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# 18 Helping language learning in inclusive classrooms

## 1 Introduction

Classrooms are very important settings around the world because they are the sites where children spend a large proportion of their time. As most of the business that is conducted in classrooms is through language, the quality of the interaction is of paramount importance. High quality spoken language is needed for children's learning (of both their native language and curriculum subjects) because it fosters active and empowered pupils. The best possible discourse in classrooms is therefore a major priority in children's early years (DCSF 2008a). The international inclusion agenda has meant that youngsters with special educational needs (SEN) are educated largely in the general education classrooms (Giangreco, Doyle and Suter 2013). The main purpose of this chapter, therefore, is to show how to increase the participation of children with SEN through high quality classroom interaction. In order to meet the interests of readers of this volume, rather than all children with SEN, the focus will be children who have speech, language and communication difficulties or autistic spectrum disorder. Examples will be drawn from several projects that involve children aged between 4–11 years.

### 1.1 The organisation of classrooms

How classrooms are organised has significant implications for the nature of the talk and the opportunities for children with SEN to actively participate. There are three basic types of organisation: whole class teaching, small group work and one-to-one arrangements for children with significant needs. There are variations and trends in these arrangements across different countries. For example, one-to-one support, through the use of paraprofessionals or teaching assistants (TAs), is more common in the UK and USA than in Germany (Giangreco, Doyle and Suter 2013).

This chapter sets out a framework for inclusive dialogic discourse in order to illustrate practices that assist language learning. It will focus on the contexts for learning that are most supportive for children with SEN: small group and one-to-one with a paraprofessional or teacher assistant (TA). The chapter shows, through detailed illustrative examples from several research projects, how to foster inclusive dialogic discourse and concludes with many recommendations for training and professional

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development. It will therefore be valuable to all those who support vulnerable children, with particular reference to speech and language therapists/pathologists. The chapter draws on the author's work that has been informed by well-established theories of teaching and learning, rooted in sociocultural theory. It also draws on several studies that have used conversation analysis (CA) of adult-pupil talk which offer a detailed and qualitative approach to analysing discourse.

## 1.2 What is high quality inclusive discourse?

One of the most dominant and enduring forms of discourse in classrooms, worldwide, is recitation (Alexander 2000). Recitation takes the form of a three-part sequence of turns (called the I-R-E) (Mehan, 1979). The sequence typically begins with a teacher initiating question (I) to which the teacher already knows the answer so the student's response (R) is usually very short. The I-R sequence is most often followed by a teacher evaluation move that assesses the pupil's answer. The third move can perform other work beyond evaluation so it is commonly known as a follow-up turn (F) and IRF sequences are ubiquitous: there are many sequences in the same lesson (Macbeth, 2004). Of major concern is the fact that, when recitation and test-like questioning prevail, children with SEN are at risk of minimal participation (Hardman, Smith, and Wall 2005). This problem is at odds with the current inclusion agenda and, worryingly, has not been adequately attended to in either policy or the professional development of education staff. There is evidence that recitation-like teaching modes benefit mainstream pupils, for example in literacy and mathematics lessons (Smith et al. 2004). However, a major concern in the UK is that they disadvantage children with SEN and speech and language difficulties in particular (DCSF 2008b). The reasons are obvious: recitation places heavy demands on the listener in terms of the amount of oral information to process which, for children with any type of difficulty with language learning, can have serious consequences.

In the quest to define high quality classroom discourse, many scholars have stressed the urgency of finding alternatives to recitation (Burns and Myhill 2004; Mercer and Littleton 2007; Skidmore 2006). A well-regarded alternative is dialogic teaching because it addresses the issues associated with minimal participation. Dialogic teaching is characterised by several distinctive features that are useful for both whole class interaction as well as small group work: interactions must be *purposeful*, *cumulative*, *collective*, *supportive* and *reciprocal* (Alexander 2008). The collective principle means that children and adults talk together so adults need to orchestrate how children participate, including how they take turns (Rojas-Drummond et al. 2013). The reciprocal, supportive and cumulative principles are very important because they are all concerned with how ideas are jointly constructed and negotiated: in reciprocal talk children are encouraged to share ideas and listen to each other;

supportive talk means being able to offer ideas freely; cumulative talk entails children building on their own and each others' ideas (Alexander 2008). Finally, classroom discourse needs to be purposeful in the sense that talk should be planned with specific goals in view; these could be educational or therapeutic objectives related to language learning. From these examples it is clear that the principles refer to both the children's verbal activity as well as that of the teacher.

In addition to the above principles, scaffolding is a key theory to explain the high quality classroom discourse that takes place in small groups and one-to-one settings. Scaffolding has its origins in the sociocultural theory of Vygotsky (1981). The theory proposes that, through social interaction with others at the intermental level, young children develop higher mental functions such as thinking and reasoning (Edwards and Mercer 1989). To be effective, such social exchanges must lie within children's 'zone of proximal development' (ZPD), that is, the area between what they can accomplish on their own as opposed to what they can do with the help of more capable others, such as parents (Vygotsky 1978). The ZPD has been developed further and taken from parent-child interaction and usefully applied to educational contexts, especially for children with special educational needs.

An extensive review of scaffolding research concluded that three fundamental principles were commonly found across studies (Van de Pol, Volman, and Beishuizen 2010). The key characteristics are: *contingency*, *fading* and *transfer of responsibility*. Contingency refers to how support is adjusted in the moment, either tailored to the learner's current level of performance or (ideally) to a slightly higher level. An example of such a move would be to use a diagnostic question such as 'What do you think x means?' to ascertain the student's current level of understanding. After listening carefully to the child's response, if the adult pitches the next turn at a slightly higher level, it is possible to claim that she or he is interacting contingently.

The other two principles of scaffolding, fading and transfer of responsibility, are closely interrelated. In the case of fading, the adult would gradually withdraw the scaffold by decreasing support for the student and withdrawing it altogether when it is no longer needed (Van de Pol, Volman, and Beishuizen 2010). How and when to fade within a sequence of discourse is clearly a sensitive matter for adults, as it rests on their appreciation of the learner's competence in given tasks. If fading is successful, responsibility will be transferred to the student.

Based on the above principles of scaffolding and dialogic teaching, the chapter now sets out a framework for language learning through high quality interactions. First, there will be an exploration of how adults and children construct ideas together (topic). The next section illustrates how adults deal with children's errors (repair) and will compare the implications of correction strategies versus prompting children to self-repair. Scaffolding strategies will be explored in more detail in one-to-one and small group work and introduce the useful device of heuristic scaffolding. The final part of the chapter shows strategies for supporting children with word finding

difficulties. Throughout the chapter examples will be shown from both literacy and mathematics lessons.

## 2 Constructing topic together

How topic is generated is at the heart of all classroom interaction. To facilitate language learning, ideas must be jointly constructed by the adult and child together. Studies that use conversation analysis (CA) show that ‘topic’ does not mean *what* is talked about (e.g. holidays, friends) but, instead, *how* it is jointly constructed over a sequence of turns. As mentioned, in the classroom this typically means a question-answer sequence such as a teacher initiation (I) and a child response (R). However, a much richer interpretation of the I-R sequence is needed to gauge if it fits the dialogic principles. Essentially, the adult question must be authentic and make a genuine enquiry to solicit the child’s ideas or opinions. One way of doing this in informal, conversational talk is through a ‘topic elicitor’ (Radford and Tarplee 2000). This typically takes the form of a child-oriented question such as ‘What did you do at the week-end?’ If the child replies with an item of news such as ‘I went to the beach’, the adult can topicalise this in the follow-up (F) turn with a phrase such as ‘really?’ and pursue the child’s topic with a further child-oriented question such as ‘What did you do there?’.

Whilst such an exchange may be useful in the playground and occasional talk in lessons, classrooms do not usually provide many opportunities for informal conversation. However, during a study of specialist activities for children with specific language difficulties, we found a teacher who built into her timetable a daily ‘speaking book’ activity (Radford, Ireson, and Mahon 2006). In this task, the adult and child share a visual resource in the form of a book. Several pictures have been stuck into the book, selected mainly by the child about experiences at home or at school, e.g. holidays, pets, the school play, etc. The pair typically discusses one picture at a time, each page representing a potentially different topic for talk. The technique that the adult uses in Extracts 1 and 2 is a statement that starts with ‘Tell me...’. What is noteworthy here is not the grammatical design; in extract 2, ‘Can you tell me about..?’ is, in fact, a closed question. The important feature is that these turns work as ‘topic elicitors’ because the child treats them as an opportunity to supply news, ideas or opinions.

### Extract 1: Topic elicitors

- 1 Adult Oka::y (.) right (.) what do you want to look at first.
- 2 Child This one.
- 3 (*points at photograph*)
- 4 Adult This one **tell me about this one.**
- 5 Child We were mice in the play and we bobbed up and down.

## Extract 2: Topic elicitor

- 1 Adult **Tell me about this one.**
- 2 Child Uhh there's a girl, and she's crying, because her brother is killed.
- 3 Adult Can you **tell me about the girl?**

When a topic elicitor successfully elicits news or opinions from the child, the adult is able to pursue the child's ideas, as seen in example 2, with further elicitors. The notable feature about these strategies is that they are oriented to the child's ideas and are not therefore pursuing the adult's agenda.

Literacy lessons also lend themselves to dialogic exchanges that involve collaborative topic generation and are therefore very helpful for language learning. One example of a small group task is to construct a story together. The extract shown here is taken from a lesson led by a specialist teacher who has a postgraduate qualification in teaching children with language impairments (Radford, Ireson and Mahon 2006). She works on a daily basis with a small group of eight children, aged 5–6 years old, who mainly have expressive language difficulties. In this activity, the teacher skilfully elicits the children's own ideas through 'topic invitations'. The key point is that she is asking the children to make all of the decisions, including how to open the story, the characters, the setting, the plot, the ending and the title e.g. 'What should we call our story?'. She draws each of their ideas onto a flipchart, thus demonstrating the collective principle of generating a story together. The following extract shows one of the strategies that she employs. In example (3) the group has already responded to the question 'Who should be in our story?' with offering the idea of a 'cheetah', thus deciding the key character. In line 1, the adult uses a topic invitation: 'Where does it live?'. The response to this question is a proposal that the setting of the story is a 'house'. What is also notable about this extract is that the child volunteers further information at line 6 regarding the number of the house ('forty four'). Volunteering of ideas by children in classrooms is rare, which is testament to this teacher's skill in creating a supportive culture for writing the story. The extract also illustrates how she accepts the children's ideas by reformulating them as a narrative and drawing them onto the flipchart.

## Extract 3: Topic invitation

- 1 Adult One day, there was a cheetah. **Where does it live?**
- 2 Child In a house
- 3 Adult In a house?
- 4 Child (*nods*)
- 5 Adult Cheetah lives in a house?
- 6 Child Forty four
- 7 Adult A house called forty four. Okay, here comes the house. One day
- 8 (*draws the house*)
- 9 there was a cheetah, lived in a house, number, forty four
- 10 (*draws roof and door*) (*writes 44*)

One of the notable features of topic invitations is that they are usually designed as 'Wh'-type questions. In addition, they commonly feature the pronoun 'we' ('What/who should we..?') which emphasises the collective nature of the task: it is the joint responsibility of the group to generate the ideas needed for the story. In order for the activity to be effective, however, it needs to be repeated regularly, especially with young children. The example is nonetheless impressive, given that these children are as young as five and have specific language difficulties. This example fits the reciprocal principle very well because the children need to listen to each others' ideas, and also the supportive principle because ideas are freely offered without fear of a negative response to an incorrect answer. The task also satisfies the requirements to be cumulative since everyone's contributions are necessary to build the story.

### 3 Responding to children's errors and misunderstandings

Children with speech, language and communication difficulties inevitably make many linguistic errors, both grammatical and lexical, during their classroom interactions. In addition, their turns frequently lack clarity, especially when complex curriculum concepts are being discussed. There are two ways of interpreting this: on the one hand, their use of language presents a challenge to staff and peers who have difficulty understanding them; on the other hand, their errors and misunderstandings could provide valuable opportunities for language learning. This paper makes the case for the latter perspective because the turn following the child's 'error', according to scaffolding theory, provides a contingent opportunity for supplying a linguistic model that the child will notice.

Conversation analysts use the term 'repair' for sequences of talk that deal with any types of trouble in an interaction (Schegloff 2007). There are different types of repairs, depending on who makes the 'error' and who does the repairing. For the purpose of supporting language learning, there are two notable types of repair sequences: a) other-initiated other-repairs (OIOR), where the adult carries out the repair or correction, and b) other-initiated self-repairs (OISR) where the adult prompts the child to self-repair. However, the implications for learning are very different because, in using OIORs, adults retain a high level of control which means that they are not transferring responsibility to the child for thinking about how to reformulate their language (Radford, Ireson, and Mahon 2012). By contrast, in using OISRs, the adult is not supplying the answer, thus the child is prompted to think about how to reformulate their grammar and/or semantics. We now present some examples and discuss their implications for the child's active participation.

Extract 4, through use of an OIOR in line 3, shows how the adult makes a grammatical correction during an exchange about a picture. The adult's first question

uses the past tense, so when the child gives an answer in the present tense, the adult accepts the meaning of the child's response but changes the erroneous verb form from 'don't' to 'didn't'. The child displays an agreement in line 4 with 'yeah' but this could be a response to the meaning of the adult's turn, as opposed to acknowledging the correction of form. Indeed, the child does not repeat the adult's correction.

#### Extract 4: OIOR as grammatical correction

(talk about a picture book)

1. Adult: What did they do in the story?
2. Child: They **don't** know what to play.
3. Adult: They **didn't** know what to play, did they?
4. Child: Yeah, but I know what the problem,
5. Adult: Mm?

#### Extract 5: OIOR as semantic correction

(talk about a familiar reading book that includes pictures)

1. Adult: Here is a mountain see me ssss
2. Child: (0.4) uhhm **snow**
3. Adult: Good try. see me **ski**
4. Child: Ski,

Extract 5 is also an OIOR but it is different in so far as it involves a semantic error on the part of the child. The adult and child are looking at a picture of a person skiing in the snow. The adult cues the child with the first sound of the word: 'ssss'. The child says 'snow' which is a potentially correct answer, grammatically and semantically, but the adult is following the written text which says 'ski'. After giving encouragement ('good try'), she corrects the child by saying 'ski'. The child repeats this in the following turn which shows that she has made good use of the adult's model.

In order for a correction sequence to help language learning in the classroom, several conditions must be satisfied (Radford 2010). First of all, the corrective turn of the adult must be in the adjacent F turn, following the child's error or unclear turn. In this way, any correction provides a model that ideally contrasts with the child's version. Secondly, the design of the corrective turn must be pitched carefully, as a semantic or grammatical upgrade. When these conditions are met, the repair fits the important scaffolding principle of contingency. Different types of repairs are helpful for children with specific language difficulties, depending on the child's error. For example, a grammatical error would be followed by a reformulation of the grammatical model.

In a study of repair in small group activities for children with specific speech and language difficulties, grammatical corrections were rarely taken up (Radford, Ireson and Mahon 2012). Indeed, out of 99 OIORs, the children self-repaired their

grammar in only three cases. In spite of the lack of take-up, the repair nonetheless offers a potentially valuable linguistic model (of the past tense in Extract 4). By contrast, semantic upgrades of lexical items were frequently taken up by the children (as in Extract 5). The fact that the lexical item was used by the child provides good evidence of the effectiveness of the correction. One of the explanations for the lack of take-up of grammatical recasts is that the correction is embedded rather than exposed. An embedded correction lacks saliency since it is prosodically unstressed. Radford, Ireson and Mahon (2012) make the case that further conditions are necessary to ensure that recasts are noticed. These include: a) placement of the contrastive repair at the end of the corrective turn and b) contrastive stress (loudness) on the repair to expose the model.

As mentioned, one of the main problems of correction, and therefore explicit modelling in response to errors, is that the adult retains a high level of control over the interaction. In some lesson contexts this can be unhelpful because it reduces children's involvement and responsibility for finding the answer on their own.

Other-initiated self-repairs are better for supporting learner independence because the correction is withheld by the adult. Extract 6 shows a teaching assistant (TA) leading a small group reading session. Lines 2 and 3 show the children reading along with her, word by word. Most of the children read the final word 'clothes' correctly, but Mike says 'washing'. In the next turn the TA could have given an outright correction but, instead, she withholds giving him the answer. At line 5 she provides explicit feedback about the precise trouble ('not washing') and prompts Mike with the first sounds ('cl') to find the answer on his own. This is successful because he is then able to self-repair his error. This is good practice by the TA because she encouraged Mike to be independent and think for the answer without over-reliance on her support.

#### Extract 6: Other-initiated self-repair

- 1 TA Now with your pointy fingers. Ok we're going to read together.  
 2 [time, for, all, the, dirty, clothes so  
 3 Group [time, for, all, the, dirty, [clothes  
 4 Mike [washing  
 5 TA Not washing it begins with a cl so its, [clothes  
 6 Mike [clothes  
 [= overlapped speech

## 4 Supporting TAs to use scaffolding

The growth of TAs around the world in recent years has been astonishing. They are currently being used in many countries as a significant workforce for inclusion (Giangreco, Doyle and Suter 2013). What is most surprising is that they mainly play a pedagogical role in supporting children with significant needs, despite the fact



that their training is very different from that of the teacher (Blatchford, Russell, and Webster 2012). Children with speech, language and communication difficulties are frequently at an advantage in this respect because they may be supported directly, or indirectly in a consultative capacity, by a speech and language therapist/pathologist. Therapists may therefore be in a position to advise the teacher about the role of the TA and relevant talk strategies. Although direct therapy, delivered by therapists or their specialist assistants, is arguably the most efficacious, children can make some gains in expressive language skills when similar programmes are delivered by school staff (McCartney et al. 2011). However, the authors note that, in order to be effective, such interventions need to be carefully monitored through on-going training and support.

Therefore, as trainers of TAs, how should therapists prioritise their limited resources when working in schools? Scaffolding is a helpful theory to underpin the work of TAs because one of primary concerns in relation to their support is that the child becomes dependent on the adult. Therapists can help TAs understand the scaffolding principles of fading and transfer of responsibility. Heuristic scaffolding has been shown to be particularly effective in mathematics and literacy lessons because it concerns how children use learning strategies to solve problems (Radford et al. 2014). Heuristic is defined by the Cambridge online dictionary (2012) as: ‘a method of teaching, allowing students to learn by discovering things themselves, learning from their own experiences rather than by telling them’. The purpose of heuristic scaffolding is to empower students by developing their awareness of relevant approaches to problem-solving (Holton and Clarke 2006).

The following examples illustrate three heuristic strategies known as models, questions and prompts. First of all, extract 7 shows a model (in line 7) that affords the highest level of support of the three strategies. This sequence takes place 10 minutes into a mathematics lesson when the students are working on problems set by the teacher. The TA is supporting individuals and small groups in turn when they need help, paying particular attention to those with special educational needs. It is not uncommon for the children to ask the TA questions when they are experiencing difficulty.

Extract 7: Heuristic model (high support)

- 1 TA It is well done, yeah, 34 it definitely is, isn't it?
- 2 Rob What is the model?
- 3 TA Model, model? What do you think that is?
- 4 Rob Mode?
- 5 TA Yes. What is mode anyway?
- 6 Rob Uhh
- 7 TA **Mode (.) most. It sounds similar, doesn't it?**
- 8 Rob Yeah. Most, so that would be eighteen.
- 9 TA Yes it would.

Rob, in line 2, asks the TA about the ‘*model*’ which is an error, given that his current mathematics problem concerns finding the ‘mode’. The TA puts responsibility back to Rob in asking what he thinks it is, thus withholding giving the definition herself. In the next turn, Rob self-corrects to ‘*mode*’ which the TA confirms and puts the question, again, back to him. Line 6 is troublesome in so far as Rob does not supply the TA with an answer. At this point the TA has different options: one possibility is to give Rob the full answer straightaway, for him to repeat, but this would risk closing down his active involvement. Instead, she models a mnemonic strategy, which includes a phonological clue, to help him recall the answer (line 7). Rob repeats her clue and successfully supplies the correct answer. It is notable that the TA creates several opportunities for Rob to take responsibility. The heuristic model can be potentially used by him to self-scaffold, in order to attempt to tackle the problem independently in the future, when she is not there. Heuristic models afford relatively high support by the adult because she is telling him the strategy as opposed to getting him to recall it. In this extract it is used in the context of repair when the student is stuck and needs additional help. In terms of scaffolding principles, the extract amply demonstrates contingency in action but not, in itself, transfer of responsibility.

In Extract 8, the arrowed turn demonstrates the TA’s use of a heuristic question. Such a question nominates a learning strategy whilst simultaneously asking the child to recall part of it. As such, a heuristic question lies in the negotiated zone between the scaffolder and the learner. The sequence is taken from the same mathematics lesson as Extract 7.

Extract 8: Heuristic question (mid support)

- 1 TA Ok, so what would the mode be from that list?
- 2 Scott What’s the mode mean again?
- 3 TA Mode. Mode, **what does it sound like?**
- 4 (1.0)
- 5 TA Mode (.) it sounds like (.) most? Mode yes?
- 6 Scott Oh all right. Most common.
- 7 TA Yes.
- 8 Scott It would be (.) five.
- 9 TA Yes, well done.

The TA begins this episode by asking Scott a question about the mode. As he is in trouble because he is unable to give the required answer, he initiates a repair by asking her for a definition. The TA has the option next of supplying an explanation but, instead, opts to return a question to Scott, thus increasing his responsibility for thinking about the answer. The question is heuristic because it concerns a learning strategy that could help Scott remember the answer on his own. The TA allows him some thinking time to recall the clue but, as his response is unforthcoming, she supplies the model of the hint herself in line 5. At this point the clueing is sufficient

for Scott to recall the rest of the strategy as he is able to say ‘*most common*’. In terms of scaffolding, this sequence shows how support is adjusted over time. The TA first of all uses a lower level device (a heuristic question) and when this fails, she contingently adjusts her support to a higher level (a heuristic model). Yet, even the model affords Scott a degree of independence because it is a partial clue that requires him to retrieve the full definition. The sequence is exemplary practice if the pedagogical goal is to foster student independence, as it clearly operates very differently from supplying the answer immediately.

The third type of heuristic scaffolding, illustrated in Extract 9, gives the child even more responsibility than the earlier examples. Rather than articulating a model of the strategy, or nominating the technique, the TA requires Josh to recall it entirely on his own. The exchange takes place in the second half of the mathematics lesson, referred to earlier, when a new problem is being discussed concerning finding the ‘range’.

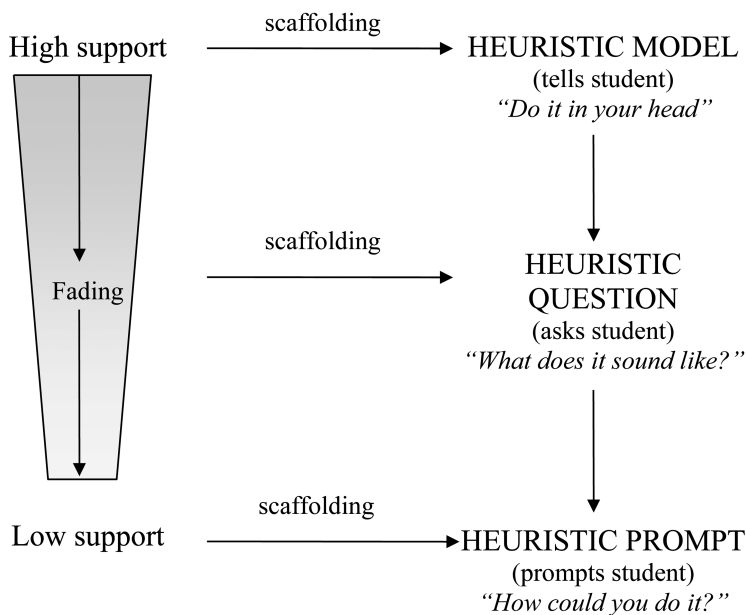
Extract 9: Heuristic prompt (low support)

- 1 TA Oh well done. You’ve done your mode.  
 2 So what would your range be?  
 3 Josh For what?  
 4 TA For fitness.  
 5 (0.3)  
 → 6 TA **How do you find your range?**  
 7 Josh Get the biggest number.  
 8 TA Yep.  
 9 Josh And divide by the smallest number.  
 10 TA That’s not your range  
 11 (0.2)  
 → 12 **From the biggest number:::**  
 13 Josh Divide by the smallest number.  
 14 TA Not divide.  
 15 Josh Take away.  
 16 TA Yes, that’s the one. Well done.

Having completed the ‘mode’ problem, the TA moves on to ask Josh about the ‘range’. Josh (line 3) clarifies the specific question that is being discussed, that is, the range of students’ fitness scores. The first problem arises at line 5 where there is a silence which the TA treats as Josh being unable to select a score. In the next turn, the simplest solution would be for her to tell him the answer but that would increase Josh’s dependence on her. Instead, the question that she uses equates with a heuristic prompt because it invites him to tell her the working out method. This is a low-assistance move as it is designed as an open question, which affords him maximum responsibility for thinking of the answer. Indeed, it is pitched contingently because Josh is able to state the first part of the working out procedure: ‘*Get the biggest number*’. The TA treats this as a partial response, offering confirmation, but allowing him to

continue at line 9: *'And divide by the smallest number'*. Josh has, in fact, attempted to verbalise a heuristic device that he could use to self-scaffold in the future. There is only one problem, which is *'divide'*. The TA recognises this issue and gives him very clear feedback that his verb is incorrect. She pauses for a moment, where he could self-repair, but he does not. At line 12, she repeats his idea from line 7 but does not complete the sentence grammatically, stretching the final sound in anticipation of his completion: *'number:::'*. Designed in this way, the turn works heuristically, prompting Josh to complete the sentence by self-correcting his error, *'divide'*. Josh fulfils the job of completing the sentence but he fails to self-repair his error. It takes one more feedback move from the TA before he arrives at the correct answer. Despite the child's difficulties in this extract, it is notable how the TA persists in using low level strategies that afford transfer of responsibility to the learner. Indeed, it is evident that Josh has been actively involved and that there is a positive outcome for him.

Heuristic strategies operate on a continuum of support to transfer responsibility to the learner. Figure 1 shows the hierarchical relationship between the three types of techniques, according to the degree of support afforded by the TA: heuristic models, questions and prompts. Prompts offer a low level of assistance, and therefore maximum for the learner, questions give medium support. Models offer the highest level of support and are necessary when the student is in difficulty and needs to be told the learning strategy. For a fuller analysis of possible heuristic strategies and their relative strength to assist the learner contingently, see Radford et al. (2014).



**Figure 1:** Hierarchy of heuristic scaffolding

## 5 Children with word-finding difficulties

As has been shown, many valuable language learning opportunities can be offered via contingent talk in small group work. Yet, there are some children who have significant speech and language difficulties that require individualised programmes in classrooms, with strategies tailored to suit their needs. A fairly common example is children who exhibit word finding difficulties. During classroom discourse, such children may have difficulty in answering the teacher or TA's questions and in initiating dialogue with adults and peers. A typical exchange might include silences, search behaviours such as 'uhh' and dysfluencies (Radford 2009). Recalling the dialogic principle of *purposeful*, it is important that all members of classroom staff are equipped with planned responses to support these children's interactions.

Whilst much is known about general strategies to support youngsters with word finding difficulties, little research has explored their actual interactions during classroom learning experiences. A recent study that used CA has shown how a range of supportive devices work on a moment-by-moment basis to evoke the active participation of the child (Radford 2010b). These include the adult use of prompts, hints and models. These strategies operate on a hierarchy of support, depending on the degree of independence offered to the student to find the word themselves.

Extract 10: prompting and hinting

- 1 Adult ... and then what was this one?
- 2 Child We went to (2.6) uh:: (3.6)
- 3 Adult [(**places pen tip on photo**  
Child [ (1.2)
- 4 Adult Who's this?
- 5 Child Santa

First, extract 10 shows that a verbal hint can be useful to increase support after a non-verbal gesture has not helped. When the adult asks a question about a picture of a trip to see Santa, the child begins her news telling but audibly searches for the correct word. Instead of giving her a model of the vocabulary (a high level of support), the teacher prompts her by pointing at the picture with a pen. The child's silence at line 3 is interpreted by the adult as a difficulty in responding so she increases her support contingently by offering a verbal prompt 'Who's this?'. This strategy also withholds the answer which affords the child with the opportunity to self-repair.

Extract 11: hinting and supplying a model

- 1 Adult You've got another picture with an astronaut haven't you.
- 2 Dean Yeah
- 3 Adult D'you think that's the same one?
- 4 Dean Yeah, trying to get to uh: (0.2) it.
- 5 Adult **Trying to get to what?**
- 6 Dean Trying to get to like that, that
- 7 *(points at picture)*
- 8 Adult **To that planet?**
- 9 Dean That planet

Extract 11 demonstrates that the next best strategy after a hint, when a child continues to be in difficulty, is to give an actual model of the elusive word. In describing a picture of an astronaut at line 4, Dean fails to find the word 'planet'. His teacher's following question repeats his actual words up to the point of difficulty. This turn works as a hint as it specifically pinpoints the next word (a noun) but withholds the answer. Dean's problems in retrieving the word continue so the adult finally supplies him with a model (line 8). In terms of scaffolding theory, the three strategies here are related, models offering the most help and non-verbal prompts the least assistance. In order to increase the independence of the learner, models should therefore be avoided as a first offer of support because learners are not prompted to think for themselves. However, when the previous strategies have failed, they may be helpful to reduce the child's anxiety.

## 6 Conclusion

The complex language that is used in inclusive classrooms can be disabling for children who have speech, language and communication difficulties. There is therefore an urgent need to create a language learning environment where the child will succeed in their interactions and avoid failure. This chapter has set out a framework for providing effective language learning opportunities in our classrooms. Evidence has been presented to show how a range of curriculum activities can be adapted in order to optimise the learning of language in small groups. The chapter has shown how high quality, adapted dialogue can be used during everyday curriculum activities such as mathematics and literacy. There are important implications of this framework for the professional development of school-based staff who support children with speech, language and communication difficulties on a daily basis.

First of all, the use of oral strategies needs to be underpinned by a good understanding of dialogic discourse and the key principles of scaffolding: contingency, fading and transfer of responsibility. Open topic elicitors and topic invitations have

a major role to play in fostering the active participation of students to offer their ideas and opinions. When children make grammatical or semantic errors, a first strategy (to promote independence) is the use of other-initiated self-repairs in the form of a prompt. Corrections can also be helpful but they need to be pitched in the learner's zone of next linguistic development and marked in such a way that the child notices the contrast between their error and the correction. Heuristic scaffolding is particularly important because it develops students' awareness of their own approaches to solving a problem. Heuristic strategies include models, questions and prompts and they have relative strength to assist the learner. Finally, for children with word finding difficulties, scaffolding strategies include prompting to offer the least assistance, hints to supply a mid level of support and finally, models of the word or phrase to give the child the answer when they are struggling and in need of most help. It must be acknowledged, however, that the research so far on these intervention strategies has been observational and exploratory. Future studies might therefore be designed to examine whether or not these discourse strategies make a difference to pupil outcomes (academic or social).

Earlier work by the author has shown that classroom-based teaching assistants can make effective use of the aforementioned strategies. Speech and language therapists/pathologists have a crucial role to play in this respect because of their unique expertise in how language learning can be supported.

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