. 1996. *Authentic Achievement: Restructuring Schools for Intellectual Quality*. San Francisco: Jossey-Bass.
- Nystrand, M. 1997. *Opening Dialogue: Understanding the Dynamics of Language and Learning in the English Classroom*. New York: Teachers College Press.
- Nystrand, M. 2006. "Pedagogy and Dialogue." *Cambridge Journal of Education* 36 (4): 503-514.
- Education Queensland 2002. *Productive Pedagogies Classroom Observation Manual*. Brisbane: Curriculum Innovation Branch, Education Queensland.

- NSW Department of Education and Training 2003. *Quality Teaching in NSW Public schools: Discussion paper*. Professional Support and Curriculum Directorate, NSW Department of Education and Training
<https://www.det.nsw.edu.au/proflearn/areas/qt/resources.htm> [accessed 18/09/15].
- Reddy, M. J. 1979. "The Conduit Metaphor: A Case of Frame Conflict in our Language about Language." In *Metaphor and Thought*, edited by A. Ortony, 284-297. Philadelphia: Cambridge University Press.
- Saussure, F. 1960. *Course in General Linguistics*, translated by W. Baskin. London: Peter Owen.
- Schleppegrell, M. 2004. *The Language of Schooling: A Functional Linguistics Perspective*. Mahwah, NJ: Erlbaum.
- Shulman, L. S. 1987. "Knowledge and Teaching: Foundations of the New Reform." *Harvard Educational Review* 57 (1): 1-21.
- Skidmore, D. 2006. "Pedagogy and Dialogue." *Cambridge Journal of Education* 36 (4): 503-514.
- The National Strategies (undated) "Teaching Speaking and Listening: Background and Context Paper." <http://www.teachfind.com/national-strategies/teaching-speaking-and-listening-background-and-context-paper> [accessed 18/09/15]
- Unsworth, L. (Ed.) 2011. *Multimodal Semiotics: Functional Analysis in Contexts of Education*. London: Continuum.
- van Lier, L. 1996. *Interaction in the Language Curriculum: Awareness, Autonomy and Authenticity*. London: Longman.
- van Lier, L. 2004. *The Ecology and Semiotics of Language Learning: A Sociocultural Perspective*. Dordrecht: Kluwer.
- Vygotsky, L. 1978. *Mind in Society: The Development of Higher Psychological Processes*, edited by M. Cole, V. John-Steiner, S. Scribner and E. Souberman. Cambridge MA: Harvard University Press.
- Watkins, M., G. Lean, G. Noble, and K. Dunn. 2013. *Rethinking Multiculturalism. Reassessing Multicultural Education*. Project Report Number 1. Penrith, Sydney: University of Western Sydney, NSW Department of Education and Communities, and NSW Institute of Teachers.
- Wells, G. 1999. *Dialogic Inquiry: Towards a Sociocultural Practice and Theory of Education*. Cambridge: Cambridge University Press.
- Wiggins, G., and J. McTighe. 2005. *Understanding by Design*. 2nd ed. Alexandria, VA: ASCD.