An exploratory study of verbal interaction between children with different profiles of DLD and their classroom teachers in educational dialogues

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Abstract
Children with a history of developmental language disorder (DLD) entering school are a challenge for classroom teachers. Teachers are often not very familiar with DLD, and language difficulties in school age children are often not obvious in context-supported everyday language. However, their language is still vulnerable. The teachers’ way of talking with four children with DLD, two with predominantly production difficulties and stronger language comprehension and two with language comprehension difficulties were studied in two types of context, differing in their degree of structure. Variables for a quantitative analysis were number of words per minute and mean length of utterance (MLU) in words for both teachers and children, and the number of questions asked by the teacher. A qualitative analysis focused on identifying typical characteristics depending on context and the child’s type of difficulties. In both contexts the teachers talked more than the children, but the difference was smaller in the less structured context, mainly because the children talked more. The two children with predominantly production difficulties seemed to take advantage of the opportunities to take initiatives offered in the less structured context. The children with comprehension difficulties function better in the more structured context, where their comprehension difficulties were less obvious. Studies with more rigorous design analysing more aspects of teacher’s interactive behavior in different contexts and with children with different linguistic profiles are needed to provide teachers with information to raise their awareness of how to provide support adapted to the linguistic profiles of children with DLD.
Introduction

Language skills, both oral and written, are of great importance in learning as well as in teaching. Children with developmental language disorder (DLD; Bishop et al., 2017) are at high risk of learning difficulties, particularly when demands on oral and written language skills increase. At school age language difficulties are no longer evident in casual oral communication, but are easily triggered by high demands on language processing. This has been referred to as illusory recovery (Dale et al., 2014; Scarborough and Dobrich, 1990). This is something that teachers need to be aware of, to enable them to make their teaching language accessible for all (Bishop et al., 2012). Here, contextual factors are important. In the present study we explore how vulnerability in different aspects of language in children with DLD interacts with contextual conditions (more or less structure) in a school setting, in relation to the teacher’s awareness of the child’s linguistic vulnerability and of the need for adaptation to the child’s linguistic profile.

II Background

1 DLD in children: Types and trajectories

Some children with DLD have predominantly difficulties in production (phonology, vocabulary and grammar), while others also have difficulties with language comprehension. In cases where language comprehension is implicated, the prognosis is worse (e.g. Bishop and Edmundson, 1987; Durkin and Conti-Ramsden, 2010; Zambrana et al., 2014). It is well known that DLD during the preschool years often persists, in many cases in a life-long perspective, although the symptoms often change during the first school years (Glogowska et al., 2006; Stothard et al., 1998).

In Swedish, as in many other languages, the language production of children with DLD at preschool age is characterized by shorter sentences, difficulties with grammatical morphemes and complex syntactic constructions (Håkansson and Hansson, 2000; Hansson et al., 2000). Even if obvious grammatical errors are no longer present, the increasing demands on language processing and linguistic flexibility in different contexts is a challenge for children with DLD, in particular for those with comprehension difficulties. Lexical and grammatical development are dependent on phonological processing capacity, which is known to be weak in this group (e.g. Adams and Gathercole, 2000; Chiat and Roy, 2008). Poor phonological processing capacity as well as semantic and grammatical difficulties have consequences for the development of literacy (Kamhi and Catts, 2012). The children are challenged by increased grammatical complexity, by encountering words with abstract meaning, in particular if their meaning has to be inferred from the context, and by texts of increasing length. With respect to interactive behavior, Fey and Leonard (1983) pointed out that children with severe comprehension difficulties are likely to also have difficulties with taking part in conversation. According to Perkins’ (2007) interactive emergentist approach, pragmatic (dis)ability emerges from the interaction between a range of capacities (language, cognition, sensory input and motor output systems) in the interpersonal domain, combined with factors from the intrapersonal domain, i.e. the choices and adaptations made within the interaction. From this theoretical perspective it can be assumed that poor language skills, and poor comprehension in particular, make higher demands on the interactional partner, who has to take a larger part of the responsibility for the interaction.
2 Teachers’ knowledge and awareness of language difficulties

Teachers’ language use has to be ‘within reach’ for the children to be able to process the language they hear. Thus, teachers not only need subject specific knowledge and language and communication skills, but also awareness of the child’s proximal zone of development, to be able to interact with the child through the process of ‘scaffolding’ (Vygotsky, 1978). The learning environment for all children will benefit from teachers’ increased knowledge and awareness of the pedagogical needs of children with vulnerable language (Starling et al., 2012). It is therefore important to raise the awareness of teachers of both language development and DLD in children (Bishop et al., 2012; Dockrell et al., 2015; Starling et al., 2012).

3 Teachers’ awareness of the need to adapt to the child

To address awareness of DLD in teachers, as well as in the general public, researchers and professionals in the field have initiated campaigns such as the RADLD (Raising awareness of developmental language disorder; www.youtube.com/RADLD; Bishop et al., 2012). Overall implications for research point to the need for better understanding of how children’s and young people’s needs impact on teaching and learning, and for the development of effective interventions to address the challenges that the children experience. Awareness of what is happening in the classroom as well as in targeted interventions are required (Dockrell et al., 2014).

Bruce et al. (2007) studied how speech and language therapists (SLTs) adapt their interactional style in communication with preschool children with DLD in two different contexts: language training and free conversation. In the free conversation context, the children talked more and had a higher mean length of utterance, whereas the SLTs did not vary their amount of talk, or their number of questions between the two contexts. However, the SLTs linked more often to the child’s focus in the conversational context and the children were more exposed to the grammatical form that was the target in the training conversations.

Cabell et al. (2015) studied the quality of conversations between teachers and children in preschool classrooms and found that the teachers’ use of explicit elicitations and extensions was associated with vocabulary growth in the children. King and Dockrell (2016) explored different types of conversations in a nursery setting. They found examples of both more natural (i.e. informal) conversations and more formal conversations that are characteristic of later language use in school. A mix of these two types offers transitional support and may raise the child’s awareness of language use in different contexts. Furthermore, Dockrell et al. (2015) point to how important it is to support children’s communication skills in the school setting to enhance their language production and comprehension skills. Glover et al. (2015) showed that teachers report that they need to know more about strategies for supporting children with weak language skills:

Teachers in the questionnaire and focus group reported wanting practical ideas and strategies to use in the classroom. (Glover et al., 2015: 373)

4 Aim and research questions

The aim of this study is to explore the interplay between the child’s profile of linguistic vulnerability and the teacher’s interactional style. Speech production and interaction in dialogues between four children and their teachers are analysed. Two of the children have a history of difficulties predominantly in production and two have persistent difficulties in comprehension. The data from each child and teacher include two conversational contexts, differing in the degree of structure. Our main focus is on whether and how the teachers adapt to the child, and how the child responds to this.
Participants
Two boys and two girls participated. All four had a history of DLD diagnosed by an SLT at or before age 4. The children took part in a longitudinal research project (Bruce et al., 2007, 2012). The background descriptions for the present study are from two points in time: at age 4–5 (time I) and at age 9–10 (time II). The main data for the study are dialogues from time II.

At time I all four children performed within normal limits on nonverbal IQ (IQ 85–122) assessed with the Leiter International Performance Scale (Leissner et al., 1962) and passed a hearing screening; for information on gender, age and nonverbal IQ, see Table 1. Language assessment included output phonology, grammar production and sentence comprehension. The results for each of the four children are presented in Table 2.

Output phonology was assessed with a picture naming test eliciting 58 words where all Swedish consonants and the most frequent consonant clusters are represented. The results are quantified as percent consonants correct (PCC; Shriberg and Kwiatkowski, 1982).

Grammatical production was assessed using Gramba (Hansson and Nettelbladt, 2004), a Swedish standardized test with norms up to age 6. Gramba results are quantified as raw score (maximum 46) and percentile score for time I. For time II only raw scores are computed, since the children are above age 6.

Language comprehension was assessed using the Swedish version of the test for reception of grammar (TROG2; Bishop, 2009), except for one child who was not able to perform TROG at time I. His language comprehension was assessed with spåkligt impressivt test [language comprehension test] (SIT; Hellquist, 1989), a Swedish language comprehension test with reference data from a limited number of children with typical language development from age 3 to age 7. TROG is quantified as number of blocks correct and percentiles, SIT as raw score.

<table>
<thead>
<tr>
<th>Table 1. The children's gender, age and non-verbal IQ.</th>
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<tbody>
<tr>
<td>Child</td>
</tr>
<tr>
<td>Phil</td>
</tr>
<tr>
<td>Phoebe</td>
</tr>
<tr>
<td>Charles</td>
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<td>Claire</td>
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<tr>
<th>Table 2. Results for phonology, grammatical production (Gramba) and sentence comprehension (TROG).</th>
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<tbody>
<tr>
<td>Measure</td>
</tr>
<tr>
<td>PCC* time I</td>
</tr>
<tr>
<td>PCC time II</td>
</tr>
<tr>
<td>Gramba raw/46 (percentile) time I</td>
</tr>
<tr>
<td>Gramba raw/46 time II***</td>
</tr>
<tr>
<td>TROG blocks/20 (percentile) time I</td>
</tr>
<tr>
<td>TROG blocks/20 (percentile) time II</td>
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</tbody>
</table>

Notes. * PCC = percent consonants correct. ** Percentiles on Gramba are not presented for time II since this test only has norms up to age 6. *** SIT raw score. The expected score for children this age is 38.

III Method

I Participants

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All four children received language intervention from an SLT during their preschool years. At time II they were attending their second year at school.

Based on these assessments all four children were judged to meet criteria for DLD at time I. All four had significant difficulties with grammatical production. Phil and Phoebe had more severe difficulties with output phonology at time I, but fair or good sentence comprehension, whereas Charles and Claire had less severe phonological output problems at time I, but weaker sentence comprehension. Difficulties with output phonology seem more or less resolved in Phoebe, Charles and Claire. Phil still has difficulties with the fricatives /ʃ/ and /ɕ/, but intelligibility is no longer an issue. Comprehension difficulties persist and even become more severe in Charles and Claire. Based on these results, we group Phil and Phoebe together as Phon-children and Charles and Claire as Compr-children.

At time II the children also performed a nonword repetition (NwRep) task consisting of 30 nonwords. NwRep was quantified as PCC (see Table 3). The expected performance for children in this age range is >90%. All four children perform more than 2 SD below the mean for children aged 8;10–9;9 reported in Hagesäter and Thern (2003). The results from the NwRep task are taken as confirmation of their status as having DLD. In their spontaneous language production, they all produce occasional morphological and syntactic errors and show evidence of formulation difficulties.

2 Material and procedure

At time II conversational data from each child and his/her teacher were collected. Four female teachers, that the children were well acquainted with, participated. The intention was to create two contexts differing in the degree of structure, or teacher control of the conversation. For the less structured context the instruction to the teacher was to motivate the child to talk, choosing a topic they thought might interest the child. For the more structured context the teacher was given the instruction to choose a topic related to what they were working with at school at the moment, and to be explicit about what the child was expected to do. These eight dialogues were video-recorded and transcribed orthographically according to CHAT-principles (MacWhinney, 2000). The CLAN program was used for quantifications. The transcriptions were made by the first author and were checked by the second author. In cases of disagreement consensus was reached through discussion.

The duration of the conversations was around 15 minutes (13:31–16:21; median duration 15:45). Quantitative variables were number words per minute (words/min), mean length of utterance in number of words and the number of questions from the teacher. Utterances where the child read aloud were not transcribed and were thus not included in the production measures.

For the qualitative analysis the transcriptions were carefully read, aiming to capture characteristic features of each dialogue and to identify sequences that were representative of each dialogue as a whole and could illustrate the results from the quantitative analysis. The qualitative analysis was exploratory in nature, aiming to see what sort of analysis was feasible and informative.

<table>
<thead>
<tr>
<th>Child</th>
<th>NwRep PCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phil</td>
<td>69.59</td>
</tr>
<tr>
<td>Phoebe</td>
<td>81.08</td>
</tr>
<tr>
<td>Charles</td>
<td>82.43</td>
</tr>
<tr>
<td>Claire</td>
<td>87.16</td>
</tr>
</tbody>
</table>
The focus is on description of each of the four cases in the two contexts, but for overall comparison between the teachers’ and children’s language production measures Wilcoxon signed ranks test was used. The study had ethical approval from the Regional Ethical Review Board at Lund University (LU631-01 and 42/2008).

IV Results

1 Quantitative analyses

The results from the analyses of language production are presented in Table 4. In seven of the eight dialogues the teacher produces a higher number of words and has a higher mean length of utterance (MLU) than the child. The difference is statistically significant for both measures ($z = -2.1, p = .036$ for words/min and $z = -2.24, p = .025$ for MLU, both with large effect sizes). The exception is Phoebe, who produces more words and has higher MLU than her teacher in the less structured dialogue.

The teachers’ number of words/min and MLU do not seem to be dependent on the type of context, nor on the child’s linguistic profile. All four children produce more words/min in the less structured (43.8–85.8) than in the structured (23.4–30.6) context. The difference between child and teacher is more consistent and larger in the structured context where the teacher produces between 27 and 74 more words/min that the child. In the less structured context this difference ranges between $-16$ and $+59$ words/min. Phil and Phoebe are more talkative (66.6 and 85.8 words/min, respectively) than Charles and Claire (43.8 and 61.2 words/min, respectively) in the less structured context. Furthermore, the difference in words/min between the two types of dialogues is larger in Phil and Phoebe (43.2 and 55.2, respectively) than in Charles and Claire (18.6 and 30.6, respectively). The results for MLU parallel those for words/min.

As a further measure we calculated the total number of questions produced by the teacher in each of the dialogues (see Table 5). There is large variation between the different teachers, in particular in the structured context. However, in each case, the teacher asks more questions in the less structured than in the structured context.

Table 4. Number of words per minute (words/minute) and mean length of utterance (MLU) in words in the two different contexts for the four teachers and children.

<table>
<thead>
<tr>
<th>Child</th>
<th>Structured conversation</th>
<th>Less structured conversation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Teacher</td>
<td>Child</td>
</tr>
<tr>
<td>Phil</td>
<td>50.4</td>
<td>23.4</td>
</tr>
<tr>
<td>Phoebe</td>
<td>104.4</td>
<td>30.6</td>
</tr>
<tr>
<td>Charles</td>
<td>96.0</td>
<td>25.2</td>
</tr>
<tr>
<td>Claire</td>
<td>80.4</td>
<td>30.6</td>
</tr>
</tbody>
</table>

Mean length of utterance (MLU):

<table>
<thead>
<tr>
<th>Child</th>
<th>Structured conversation</th>
<th>Less structured conversation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Teacher</td>
<td>Child</td>
</tr>
<tr>
<td>Phil</td>
<td>4.56</td>
<td>2.33</td>
</tr>
<tr>
<td>Phoebe</td>
<td>7.68</td>
<td>3.20</td>
</tr>
<tr>
<td>Charles</td>
<td>7.69</td>
<td>3.31</td>
</tr>
<tr>
<td>Claire</td>
<td>5.56</td>
<td>2.81</td>
</tr>
</tbody>
</table>
Qualitative analysis

The main characteristics of the conversations are described with examples, to illustrate the differences depending on conversational context (structured or less structured) and on the child’s linguistic profile. The examples are translated into English. Swedish original utterances are only given when pronunciation is commented.

a. Educational conversations. The structured dialogue between Phil and his teacher opens up with a sequence where Phil reads aloud from a text book. The teacher interrupts the reading, commenting on where to make pauses, or on decoding. She also often comments on the pronunciations of words, focusing on the phonemes which Phil still has difficulties with (/ʃ/ and /ɕ/; see Example 1). When the content of the reading is addressed the dialogue takes the form of the teacher asking questions and the child answering minimally.

Example 1.

Teacher: m, wait a minute.
Teacher: tjejer [ɕeːjɵː] {careful pronunciation}.
‘girls’
Phil: tjejer [ɕeːjɵː].
‘girls’
Teacher: kärlek [ɕæːle:k] {careful pronunciation}.
‘love’
Phil: kärlek [ɕæːle:k].
‘love’

Phil seems to tire. He tells the teacher what types of books he likes to read, but the teacher does not give much feedback. Finally, they pick up the topic of mathematics, which is Phil’s favorite subject. This results in a sequence of more symmetrical dialogue.

In the structured conversation between Phoebe and her teacher the first topic is fairy tales that Phoebe has written and is proud of. The teacher changes the topic to words with opaque spelling, and Phoebe reads lists of such words. They also bring up the /r/-sound, that Phoebe has struggled with. The conversation focuses on both the content and the pronunciation, as well as the spelling of words. In cases where words are not pronounced correctly, the teacher and child try to find the correct articulation together.

In the structured dialogue between Charles and his teacher the teacher opens up by proposing that they talk about word classes. Charles does not understand at first. The teacher explains that word classes are about how words can be categorized according to their meaning and function. She successfully manages to make Charles understand what an adjective is (see Example 2). During the

<table>
<thead>
<tr>
<th>Child</th>
<th>Structured context</th>
<th>Less structured context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phil</td>
<td>36</td>
<td>70</td>
</tr>
<tr>
<td>Phoebe</td>
<td>47</td>
<td>60</td>
</tr>
<tr>
<td>Charles</td>
<td>27</td>
<td>69</td>
</tr>
<tr>
<td>Claire</td>
<td>61</td>
<td>88</td>
</tr>
</tbody>
</table>

Table 5. Number of questions asked by the teachers in each dialogue.
continued conversation Charles takes the opportunity to contribute by suggesting more words representing different word classes. The conversation continues to analyse syntax and to focus on agreement between different words in a sentence. They both seem to enjoy the conversation, and both contribute content.

Example 2.
Charles: yes verbs, isn’t that a s- isn’t that a or an adjective, that is one so that you describe.
Teacher: exactly, that’s what you do, you describe, yes.
Charles: like, that it is that that jacket is green.
Teacher: yes, so then green is an adjective, absolutely correct.
Charles: and a verb isn’t that a, isn’t that something you do?
Teacher: exactly.
Charles: like honking.
Teacher: honking for example, quite right.

The structured conversation between Claire and her teacher starts with the teacher explaining that they are expected to talk about something they are doing at school. During the dialogue they work with a crossword puzzle where you are expected to guess words from cues such as a picture, a synonym, a short definition, or the number of letters. Claire is eager to complete the crossword puzzle, but the teacher comments on decoding, spelling and meaning of the words (see Example 3). The teacher and Claire cooperate well and the dialogue is coherent.

Example 3.
Claire: a Rudolph with the red muzzle {reads}.
Teacher: with red?
Claire: the red muzzle.
Teacher: yes, that’s right, the muzzle.
Teacher: do you know that, do you know what that is, Rudolph with the red muzzle?
Claire: I have seen Rudolph with the red muzzle.
Claire: it is a muzzle that is red, he has a cold.
Teacher: m what is, what is muzzle?
Claire: don’t know.
Teacher: where do you have a cold?
Claire: on the nose.
Teacher: that’s right {touches her nose}.
Claire: that is the muzzle.
Teacher: the muzzle is the nose of a?
Claire: horse.

b Less structured dialogues. In the less structured dialogue between Phil and his teacher the focus is on dinosaurs, which is a theme in class. The teacher asks Phil to tell her what he knows about different dinosaurs. They discuss dinosaurs, and their plans for working with dinosaurs in class. Phil is very engaged in the dialogue. He takes an active role and contributes to the discussion with deep interest and knowledge, that he wants to share with the teacher.

Example 4.
Teacher: that was the biggest aha?
Phil: on the whole planet.
Teacher: what is so exciting about that one then, do you think?
Phil: I think that it is so cool.
Phil: it is so forceful and ve- that it can have three long {shows with his hand} fins three metres long.
Teacher: yes.
Phil: and it weighs one hundred and fifty tons.

The teacher opens up the less structured dialogue with Phoebe by asking about Phoebe’s friends, a topic that she engages in. A new opening from the teacher is equally successful. The teacher plans to go to Thailand, where Phoebe has already been. They discuss different aspects of being a visitor in Thailand: the food, the people, transportation, hotels. The teacher shows genuine curiosity and the conversation is lively and balanced (see Example 5).

Example 5.
Teacher: tell me what is different about Thailand!
Phoebe: it is so much warmer there.
Teacher: yes.
Phoebe: and then you live completely differently there I think.
Teacher: how?
Phoebe: you don’t live, so when we live in in Bangkok them’s house hotel was very high house very many storeys.
Phoebe: and the town was a different type, didn’t look like town that we have in Sweden.

In the less structured dialogue between Charles and his teacher the teacher introduces the idea of talking about a book that they have read in class, and to write a review of that book. Charles does not seem to understand what the teacher means. He answers peripherally, or hardly at all. The teacher seems to be aware of Charles’ comprehension difficulties, but struggles to cope with it, and keeps asking quite complex questions (see Example 6).

Example 6.
Teacher: what do you think about the book’s title then?
Charles: no, I didn’t think it was like he wolf, it is not so much, I think.
Teacher: no.
Charles: self wolf.
Teacher: which was?
Charles: which was that dog I think.
Teacher: yes, that’s right.
Charles: was not so much in the book.
Teacher: m.
Charles: was a bit less in the limelight.
Teacher: but was it only the dog that was called wolf?
Charles: yes.

The less structured conversation between Claire and her teacher starts with Claire showing some books, and she tells the teacher which ones she has read. The teacher asks questions about their content, but Claire does not seem to remember. The conversation continues with a discussion about what Claire wants for Christmas. The topic drifts away, from secret boxes to sweets to tooth paste. The teacher does not seem to follow and tries to take the topic back to the immediate school
context. She asks about when it is time for physical exercise, and the topic drifts away to martial
arts and television channels (see Example 7), after a while getting back to the topic of Christmas
gifts. The conversation continues in different directions and Claire does not seem to link to the
teacher’s topic. Finally, they return to the ‘here and now’: the books on the table in front of them.

Example 7.
Claire: Eh no, yesterday I saw Sanna Nielsen {Swedish artist} on television
Teacher: {looks questioning at Claire}?
Claire: you probably forgot to see it, it was in the paper.
Teacher: ok.
Claire: eh {shudders} I got goose bumps.
Teacher: do you like her?
Claire: yes, I get goose bumps every time.
Teacher: hm.
Claire: like {makes a shuddering sound}.
Teacher: I didn’t watch it.
Claire: once once when I was on television, I got a piece of chocolate this big {shows with
her hands}.
Claire: I won over my sister.
Teacher: on television?
Claire: well no, when we were in Stockholm at Gothe – uh at Gröna Lund {amusement park
in Stockholm}, I won a piece of chocolate this big.

V Discussion
The analyses indicate that the teachers did not differ in quantitative aspects of language use (words/
min and MLU) depending on whether the context was more or less structured, although individual
variation was considerable. With only one exception the teachers talked more than the children
irrespective of type of context. This is what would be expected and a parallel pattern was found for
a larger group of children in more and less structured interaction with an SLT (Bruce et al., 2007).
However, the teachers in all four cases asked more questions in the less structured than in the struc-
tured context. This is in contrast to Bruce et al. (2007), who found no difference in number of
questions between the two contexts. Asking questions may be a way of scaffolding a child with
weaker language skills (Iacono et al., 1998). Asking questions may also be a strategy to manage a
conversation with a child, demonstrating interest, and a consequence of the instruction to motivate
the child to talk. In the structured context the teachers gave instructions to the child, and there was
less need for questions.

No difference was found in the teachers’ interactive behavior, neither with respect to amount of
talk or number of questions, based on whether the child had comprehension difficulties or not.
However, the choice of topic for the structured contexts indicated that the teachers were aware of
the child’s area of weakness. For both children with a history of severe phonological difficulties the
focus was on decoding, spelling and pronunciation, whereas with the children with comprehension
difficulties the topics were more about concepts, grammar and narrative skills.

The children produce more words and longer utterances in the less structured context, and this
difference is greater for the two children with predominantly production difficulties than for the
children with comprehension difficulties. This quantitative difference is confirmed by the qualita-
tive observations. The dialogues with Phoebe and Phil in the less structured context run smoothly,
the children contribute information linking to the teacher’s turns and the dialogues are coherent. In
the less structured dialogue with Claire communicative breakdowns and topic drifts are common. The less structured dialogue with Charles is mainly characterized by Charles responding minimally to the teacher’s questions. Charles and Claire thus seem to adapt differently to the situation in the less structured context, but both seem more comfortable in the structured dialogues, which are more predictable. Phoebe and Phil, on the other hand, seem more comfortable in the less structured context. Their language skills are strong enough for them to take a larger part of the responsibility for the interaction, whereas they seem to tire in the structured context. As implied by the emergentist approach (Perkins, 2007) and also observed by other researchers, structural language and type of language difficulties have an impact on pragmatics (e.g. Bruce et al., 2012; Fey and Leonard, 1983). To ensure optimal participation from children in the school setting, it is important make teachers aware of the importance of the interplay between the intrapersonal (the child’s capacities) and the interpersonal domains. They need to be aware of the child’s strong and weak areas, and how to adapt to these in interaction, in order to offer the appropriate degree of scaffolding to support both the children’s structural linguistic and cognitive skills and their pragmatic skills, within the child’s zone of proximal development (Vygotsky, 1978).

When interpreting the results, it is important to keep in mind that this is an explorative study and more research is needed to be able to generalize and draw more definite conclusions. First of all, samples from a larger number of children are needed. It would also be important to include children with typical language development for comparison. A further problem is the lack of standardized assessment with age norms for all age groups. Future studies should make sure all participating children can be assessed in relation to age norms at all time points. Furthermore, each child interacted with a different teacher. A design where the same teacher interacts with children with different linguistic profiles would be more appropriate to investigate teachers’ adaptation to the child’s profile. More specific instructions to the teachers might lead to a clearer contrast between more and less structured contexts. In the present study the degree of structure was more a result than a created condition. The qualitative analysis could also be elaborated, focusing on specific target behaviors. Since the difference between the contexts did seem to reside in other aspects of behavior than amount of language production, a closer analysis of other aspects of teacher behavior, for example their use of different types of questions could be of interest. As an example, Gjems (2010) coded different aspects of how teachers invited children in kindergarten to participate actively in conversations. Open-ended questions, explicit invitation to share thoughts, and giving the children time to answer were successful ingredients. Finally, interviews with teachers discussing their knowledge and thoughts on the issue would be valuable.

VI Conclusions

The main findings indicate that children with different types of linguistic vulnerability benefit differently from different conversational contexts. Those with predominantly production weaknesses seem to take advantage of a less structured context to take up more speaking space, while children with comprehension difficulties need the scaffolding they get in a more structured context, which helps them to stay on topic and to respond adequately. This points to the importance of teachers being aware of children’s linguistic profile, and of the need to adapt their way of communicating.

The most important contribution of the present study is that it indicates that differentiating children with DLD according to their linguistic profiles may be an important ingredient in trying to identify ways to support their language use and language skills in different contexts. Importantly, due to the exploratory nature of the study, definite conclusions are hard to draw, but the results indicate that the proposed issues are worth pursuing in future more extensive and deliberately planned studies.
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