

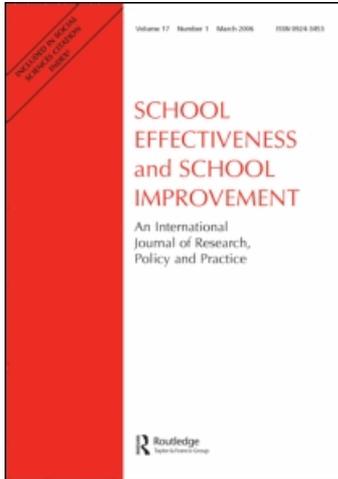
This article was downloaded by: [Rubie-Davies, Christine]

On: 24 November 2010

Access details: Access Details: [subscription number 930117883]

Publisher Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## School Effectiveness and School Improvement

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t714592801>

### Enhancing learning? A comparison of teacher and teaching assistant interactions with pupils

Christine M. Rubie-Davies<sup>a</sup>; Peter Blatchford<sup>b</sup>; Rob Webster<sup>b</sup>; Maria Koutsoubou<sup>b</sup>; Paul Bassett<sup>b</sup>

<sup>a</sup> School of Teaching Learning and Development, Faculty of Education, The University of Auckland, Auckland, New Zealand <sup>b</sup> Department of Psychology and Human Development, Institute of Education, University of London, London, UK

First published on: 29 September 2010

**To cite this Article** Rubie-Davies, Christine M. , Blatchford, Peter , Webster, Rob , Koutsoubou, Maria and Bassett, Paul(2010) 'Enhancing learning? A comparison of teacher and teaching assistant interactions with pupils', School Effectiveness and School Improvement, 21: 4, 429 – 449, First published on: 29 September 2010 (iFirst)

**To link to this Article: DOI:** 10.1080/09243453.2010.512800

**URL:** <http://dx.doi.org/10.1080/09243453.2010.512800>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

## Enhancing learning? A comparison of teacher and teaching assistant interactions with pupils

Christine M. Rubie-Davies<sup>a\*</sup>, Peter Blatchford<sup>b</sup>, Rob Webster<sup>b</sup>,  
Maria Koutsoubou<sup>b</sup> and Paul Bassett<sup>b</sup>

<sup>a</sup>*School of Teaching Learning and Development, Faculty of Education, The University of Auckland, Auckland, New Zealand;* <sup>b</sup>*Department of Psychology and Human Development, Institute of Education, University of London, London, UK*

(Received 27 January 2010; final version received 18 June 2010)

In many countries, teaching assistants are working in schools in increasing numbers. While they formerly supported teachers by completing low-level administrative tasks, they are increasingly playing a pedagogical role and working directly with pupils, particularly those with special educational needs. However, little is known about the quality of the support that teaching assistants provide to these pupils. This paper systematically examines differences in the types and quality of interactions teaching assistants have with pupils compared with the interactions of teachers in the same classrooms. Differences were found, particularly in relation to the development of pupil thinking, and examples of the differential interactions are provided in the paper. Recommendations are made related to the need to examine existing models of teaching effectiveness to take account of the role of teaching assistants in classrooms and the role of teachers managing teaching assistants.

**Keywords:** teaching assistants; teacher aides; educational personnel; special education

### Introduction

The inclusion of teaching assistants (TAs)<sup>1</sup> in classrooms in the UK has risen dramatically in recent years. Figures from the English Government (DCSF, 2009) show that the number of TAs has trebled since 1997 in line with Government drives to improve basic literacy and numeracy skills, reduce teacher workload, and include pupils with special educational needs (SEN) in mainstream schools. In January 2009, TAs comprised nearly a quarter of the overall school workforce (DCSF, 2009).

While much is known about the ways in which teachers interact with pupils (e.g., Alexander, 2000; Geekie, Cambourne, & Fitzsimmons, 1999; Mercer, 2000), little is known about the practice and effectiveness of TAs working in classrooms and the extent to which TAs interact similarly to teachers. This paper explores the interactions of teachers and TAs with pupils in primary and secondary schools in

---

\*Corresponding author. Email: c.rubie@auckland.ac.nz

England and Wales. Findings are interpreted in relation to existing models of teacher and school effectiveness.

### *The deployment and practice of TAs*

There is much debate about the appropriate role of TAs in schools and how this differs from the role of teachers (in the UK: Beeson, Kerry, & Kerry, 2003; Farrell, Balshaw, & Polat, 1999; Mistry, Burton, & Brundrett, 2004; Moran & Abbott, 2002; Mortimore & Mortimore, 1992; Wilson, Schlapp, & Davidson, 2003; and in other countries, e.g., the USA: Finn, Gerber, Farber, & Achilles, 2000 and Finland: Takala, 2007). The 5-year Deployment and Impact of Support Staff (DISS) Project found that, far from supporting the teacher with low-level administrative duties (which was once the mainstay of their work), the bulk of TAs' work now involves direct pedagogical interactions with pupils (Blatchford, Bassett, Brown, & Webster, 2009). TAs in primary schools tended to support children in small groups, while TAs in secondary schools were more likely to support individual pupils (Blatchford, Bassett, Brown, Koutsoubou, et al., 2009). The vast majority of in-class support provided by TAs was for low-ability/SEN pupils. Systematic observations also showed that pupils had very different types of contact with teachers and TAs. With teachers, they were more likely to be one of a crowd, and this applied particularly to the pupils who did not have learning support needs, while with TAs they tended to be the main focus of attention and have more active and sustained interactions with them. As pupils had more contact with TAs, they had less interaction with teachers. In practice, therefore, TAs do not provide *additional* support but *alternative* support (Blatchford, Bassett, Brown, Koutsoubou, et al., 2009). Lower-ability pupils and those with SEN are likely to have hard-to-diagnose and complex difficulties, and this makes it important that there is good information on the way they are supported by TAs.

Though useful, data from systematic and structured observations are at a relatively general level, in terms of a broad description of the role of pupils in interaction with teachers (e.g., initiating or responding) and the content of the behaviors (e.g., whether task-related or off-task). Also needed is a more detailed description of the nature of the interactions that take place between TAs and pupils, and how this compares to those between teachers and pupils.

### *Interactions between TAs and pupils*

The interactions teachers have with their pupils have long been recognized as playing an important role in pupil learning (Bakhtin, 1981; Jones, 2007; Nystrand, 2006). "To a great extent the language used by teachers and pupils in classrooms determines what is learned and how learning takes place" (Wilkinson & Silliman, 2000, p. 37). This quote could also be applied to TAs because, as we have seen, a major component of their role is to support pupils in their learning through interacting with them, often on an individual basis or in small groups. This opportunity for extended interaction between individual pupils and an adult could be considered to provide enhanced opportunities to learn, and therefore we might predict enhanced academic progress as a result. However, the DISS project (Blatchford, Bassett, Brown, Koutsoubou, et al., 2009), as well as other studies (Gerber, Finn, Achilles, & Boyd-Zaharias, 2001; Klassen, 2001; Muijs & Reynolds, 2003), have not found that TAs have a positive

effect on pupils' educational progress. One of the main prerequisites of understanding the impact of TAs on pupil learning is to first obtain a clear picture of just how they interact with pupils. This was a main reason for the current study.

Studies of teacher-to-pupil interaction suggest that much of the dialogue in classrooms is concerned with transmission of knowledge and that an IRF (Initiation/Response/Feedback) sequence occurs in around 60% of exchanges between teachers and pupils (Sinclair & Coulthard, 1975). In this sequence, the teacher asks a question usually designed to elicit recall, check pupil understanding of concepts, or provide prompts within the question to cue pupil answers. Following this teacher question, the pupils provide a response, and then the teacher responds in some form which generally terminates the exchange and leads to further questioning or knowledge transmission (Lyle, 2008). This form of exchange was described by Bakhtin (1981; see Holquist, 1990) as monologic, and he argued that this form of dialogue largely prevented a genuine interchange of ideas. He extended Vygotsky's views of learning within a social context and claimed that a dialogic exchange enabled the pupil to actively develop a personally constructed understanding of ideas and concepts. Dialogic teaching, therefore, is that which stimulates pupils cognitively, expands their consciousness, and facilitates pupil engagement in thinking (Fisher, 2007).

A number of studies have identified aspects of effective teaching. Effective teachers manage pupil behavior positively, mostly using statements designed to prevent disruptive behavior (Bohn, Roehrig, & Pressley, 2004; Hall & Harding, 2003; National Institute Child Health and Human Development Early Child Care Research Network, 2005; Topping & Ferguson, 2005). Further, they spend time orientating pupils to lessons and making links to prior learning (Berliner, 2004; Topping & Ferguson, 2005; Wray, Medwell, Fox, & Poulson, 2000). New concepts are introduced by providing high levels of instructional talk and checking pupil understanding (Connor, Morrison, & Petrella, 2004; Sylva, Hurry, Mirelman, Burrell, & Riley, 1999), and effective teachers ask far more questions that require pupils to reason and engage in higher level thinking than do teachers who are less effective (National Institute Child Health and Human Development Early Child Care Research Network, 2005; Taylor, Pearson, Clark, & Walpole, 2000). Further, effective teachers frequently provide pupils with feedback about their learning and encourage them to participate (Berliner, 2004; National Institute Child Health and Human Development Early Child Care Research Network, 2005; Topping & Ferguson, 2005). Aligned with the recognized importance of feedback by effective teachers, they also spend time ensuring that pupils are motivated to learn (Berliner, 2004; Block, Oakar, & Hurt, 2002; Bohn et al., 2004) and that they are not just on-task but are cognitively engaged (Berliner, 2004; Bohn et al., 2004; Pressley et al., 2001). For adult talk to actively promote pupil learning and conceptual understanding, the adult needs to clearly articulate concepts and ideas (Mercer, 1995), make links to prior learning (Myhill, 2006), check to ensure pupils understand the new concepts presented (Jones, 2007), and hence skillfully scaffold pupil learning (Bruner, 1986). Alexander (2006) has specifically explored the usefulness of dialogic discourse in promoting pupils' thinking and learning, arguing that teacher talk should cognitively challenge pupils, be a primary aim of learning, focus on enhancing cognitive functioning, take more account of oral learning experiences and forms of assessment, use feedback to support pupil learning, encourage questions from pupils, and include challenging questions that provoke proposition and speculation.

Given the growing presence of TAs in classrooms and their increasingly instructional, pedagogical role, it seems vital to address the nature and possible educational effectiveness of TAs with pupils and to describe their interactions in terms of what we might expect from effective teachers. The current study was therefore designed to obtain a detailed account of the nature of talk between TAs and pupils and to compare this with talk between teachers and pupils within the same classrooms and during the same lessons. While we recognize that the context of the talk is different in that teachers are generally working with the whole class, whereas TAs work with small groups (or individuals), we wanted to explore the kinds of talk experienced by pupils under everyday conditions. This is the experience for pupils working with TAs. In all our lessons, the teacher introduced the lesson to the whole class (including those working with a TA), and the teacher then worked with the remainder of the class while the TAs worked with their small group.

There have been many different types of approaches to the analysis of classroom talk, stemming from very different paradigms of research, for example, extremely detailed linguistic analyses (e.g., Sinclair & Coulthard, 1975), sociolinguistics (Edwards & Westgate, 1987), detailed systematic observation approaches (e.g., Dunkin & Biddle, 1974; Galton, Simon, & Croll, 1980), approaches influenced by sociocultural traditions (e.g., Barnes, Britton, & Torbe, 1986), and more contemporary approaches to “dialogic” teaching (Alexander, 2000). The aim of the analysis here was to provide a general comparison of main forms of talk as they relate to everyday educationally relevant interactions with pupils and to use the evidence from the effective teaching literature to form the basis of the coding categories.

## Method

### *Research design*

Data on TA-to-pupil interactions were collected in 2007/8 as part of Strand 2 Wave 2 of the DISS study. This involved a multimethod approach, combining numerical data on connections with pupil and teacher outcomes with qualitative, interpretive analysis of processes in schools connected to the effective deployment of support staff. As part of this part of the study, audio recordings of adult-to-pupil interaction were made to provide detailed data on the practices of teachers and TAs. It is results from these recordings that are reported in this paper. Results from other aspects of Strand 2 Wave 2 can be found in Blatchford, Bassett, Brown, Koutsoubou, et al. (2009).

### *Data collection: audio recordings*

In a subsample of 15 schools (8 primary, 7 secondary), a total of 130 lesson/session-length recordings of teacher and TA talk were made, of which 42 were made simultaneously in the same classroom. The main analyses presented in this paper were conducted on pairs of teacher-to-pupil and TA-to-pupil talk in the same lessons. In order to make the classroom conditions as similar as possible, we also restricted the analysis to English and mathematics and to situations where TAs were in the classroom with the teacher (the structured observations showed that TAs spent most of their time in this context). This resulted in a sample of 16 lesson-length transcriptions of teacher-to-pupil talk and 16 lesson-length transcriptions of TA-to-pupil talk. In the presentation of results below, the utterances reflect the

natural classroom context, that is, the teacher utterances relate to them working with the whole class, whereas the TA utterances relate to them interacting with a small group or an individual. This is the day-to-day experience of pupils working with TAs.

The audio-recordings were transcribed and then coded. A coding frame was developed which was designed to capture all interactions of teachers and TAs with pupils. We wanted to describe talk at the individual utterance level, with a level of categorization that allowed units meaningful in terms of educational and linguistic form and frequent enough to be subjected to numerical analysis. In order to develop the coding framework, the first author read through several of the transcripts to gain a sense of the structure of the lessons and the types of interactions that were occurring. We also drew on informal and systematic observations from the DISS project and Berliner's (1987) model of effective teaching, as we wanted a general approach able to describe talk with an instructional purpose, covering explanations, questions, prompts and feedback, and planning and classroom management. This emerging coding frame was then discussed with others on the team, who had also read through transcripts, and differences and similarities in interpretations were discussed. Through an iterative process whereby various drafts of the coding framework were developed, trialed with the transcripts, and discussed, the coding framework used here was developed.

Each lesson transcript for teachers and TAs was divided into utterances and appropriate codes applied. Lengths of utterances varied from single lines to extended sequences of (usually) teacher-to-pupil talk (usually in the context of the whole class). Coding categories were split into talk referring to the task or substantive content of the topic ("task/content talk") and those relating to the purpose of the lesson ("lesson purpose talk"). There were 14 talk-level codes altogether, and a summary of the codes is given in Table 1.

In order to ascertain the reliability of the coding, another experienced researcher independently coded six transcripts, three of teacher talk and three of TA talk. The first pair of scripts was used for training purposes, with the remaining four being used for analysis of reliability. Reliability was calculated by taking each utterance as the unit of analysis and examining the extent of agreement over the codes within. As utterance lengths varied, one/zero coding was used for the purpose of the reliability analysis, that is, codes were counted once only for each utterance. The resulting percentage agreement score ( $\text{agree} / (\text{agree} + \text{disagree}) \times 100$ ) between the two coders was satisfactory at 74% overall.

For the purposes of the main analyses, codes were summed for each session for teachers and TAs, and results are shown in Table 1. Pupils' talk was not coded. There were a large number of codes: teachers had 5226 and TAs 2295 (it was possible for more than one code to be applied to an utterance, so these frequencies exceed the number of utterances). Comparisons of frequencies of each code for teachers and TAs are to a degree misleading because differences might simply reflect the fact that teachers speak more than twice as much as TAs overall. To address this, and provide a stricter test of differences between teachers and TAs, the percentage each type of talk occurred relative to the total number of codes for each session for each adult was also calculated, along with the standard deviations of these means (*SD*) (see Table 1). Relative proportions may not exactly reflect overall frequencies because session lengths varied, as did the number of times other codes occurred within the session.

Table 1. Comparison of teacher and TA – talk-level codes.

Outcome	Teacher		TA		<i>P</i> value
	Frequency	Mean% ( <i>SD</i> )	Frequency	Mean% ( <i>SD</i> )	
1a. Organization of pupils	683	16 (9)	302	15 (9)	0.73
1b. Organization of materials	75	2 (2)	13	1 (2)	0.06
2a. Explanation of concept	421	7 (5)	116	4 (4)	0.01
2b. Statements as prompts	254	4 (2)	339	16 (13)	0.002
3a. Types of questions	912	16 (8)	542	24 (11)	0.02
3b. Response to pupil answers	541	9 (5)	222	7 (6)	0.22
4a. Feedback is about learning/task completion	275	5 (3)	84	3 (3)	0.03
4b. Use of praise/rewards/criticism	272	5 (3)	99	4 (4)	0.47
5a. Behavior management: preventive	53	1.1 (1.4)	10	0.4 (1.1)	0.12
5b. Behavior management: reactive	347	7 (5)	60	5 (11)	0.40
6a. Introduction to lesson focus	69	1.5 (1.3)	2	0.1 (0.4)	0.001
6b. Linking to prior learning/future learning/prior knowledge	130	3 (2)	23	1 (1)	0.001
7a. Motivation/engagement: cognitive focus	409	8 (5)	63	3 (5)	<0.001
7b. Motivation/engagement: task focus	785	15 (6)	420	15 (10)	0.94
<b>TOTAL</b>	<b>5226</b>		<b>2295</b>		

Frequencies of categories were generally normally distributed, and so paired *t*-tests were used to compare teachers and TAs. Within each talk-level category, there were a number of qualitatively different kinds of behaviors, for example, different types of explanation, statements, and questions. These were often as revealing as the overall frequency of occurrence, and we refer to these below, along with numerical information and illustrative extracts from the transcripts. All pupil names are fictitious.

## Results

A summary of the results for talk-level codes is provided in Table 1. The results showed that the most frequent types of talk for teachers were types of questions (asking of open questions (those for which there could be a number of potential responses) or closed/factual questions (those for which there was only one correct response)), promoting engagement/motivation: task focus (statements designed to engage or motivate pupils focused on completion of the task), organization of pupils (statements related to preparing pupils to move from one task to another), responding to pupils' answers (types of responses to pupils, i.e., praise, repeating pupil response, etc.), promoting engagement/motivation: cognitive focus (statements designed to engage or motivate pupils focused on cognitively engaging pupils), and behavior management: reactive (statements that are a reaction to a pupil behavior in contrast to those that are designed to prevent unwanted behavior). The most frequent types of talk for TAs were types of questions, promoting engagement/motivation: task focus, statements as prompts (statements that provide a clue to pupils for a response to a question or task), organization of pupils, and responding

to pupils' answers. Overall, therefore, the two most common types of talk were similar for teachers and TAs.

The results indicated a statistically significant difference between teachers and TAs for explanations of concepts, statements as prompts, asking of questions, providing pupils with feedback (either in relation to learning or task completion), making statements that pointed to the lesson objectives, making links from current learning to prior or future learning, and promoting cognitive engagement to motivate pupils. There were no differences between the two sets of results for the other outcomes, although differences approached significance for statements related to organizing materials for pupil use during lessons. Teachers tended to engage in proportionately more explanation of concepts (2a), feedback about learning/task completion (4a), introduction to lesson objective/focus (6a), links to previous/future lesson, prior knowledge (6b), and promoting engagement/motivation: cognitive focus (7a). Conversely, TAs engaged in proportionately more statements as prompts (2b) and types of questions (3a). Observations in category 2b (organization of materials) made up 16% of responses for TAs, but only 4% for teachers, while 24% of all TA observations fell into category 3a (asking questions), with the equivalent figure being 16% for teachers. We were surprised that there were more explanations by teachers than TAs, given that teachers generally provided brief explanations to the whole class before pupils began work, while teaching assistants were supporting SEN pupils, who arguably would need further explanations of concepts in order to complete their tasks. Similarly, the situation of TAs working closely with small numbers of pupils lends itself naturally to a focus on enhancing cognitive engagement, yet we found that this role was more frequently assumed by teachers.

### *Talk-level codes*

#### *A Task/content talk*

##### *1. Organization.*

*1a. Organizing pupils.* In terms of overall frequencies, this was the third most common type of talk for teachers and the fourth most common for TAs. There were similar proportions for teachers and TAs. Generally, both teachers and TAs organized pupils effectively and efficiently for lessons and during the lessons for tasks. Due to the teacher role, teacher organizational comments frequently related to groups of pupils (420 of 683 (62%) organizational statements directed to groups). For example:

Now if you've not finished I want you to carry on and write your poem. For those of you who have finished I want you to do the next one. (Teacher H1)

On the other hand, TAs' comments were almost exclusively at the individual level (27 of 302 (9%) statements directed to groups), which is to be expected. For example:

Put the date in the margin – which is the 9<sup>th</sup>. So zero nine, forward slash ten, forward slash zero seven. (TA C1)

*1b. Organizing materials.* Overall, comments relating to organizing materials were rare for both teachers and TAs. However, there was a tendency (not quite

statistically significant –  $p = 0.06$ ) for proportionately fewer such comments to come from TAs compared to teachers. This was mostly because teachers as part of their role took responsibility for organizing the distribution and collection of materials.

For example:

Dice go in this bag, books, the worksheets on here. Pens and pencils need to go away up on the shelf. Chairs need to be stacked behind the benches. Tables need to be stacked where they go. (Teacher B2)

## 2. *Language use: concepts.*

*2a. Explaining concepts.* Teachers spent proportionately more time explaining concepts than did TAs (7% vs. 4%). Overall, teachers were able to adjust explanations to pupil level and explain and re-explain concepts so they were at a suitable level for pupils. Generally, explanations were clear and designed to assist and develop pupil thinking.

Seven times three is 21, 0.2 times three is 0.6. 0.01, because that 1 is one hundredth times three, is 0.03 – giving an answer of 21.63. (Teacher A2)

On the other hand, explanations by TAs were less common. They generally appeared more concerned with completing tasks than with developing understanding. There were several instances in which there was no concept development or explanation throughout the lesson. Sometimes, the explanations were incorrect. Of the 16 lessons involving TAs analyzed in this study, there were 9 in which the TAs explained concepts to pupils; of these 9 lessons, there were 5 in which at least some of the concept explanations were inaccurate. For example:

Well look – a whole number – you know if you have seven, well that would be closer to ten, wouldn't it? Because ten is a whole number. Near to seven. Do you understand? Yes? Do you think? So, we think that whole numbers are like tens and things like that – yes? (TA C1)

Other explanations by TAs seemed confusing for pupils:

Three from nothing you can't do, can you? So you have to borrow one, don't you? ... So three from ten is seven ... Then you have to give one back, don't you, here? Or do you do it the opposite way? ... There's two ways to do it, you see. I don't know which way you do it. Right. So if you give one back that would be a one, wouldn't it? So cross that out and that'd be a one. One from nothing you can't do, so we have to borrow another one, don't we? (TA D1)

*2b. Statements as prompts.* TAs were significantly more likely than teachers to provide pupils with prompts (16% vs. 4%). Moreover, the structure of prompts appeared to vary. Prompts from teachers were mostly designed to enhance pupil thinking. For example:

When you're deciding on the genre quite often they are mixed. But you've got to think which one is the main one. (Teacher M1)

In contrast, prompts from TAs frequently supplied pupils with the answer. This meant that the TAs were in a sense doing the work for the pupils and pupils did not

therefore need to engage in thinking. At times, TAs asked pupils to engage in thinking but would then supply pupils with an answer. For example:

You need to explain what that phrase is telling you, Veronica. Does it make you feel that she's angry for him, or she's upset for him, or . . . ? Use whatever word you feel. You need to say that Grace Nichols feels upset . . . because he's upset because he's now living in London. (TA F1)

Overall, of 254 prompts by teachers, there were 29 (11%) in which the teacher supplied the pupils with the answer, whereas for TAs, of 339 prompts, 208 (61%) provided pupils with the answer and only 131 encouraged pupil independence and thinking. Where pupil thinking was not encouraged as part of the prompt, the TAs supplied pupils with answers, told them what to write for answers, provided them with ideas, wrote answers for them, read out questions, and spelled words out for pupils without encouraging independence. On the other hand, teachers supplied answers having previously provided prompts that had not led to a suitable pupil response.

### 3. *Language use: questions.*

*3a. Types of questions.* This was the single most frequent type of talk for teachers and TAs. Both teachers and TAs therefore asked pupils lots of questions, though there were proportionately more of these from TAs compared to teachers (24% vs. 16%). Closed questions were the most common form of questions used by both groups. However, whereas teachers used a variety of open and closed questions, TAs almost exclusively asked closed questions of their pupils. TAs asked a total of 37 open questions of 542 questions, whereas teachers asked 194 of 912. It was rare for teachers to supply pupils with answers to questions. Generally, teachers would rephrase questions or provide additional information so pupils did the thinking and could answer the questions. For example:

Why is it a square? . . . why do we say that's a square and that's not a square? That's a rectangle – OK? It's got four sides – but it's not a square, it's called a rectangle. Now – can you tell me why that's called a square and that's called a rectangle? What's different? What do you see different? (Teacher E2)

In contrast, TAs often asked pupils a question and then answered it for them:

OK – what are we up to? This one – 111 – a hundred and eleven. So the nearest ten would be . . . ? No, no – that's hundreds. A hundred and eleven. Just take off the hundred and look at the eleven – so what number are you going to take it to? . . . Ten, isn't it? . . . If you've got to take it to the nearest ten – you've got ten or twenty. Eleven is closer to ten, isn't it? . . . So it's a hundred and ten. Yes? (TA C1)

The same difference between teacher and TA talk was evident where questions were used as prompts.

Teachers often used questions to check pupil understanding of a concept or idea, whereas when TAs checked pupil understanding they tended to simply ask if pupils understood without further checks. In the next extract, for example, when checking pupil understanding of facts, the teacher asks the question at the end of the sequence to confirm pupil knowledge. Closed questions such as this were common with

teachers when checking pupil understanding. The final question in the sequence below is used to check pupil understanding:

So some people think it has to be just a single digit because it stands on its own, and you think it can't be a single digit. So why do you think that? What's your reasoning behind that? (Teacher C2)

Conversely, the example below shows a TA providing an explanation for rounding of numbers; she then simply asks if the pupil understands, and when the pupil indicates she does, the TA moves on to something else. In the case of the TA below, this happened repeatedly during the lesson.

It's four hundred – because that's below five, isn't it – the thirty-two? Like three is below five – so it would be one thousand, four hundred, wouldn't it? Do you understand that? (TA C1)

*3b. Response to pupil answers.* Both teachers and TAs responded similarly to pupil responses to answers. They praised the pupil for a correct answer, they repeated correct and incorrect responses, they rephrased questions when responses were incorrect, or they asked another pupil. However, one difference between teachers and TAs was that teachers frequently used pupil responses as a springboard to promote additional pupil thinking. This was much less common for TAs. For example, from a teacher discussing a poem about apartheid:

The sign's gone, but Vaughan's right – he said he knows that even though there's no sign there anymore, that they still wouldn't be allowed in; that they would be stopped. All right? What do you think, then, the poet might actually be saying? (Teacher K2)

#### 4. *Feedback.*

*4a. Feedback about learning or task completion.* Teachers tended to provide more of this kind of talk than TAs. All teachers provided pupils with feedback, whereas only 11 TAs did so. Moreover, teachers provided pupils with feedback about their learning more frequently than they did about the task or pupil behavior, and, with the exception of one teacher, all provided several instances of feedback about learning in each lesson. For example:

When marking your stories, your genres, I was really pleased. I looked at them and I think probably just about everybody had views on the genre they were writing. Some of you need to be really careful because the comedy genres – some of them were getting a bit on the nonsense, silly side; so you've got to think about how you can use comedy without being silly and writing nonsense. (Teacher G2)

However, fewer instances of feedback related to learning could be found for TAs (4 TAs provided at least one instance). More frequently, feedback from TAs related to task completion. For example:

Try not to do it so fast and you might do it a bit neater. [And later] Oh, that's looking super now. (TA N1)

There were also times when some teachers provided feedback related to task completion. For example:

I've set your sums for you, because they start off not needing so much carrying and things and I hope you will be able to go quite quickly with the first few. (Teacher B)

Overall, of the total of 275 instances of feedback by teachers, 192 (70%) statements were feedback related to pupil learning and 83 (30%) were in connection with either task completion or task-related pupil behavior. In contrast, of the total of 84 feedback statements by TAs, 54 (64%) concerned pupil learning, while 30 (36%) were related to task completion or task-related behavior.

*4b. Use of praise and criticism.* There was little difference in the proportion of praise and criticism. Pupils were praised for understanding, task completion, behavior, and responses to questions. Often, praise comprised expressions such as, "well done", "excellent", or "very good", and pupils would not always have been sure what they were being praised for. The examples given below show praise that would have been meaningful to pupils:

Powerful – good, OK. What else? That's a super word – it's an excellent word. (Teacher J2)

You've found "orphan". Well done. Good lad. (TA I1)

Criticism was very uncommon among both teachers and TAs. Very occasionally, a pupil was criticized or given negative feedback.

You think they're off for a walk (rephrased pupil response). Frank – I think you may need to go to the opticians. Let's have somebody else help us out. (Teacher K2)

An egg comes out of the egg? No, something's got to come out of it Leona – it can't just be another egg. You've got to think what comes out of the egg – not another egg. You're not putting much of a story to that, are you? (TA A1)

## 5. Behavior management.

*5a. Preventive: positive and negative.* Although there were some exceptions, generally adults had only a small number of behavior management incidents to deal with in any lesson. Overall, teachers made more comments related to behavior management than did TAs, though statistical analysis showed no significant differences. Differences largely reflected their respective roles within the classroom. Teachers managed the behavior of the whole class, whereas TAs only had responsibility for a small group of pupils. Moreover, whereas teachers would reprimand pupils who were the responsibility of TAs, the reverse was rarely the case.

Preventive behavior management statements were less common for TAs than for teachers. Whereas 11 teachers made such comments, only 4 TAs used preventive statements to manage behavior. Almost all preventive behavior management statements were positive as illustrated below:

And if we can do this lovely work in this level of noise, it will be a smiley face point soon. (Teacher G2)

If you keep being good I'll give you a nice shiny one [merit certificate] in math. A special one. This afternoon. Math is straight after dinner, so I'll bring that nice shiny one with me. (TA I1)

*5b. Reactive: positive and negative.* Both teachers and TAs mostly reacted to pupil behavior when necessary. At times, the response was positive (i.e., they might focus on pupils doing the right thing rather than those who were not), but mostly the reaction was neutral but firm, or negative. Both teachers and TAs used a variety of methods to deal with inappropriate behavior. These included threats; questions (e.g., “what are you doing?”); requests for compliance (e.g., phrased with “please” or “can you?”); punishment for noncompliance (at times in response to previous threats); clear consequences for behavior; engaging in debate with a pupil; providing pupils with clear expectations for behavior; and using a clear, assertive statement. Often, just the use of a pupil’s name was enough to gain compliance. Every teacher made reactive behavioral statements during each lesson. However, only 11 TAs made such comments. Teachers were more likely to respond to pupil behavior by providing clear expectations for pupil behavior or strong statements that left little doubt about what was expected. On the other hand, TAs mostly responded to pupil behavior with requests for compliance; they tended to make what might be regarded as weaker statements. For example, note the contrast in style shown below:

Fraser – if you write on your board you’re not listening. That tells me you’re not doing the right thing. So wipe your whiteboard, put it away, and then you won’t be tempted. (Teacher C2)

David – go and sit down please. David – go and sit down please. Thank you. Put that piece of paper away please. And the sweet. And the sweet. (TA F1)

As a way of further categorizing statements, reactive statements were categorized as either “pedagogically appropriate” (i.e., defined as clear, assertive statements; providing clear expectations; positive reactions; questions about behavior, e.g., what are you doing?) or as “pedagogically inappropriate” (defined as threats, requests for compliance, punishment, arguing with a pupil, sarcastic comments, “shh” when not specifically targeted). Overall, teachers made 209 (60%) appropriate and 138 (40%) inappropriate statements, while TAs made 24 (40%) appropriate and 36 (60%) inappropriate statements.

## B. Lesson purpose

### 6. Orientation.

*6a. Introduction to the lesson objective/focus.* Introducing the lesson or ensuring pupils were aware of the lesson objective or focus did not make up a major proportion of any lesson. However, there were clear differences between teachers and TAs. Whereas 13 teachers at some stage during the lesson informed pupils of the focus, no TA did this. An example of a teacher’s introduction appears below:

Now, what you’re doing today is you are going to start producing imaginative writing. You’re going to write a poem. You’re going to be given a topic. A silly topic, like imagine you’re a glass. Imagine you’re a tree. Imagine you’re hiding from someone. And you’ve got to produce an imaginative piece of writing. The reason we do this is because, when you are asked (as you were asked in the last half term) to write about celebrities, you have to produce one page of writing at least in paragraphs. And writing like this,

this type of imaginative, creative writing helps you to practice expressing your thoughts. Not just in a boring way, but in a creative way, in a very interesting way. (Teacher H1)

There was one example of a response by a TA who was asked by a pupil what they would be learning. Her reply shows she was unsure of the lesson objective; instead she focused on a task the pupils would complete. This was the only instance of TA talk referring to lesson focus.

I don't know what we're doing today. I know we're going to start with a game on the board. So that will be quite good. (TA L2)

*6b. Links to prior knowledge/previous lessons/future learning.* Although relatively infrequent, teachers engaged in proportionately more of this type of talk than TAs (3% vs. 1%). Without exception, all 16 teachers linked the current lesson to knowledge they knew pupils already possessed, to previous lessons (usually the previous day or week), or to future learning. Several TAs did make similar links (9), but their statements were in relation to prior learning (at times within-lesson links) or on completing work for a forthcoming examination. Typical teacher and TA statements are below:

Remember last lesson. What did we make last lesson? We were building, weren't we? Well we need to be able to do these (2-dimensional shapes) so we can construct accurately. (Teacher L1)

What did we say 25% was yesterday? When we was doing fractions? (TA D1)

## 7. *Promoting engagement and/or motivation.*

*7a. Promoting cognitive engagement.* Teachers also engaged in more of this type of talk than TAs (8% vs. 3%). Teachers frequently attempted to promote pupil thinking and cognitive engagement. While 10 TAs did try to foster pupil thinking, this was a much less common practice than it was for teachers. For many teachers, there was reference to encouraging pupil thinking. For example:

You need to go back and you need to think about the words that you can use in your story. They need to be creative words; they need to be fairly important, significant words. Words like when we discussed symbolism – that make up layers of meaning. (Teacher O1)

When the problem arises, how are you going to solve the problem? You've got to think about how the problem will be solved and then what happens at the end. A good ending to your story, OK? (TA A1)

*7b. Task focus.* This was the second most common type of talk for teachers and TAs. For teachers, there was a balance between the focus on cognitive engagement and on the task. There were large numbers of statements for all teachers in both categories (a total of 409 for 7a and 785 for 7b). However, for TAs, the major focus was on the task, rather than in promoting engagement (420 for 7b vs. 63 for 7a). Even TAs who did try to promote pupil thinking spent more time concentrating on the task. Partially, this is a function of their role in that in most lessons they are given one or more tasks to complete with pupils. As a consequence, TAs tend to focus

more on completing the task than on promoting pupil thinking about the task. The examples below are of teachers and TAs focusing pupils on the task.

So I'd like you to practice exercise 1.1B, but I'd only like you to do for me questions five, six and seven now please. (Teacher D2)

So we have to put the chemical in and then measure the temperature. Add one spatula of the chemical . . . One spatula of copper . . . is that copper sulfate? One spatula of copper sulfate and then take the temperature. (TA P2)

This category included not only talk that was focused on the task, but when teachers or TAs engaged in off-task talk with pupils, this was also recorded in this category. It should be noted that "off-task" is a general term used here to refer to all talk not specifically about the substantive topic of the lesson. There were six teachers who engaged in off-task talk defined in such a way. In all cases, the distraction was short, and the teacher quickly re-focused. In contrast, 11 TAs had off-task conversations with their pupils, some of which were extended. This is illustrated by the numbers of off-task statements. There were 21 teacher off-task statements and 83 TA off-task statements.

## Discussion

One obvious factor to be considered when comparing teacher- and TA-to-pupil talk is the extent to which the contexts within which the talk takes place are equivalent. As we have seen, for the most part, teacher talk to pupils was in whole-class or large-group contexts, while talk between TAs and pupils was often when in a small group or on an individual basis. There is a dilemma here, in that it might be seen as more valid to compare teacher and TAs when in exactly the same classroom contexts. On the other hand, this study was set up to examine the nature of classroom talk under normal classroom conditions, and teachers almost exclusively work with the whole or vast majority of the class, and TAs almost always work with small groups and individuals. The recordings analyzed in this paper therefore reflect the reality of talk as experienced by pupils. It is true that comparisons may to some degree reflect the nature of the social situation within which talk takes place, but this is still the nature of talk experienced by the pupils. The same dilemma applies to the ability level of the pupils. As we have seen, for the most part, TAs support low-ability pupils or pupils with SEN, whereas the teacher often teaches the rest of the class. The ability level of the pupils dealt with by the teacher and TA are therefore likely to differ. Nevertheless, this again reflects the reality of the way TAs are deployed in UK schools; they almost never support middle- or high-ability pupils (Blatchford, Bassett, Brown, Koutsoubou, et al., 2009). The point to make, therefore, is that strict comparisons between teacher and TAs need to be treated cautiously in that they can be affected by the social context in which they take place and the ability levels of the pupils involved, but they nonetheless reflect the kinds of talk pupils experience on a daily basis with teachers and TAs.

The results showed some similarities in the talk of teachers and TAs. The most frequent types of talk for teachers and TAs were questions, promoting engagement/motivation, organization of pupils, responding to pupils' answers, and behavior management. Overall, therefore, there are similarities in the types of interactions that both adults have with pupils in classrooms.

A major finding of the current study was that the interactions of teachers and TAs with pupils were both quantitatively and qualitatively different in several areas. We found that teachers had a formal style of delivery, while TAs were more informal, chatty, and more likely to use colloquial language with pupils. Both teachers and TAs were usually relaxed and positive with pupils, but some TAs were very informal and familiar with pupils, and TAs often provided pupils with answers and completed work for them. Teachers spent more time explaining concepts than TAs, and TA explanations were sometimes inaccurate or confusing; teachers used prompts and questions to encourage thinking and check understanding, while TAs more frequently supplied pupils with answers; teachers tended to use feedback to encourage learning, while TAs more often were concerned with task completion. There were differences as well in dealing with the purpose of lesson talk: Teachers, but not TAs, informed pupils about the focus of the lesson; teachers more than TAs linked the current lesson to pupil prior knowledge and attempted to promote pupil thinking and cognitive engagement in a task, while more TA talk was about task and non-task matters.

Evidence from the transcripts therefore suggests that teachers were more likely than TAs to show aspects of effective teaching (Berliner, 2004; Sylva et al., 1999; Topping & Ferguson, 2005), for example, talk requiring pupils to reason and engage in higher level thinking, providing pupils with feedback about their learning, and encouraging them to participate (Berliner, 2004; National Institute Child Health and Human Development Early Child Care Research Network, 2005; Topping & Ferguson, 2005). These features of language in promoting pupil learning were present far more consistently in the teacher talk than they were in the TA talk. Indeed, TAs in the current study at times provided erroneous explanations of concepts, infrequently made links to prior learning, did not appear to use effective techniques for scrutinizing pupil understanding, and hence did not usefully scaffold pupil learning. Similarly, Berliner's model of effective teaching incorporates pupil cognitive engagement (Berliner, 1987) as a key component in pupil learning. Teachers can use talk to cognitively challenge pupils (Alexander, 2006) through the questions they ask and the prompts they use, which enhance pupils' independence and increase metacognitive functioning (Lyle, 2008). Again, the current study showed teachers far more often than TAs promoting pupil engagement and encouraging pupils to develop their own ideas. TAs, on the other hand, focused more often on task completion rather than promoting higher levels of pupil thinking. Prompts were also a language feature teachers frequently used to challenge pupils to think more deeply, whereas for TAs prompts were a means of providing pupils with answers.

There were therefore two overarching differences between teachers and TAs in their interactions with pupils. First, teachers were more focused on learning and understanding, while TAs focused on completing tasks. In this study, it was found that teachers' interactions with pupils were more likely to stimulate pupils cognitively and facilitate pupil learning engagement in thinking.

A second overall difference between teachers and TAs was that teachers appeared proactive and in control of lessons, while TAs were in a reactive role (possibly because they had little time to prepare for, or input into, the session; see Blatchford, Bassett, Brown, Koutsoubou, et al., 2009). Moyles and Suschitzky (1997) found that TAs could encourage dependency because they could prioritize the outcomes of activities or procedural matters rather than encouraging pupils to think for

themselves. It has also been suggested by Ofsted (2004) that TAs may be less able to break tasks down and may be more inclined to keep pupils on-task rather than focusing on what pupils need in order to complete tasks. There may be less stress on improving understanding and skills. “This was a common reason why a significant number of pupils with SEN made too little progress, despite good teaching to the majority of the class” (2004, p. 16).

The finding that TAs at times did not understand the concepts they were supposed to be assisting pupils to learn was particularly troubling, given that they often support the pupils most in need of learning support. A further point is that TAs did not appear to have received sufficient training to understand how to develop pupil thinking, but were on frequent occasions providing pupils with answers to questions or tasks, meaning that pupils did not need to do the thinking for themselves. TAs appeared to be stifling pupil independence. Such qualitative differences in teacher versus TA talk outlined in this and the previous paragraphs may provide one explanation for the provocative finding that pupils who received more support from TAs actually made less progress than similar pupils who had less TA support (Blatchford, Bassett, Brown, & Webster, 2009). Pupils may actually be hindered rather than helped by the support provided. But this possible explanation, that is, the language used by TAs, needs to be set in a wider context. Explanations couched simply in terms of TA language, or their characteristics and skills, are inadequate; an understanding of the wider forces within which TAs work is necessary to fully understand both their effectiveness and strategies for improvement. The work of the DISS study has produced a model of the “wider pedagogical role” (WPR) of TAs that integrates findings across all the dimensions studied (Blatchford, Bassett, Brown, Koutsoubou, et al., 2009). Two components of the WPR model are particularly relevant to this paper.

### *Preparedness of TAs*

The DISS findings pointed to a lack of preparedness for TAs, which might have contributed to differences between teachers and TAs found in the transcript analysis reported in this paper. There were two main expressions of this lack of preparedness. The first was the lack of meaningful time for preparation before, and for feedback and reflection after, lessons. Teacher–TA communication was often ad hoc (e.g., before/after school; during break or lunch times). As a consequence, TAs felt underprepared for their roles, and many picked up subject and pedagogical knowledge by “tuning in” to the teachers’ delivery. Also, teachers could be detached from the planning and preparation of the intervention sessions that they delegated to TAs. The product of these types of “preparedness” was that TAs routinely operated in a reactive rather than proactive way, responding to the immediate demands of the lesson and the pupil rather than building on prearranged instructional aims.

No less important, preparedness also concerns the extent to which TAs are trained to work with pupils, and, as important, teachers are trained to know how to direct and organize the work of the support staff they work with closely *OR* that work in their classrooms. In the DISS project, it was found that training did not build on the reality that TAs are working in an instructional capacity with pupils. Overall, about three quarters of teachers reported never having any training or development to help them work with TAs, even though the numbers of teachers involved in training TAs had increased markedly. If TAs are to continue to play an

important role in the teaching of pupils, it will be important that they receive adequate background in pedagogical and curriculum knowledge and understanding. The importance of training for TAs is shown in studies that report that when TAs are given explicit training and scripted lessons, they are successful in promoting pupil learning (Alborz, Pearson, Farrell, & Howes, 2009; Ryder, Tunmer, & Greaney, 2008).

### ***Deployment of TAs***

The second key component of the WPR model, of relevance to this paper, is the “deployment” of TAs. As we saw in the introduction, TAs in England and Wales now have a distinct, direct pedagogical role, supporting and interacting with pupils, particularly low-ability pupils or those with SEN, and this exceeds time assisting the teacher or the school. Moment-by-moment responsibility for teaching these pupils has effectively been handed to TAs. This owes much to two general policy developments: an increase in TAs as part of workforce remodeling and an increase in pupils with SEN in mainstream schools and accompanying efforts to develop policies of inclusion. The use of TAs to help support pupils with particular needs seems a logical and commonsensical solution to time issues for teachers and the need for individual attention for pupils. However, the data on the impact of TAs on pupil progress (see Blatchford, Bassett, Brown, Koutsoubou, et al., 2009) suggests this is at a cost to the supported pupils themselves.

### ***Implications for models of teaching effectiveness***

There are two main implications for models of teaching effectiveness. First, models of teacher and school effectiveness need to be updated so they now include the changed reality of schools today (at least in the UK), which involves large numbers of TAs. Existing models of teacher effectiveness, for example, those by Creemers (1994) and Dunkin and Biddle (1974), map important teacher influences on pupil attainment and learning. Moreover, other models, such as that proposed by Berliner (1987), provide guidance in terms of promoting and enhancing pupil cognitive engagement and learning. The assumption underpinning these models is that the important educationally effective input is provided by teachers. To these models, we will need to show that input is also now provided by TAs. More than that, we also need to show that schools and teachers now work routinely with TAs and other support staff, and we need therefore to include management responsibilities over TAs, which will affect the situation. School effectiveness research has stressed the important school-level factors likely to be a sign of effective schools. The key factors associated with successful schools (e.g., Creemers, 1994) will need to be augmented to include management of TAs and other support staff. These additional factors have changed the landscape of debate about effective teaching and schooling. It is not enough now to talk as before about focus on learning and of appropriate models of leadership provided by schools, without also covering how the wider workforce is supported and managed to ensure effective learning.

The second implication of the findings for teacher and school effectiveness is that models of effectiveness when applied to teachers will also need to be applied to TAs. This is unavoidable, given that we have seen that TAs are engaged in a direct pedagogical, instructional relationship with pupils. We need to consider the use of

questioning, explanations, prompts, and feedback by TAs, as well as by teachers. There has been tendency to avoid close scrutiny of actual practice because TAs only “support” pupils. Evidence from the current study suggests differences between TAs and teachers, and it is difficult to escape the view that the quality of talk in some TA to pupil interactions was less effective and less educationally valuable than the talk of teachers. We need therefore to face the reality of the instructional role of TAs – they are to all intents and purposes engaged in educational, instructional interactions with pupils and in this sense are “teaching”.

There are two broad conclusions that follow from this finding. The first is to argue that TAs are not teachers and we should not expect the same from them. It might be argued that TAs should not be used directly in a teaching role but can contribute to other facets, for example, to encourage pupil motivation and classroom organization and management. This conclusion also means that the deployment of TAs as the primary educators for supported pupils, engaged in teaching interactions, is unacceptable, as Giangreco, Edelman, Luiselli, and MacFarland (1997) have argued, and that alternative forms of deployment need to be made explicit. A second, alternative conclusion, however, is to argue that TAs do have a pedagogical contribution to make, alongside and perhaps complementary to that of teachers. For this view to be sustainable, the types of deployment and interactions expected of TAs again have to be set out explicitly. At present, there is very little attention paid to appropriate forms of TA pedagogical deployment, largely because there has been a general denial that TAs are in fact teaching. We need, therefore, more imaginative and informed ways of positioning the pedagogical role of TAs relative to teachers.

### **Acknowledgement**

This research was supported by a research grant from the Department for Children, Schools and Families.

### **Note**

1. In line with common usage, this paper uses the generic term “teaching assistant” to cover similar classroom-based post titles which engage in similar activities (e.g., classroom assistant, higher level teaching assistant, learning support assistant, and nursery nurse).

### **Notes on contributors**

Christine Rubie-Davies is a Senior Lecturer at the University of Auckland, New Zealand. Her research interests relate to the enhancement of student social and academic outcomes. She is also interested in the effects of teacher characteristics on student outcomes.

Peter Blatchford is Professor of Psychology and Education at the Institute of Education, University of London, UK. Prior to directing the DISS project, Peter led large-scale UK research projects on the effects of class size differences on pupils’ academic progress and classroom processes (CSPAR project).

Rob Webster was a Research Officer on the qualitative elements of the DISS project. He is currently working on a follow-up to the DISS study, which aims to develop school-based strategies for effective deployment of TAs.

Maria Koutsoubou was a Research Officer on the DISS project and conducted the Strand 2 Wave 2 case studies with Rob Webster.

Paul Bassett was responsible for the data management and statistical analysis of the DISS project, as well as interpreting the results. He is now a director of Statsconsultancy Ltd, a company offering independent statistical services.

## References

- Alborz, A., Pearson, D., Farrell, P., & Howes, A. (2009). The impact of adult support staff on pupils and mainstream schools. Technical Report. In *Research Evidence in Education Library*. London, UK: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London. Retrieved from <http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=2438&language=en-US>
- Alexander, R.J. (2000). *Culture and pedagogy*. Oxford, UK: Blackwell.
- Alexander, R.J. (2006). *Towards dialogic teaching: Rethinking classroom talk* (3rd ed.). Cambridge, UK: Cambridge University Press/Dialogos.
- Bakhtin, M. (1981). *The dialogic imagination*. Austin, TX: University of Texas Press.
- Barnes, D., Britton, J., & Torbe, M. (1986). *Language, the learner and the school* (3rd ed.). Harmondsworth, UK: Penguin.
- Beeson, C., Kerry, C., & Kerry, T. (2003). *The role of classroom assistants*. London, UK: National Primary Trust.
- Berliner, D.C. (1987). Simple views of effective teaching and a simple theory of classroom instruction. In D.C. Berliner & B.V. Rosenshine (Eds.), *Talks to teachers* (pp. 93–110). New York, NY: Random House.
- Berliner, D.C. (2004). Describing the behavior and documenting the accomplishments of expert teachers. *Bulletin of Science, Technology & Society*, 24, 200–212.
- Blatchford, P., Bassett, P., Brown, P., Koutsoubou, M., Martin, C., Russell, A., & Webster, R. (with Rubie-Davies, C.). (2009). *The impact of support staff in schools: Results from the Deployment and Impact of Support Staff (DISS) project. Strand 2 Wave 2*. London, UK: Department for Children, Schools and Families.
- Blatchford, P., Bassett, P., Brown, P., & Webster, R. (2009). The effect of support staff on pupil engagement and individual attention. *British Educational Research Journal*, 35, 661–686.
- Block, C.C., Oakar, M., & Hurt, N. (2002). The expertise of literacy teachers: A continuum from preschool to Grade 5. *Reading Research Quarterly*, 37, 178–206.
- Bohn, C.M., Roehrig, A.D., & Pressley, M. (2004). The first days of school in the classrooms of two more effective and four less effective primary-grades teachers. *The Elementary School Journal*, 104, 269–287.
- Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge, MA: Harvard University Press.
- Connor, C.M., Morrison, F.J., & Petrella, J.N. (2004). Effective reading comprehension instruction: Examining child x instruction interactions. *Journal of Educational Psychology*, 96, 682–698.
- Creemers, B.P.M. (1994). *The effective classroom*. London, UK: Cassell.
- Department for Children, Schools and Families. (2009). *Statistical first release (SFR 09/2009): School workforce in England, January 2009 (Provisional)*. London, UK: Author.
- Dunkin, M.J., & Biddle, B.J. (1974). *The study of teaching*. Lanham, MD: Holt, Rinehart and Winston.
- Edwards, A.D., & Westgate, D.P.S. (1987). *Investigating classroom talk*. London, UK: Falmer.
- Farrell, P., Balshaw, M., & Polat, F. (1999). *The management, role and training of learning support assistants*. London, UK: DfES.
- Finn, J.D., Gerber, S.B., Farber, S.L., & Achilles, C.M. (2000). Teacher aides: An alternative to small classes? In M.C. Wang & J.D. Finn (Eds.), *How small classes help teachers do their best* (pp. 131–173). Philadelphia, PA: Temple University Center for Research in Human Development.
- Fisher, R. (2007). Dialogic teaching: Developing thinking and metacognition through philosophical discussion. *Early Child Development and Care*, 177, 615–631.
- Galton, M., Simon, B., & Croll, P. (1980). *Inside the primary classroom*. London, UK: Routledge and Kegan Paul.
- Geekie, P., Cambourne, B., & Fitzsimmons, P. (1999). *Understanding literacy development*. Stoke-on-Trent, UK: Trentham Books.
- Gerber, S.B., Finn, J.D., Achilles, C.M., & Boyd-Zaharias, J. (2001). Teacher aides and students' academic achievement. *Educational Evaluation and Policy Analysis*, 23, 123–143.

- Giancreco, M.F., Edelman, S., Luiselli, T.E., & MacFarland, S.Z.C. (1997). Helping or hovering? Effects of instructional assistant proximity on students with disabilities. *Exceptional Children*, 64, 7–18.
- Hall, K., & Harding, A. (2003). A systematic review of effective literacy teaching in the 4 to 14 age range of mainstream schooling. In *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education.
- Holquist, M. (1990). *Dialogism: Bakhtin and his world*. London, UK: Routledge.
- Jones, D. (2007). Speaking, listening, planning and assessing: The teacher's role in developing metacognitive awareness. *Early Child Development and Care*, 177, 569–579.
- Klassen, R. (2001). "After the statement": Reading progress made by secondary students with specific literacy difficulty provision. *Educational Psychology in Practice*, 17, 121–133.
- Lyle, S. (2008). Dialogic teaching: Discussing theoretical contexts and reviewing evidence from classroom practice. *Language and Education*, 22, 222–240.
- Mercer, N. (1995). *The guided construction of knowledge*. Clevedon, UK: Multilingual Matters.
- Mercer, N. (2000). *Words and minds*. London, UK: Routledge.
- Mistry, M., Burton, N., & Brundrett, M. (2004). Managing LSAs: An evaluation of the use of learning support assistants in an urban primary school. *School Leadership and Management*, 24, 125–137.
- Moran, A., & Abbott, L. (2002). Developing inclusive schools: The pivotal role of teaching assistants in promoting inclusion in special and mainstream schools in Northern Ireland. *European Journal of Special Needs Education*, 17, 161–173.
- Mortimore, P., & Mortimore, J. (with Thomas, H., Cairns, R., & Taggart, B.). (1992). *The innovative uses of non-teaching staff in primary and secondary schools project: Final report*. London, UK: Institute of Education.
- Moyles, J. & Suschitzky, W. (1997). *Jills of all trades: Classroom assistants in KSI classes*. London, UK: University of Leicester/ATL.
- Muijs, D., & Reynolds, D. (2003). The effectiveness of the use of learning support assistants in improving the mathematics achievement of low achieving pupils in primary school. *Educational Research*, 45, 219–230.
- Myhill, D. (2006). Talk, talk, talk: Teaching and learning in whole class discourse. *Research Papers in Education*, 21, 19–41.
- National Institute Child Health and Human Development Early Child Care Research Network. (2005). A day in third grade: A large-scale study of classroom quality and teacher and pupil behavior. *The Elementary School Journal*, 105, 305–323.
- Nystrand, M. (2006). Research on the role of classroom discourse as it affects reading comprehension. *Research in the Teaching of English*, 40(4), 392–412.
- Ofsted. (2004). *Remodelling the school workforce: Phase 1* (HMI ref.2298). London, UK: Author.
- Pressley, M., Wharton-McDonald, R., Allington, R., Block, C.C., Morrow, L., Tracey, D., . . . Woo, D. (2001). A study of effective first-grade literacy instruction. *Scientific Studies of Reading*, 5, 35–58.
- Ryder, J.F., Tunmer, W.E., & Greaney, K.T. (2008). Explicit instruction in phonemic awareness and phonemically based decoding skills as an intervention strategy for struggling readers in whole language classrooms. *Reading and Writing: An Interdisciplinary Journal*, 21, 349–369.
- Sinclair, J.M., & Coulthard, R.M. (1975). *Towards an analysis of discourse*. Oxford, UK: Oxford University Press.
- Sylva, K., Hurry, J., Mirelman, H., Burrell, A., & Riley, J. (1999). Evaluation of a focused literacy teaching programme in reception and year 1 classes: Classroom observations. *British Educational Research Journal*, 25, 617–635.
- Takala, M. (2007). The work of classroom assistants in special and mainstream education in Finland. *British Journal of Special Education*, 34, 50–57.
- Taylor, B.M., Pearson, P.D., Clark, K., & Walpole, S. (2000). Effective schools and accomplished teachers: Lessons about primary-grade reading instruction in low-income schools. *The Elementary School Journal*, 101, 121–166.

- Topping, K., & Ferguson, N. (2005). Effective literacy teaching behaviours. *Journal of Research in Reading*, 28, 125–143.
- Wilkinson, E.R., & Silliman, L.C. (2000). Classroom language and literacy learning. In M. Kamil, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. III, pp. 337–360). Mahwah, NJ: Erlbaum.
- Wilson, V., Schlapp, U., & Davidson, J. (2003). An “extra pair of hands”? Managing classroom assistants in Scottish primary schools. *Educational Management Administration & Leadership*, 31, 189–205.
- Wray, D., Medwell, J., Fox, R., & Poulson, L. (2000). The teaching practices of effective teachers of literacy. *Educational Review*, 52, 75–84.