

From incomplete scaffolding to complete scaffolding

Dutch teachers are struggling with reciprocal teaching: How to raise the level of the pupil-pupil dialogue in collaborative groups?

Research Report Dialogic Teaching, Hedi Jansen, June 2012



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Dutch teachers are struggling with reciprocal teaching in a Dutch year 8 class: How can I raise the level of the pupil-pupil dialogue in collaborative groups?

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1. Direct cause of reason. A work in progress.

As a result of my intervention research report for the Master of Education Professional Mastership, which focused on continuing professional development and team learning in a Dutch teacher team by designing a procedure for improving students' comprehensive reading, my colleagues and I kept struggling with the reciprocal teaching strategy. Although students did enjoy working in collaborative groups and were able to summarize the texts given, I was missing a deeper effect on the students' dialogic skills and I was missing the deeper learning by applying correctly the other steps in reciprocal teaching like predicting, questioning and clarifying. Further, students mentioned that they weren't able to transfer the skills to other contexts.

Time to practice during the intervention period was limited: the students experienced the reciprocal strategy only 2-4 times in different subjects. In my own four classes (second year, comparable to the British year 8 classes) I practiced the reciprocal teaching strategy twice in every class.

I decided, according to this research plan for dialogic teaching, to focus on improving my own teachings skills. I realized only improving my own teaching skills could be the key for improving any student skills and I might be able to help my colleagues afterwards improving their teaching skills. Perhaps I hadn't done enough modeling the strategy and hadn't provided appropriate scaffold instruction during the process.

I continued studying literature on reciprocal teaching and dialogic teaching.

The feedback I received from other CamTalk students, after my presentation in Cambridge on March 7, 2012, confirmed my concept research question, which was about the group difficulties like taking the role of the leader and the quality of the dialogue in the collaborative student groups. One of the feedback notes showed: 'Consider how students could question each other and the text (Socratic method)'. The feedback told me also to be patient. Another comment was: 'It took me six months to establish the conditions'.

Finally I decided to write this research report in English, to improve my writing skills in English and make my research also accessible to our English colleagues.

Indeed: learning is a never-ending story.

2. Background of the problem.

There is a lot of evidence of reciprocal teaching, using classroom talk, dialogue and scaffold instruction, being an effective teaching and learning strategy (Palincsar & Brown, 1984; Palincsar, 1986; Alexander, 2006; Doolittle et al., 2006; Alexander, 2008; Marzano & Miedema, 2008; Copper & Greive, 2009; Hattie, 2009; Van de Pol et al., 2009; Van de Pol et al., 2010; Hattie, 2012). Reciprocal teaching consists of four steps: predicting, questioning, clarifying and summarizing. Characteristics of the reciprocal teaching strategy are: The teacher demonstrates and scaffolds, students are working in collaborative groups and students take the role of the group leader by turn.

There was also enough evidence to justify the choice for comprehensive reading. Results in The Netherlands for reading are decreasing according to the PISA 2009 results (Gille et al., 2010). The governmental action plans '*Actieplan leraar 2020-Een krachtig beroep*' (Ministry of OCW, 2011) and '*Actieplan Beter Presteren*' (Ministry of OCW, 2011) aim for improvement of reading and writing skills, especially in Dutch and English language.

I found out that (Table 1):

	Theory	Question
1	'Scaffolded instruction should provide a powerful means of guiding students in the acquisition of new skills' (Palincsar, 1986).	What if I could integrate the dialogic teaching strategies in the reciprocal teaching strategy?
2	'Reciprocal teaching has been designed to be dialogic'. (Palincsar, 1986).	But how can I encourage the dialogue in collaborative groups?
3	'Finding the good right question was the most difficult activity' (Palincsar & Brown, 1984)	So how do students learn to formulate the right question catching the main idea? What has it to do with the modeling and scaffolding I can do as a teacher?
4	'Summarizing was the most helpful activity' (Palincsar & Brown, 1984).	Our second year students (comparable to British year 8 students) confirm that.

Table 1. Theory and questions.

My challenge is to find out what works in my lessons and what doesn't, and to be prepared for the new school year with new students able to act like a more experienced teacher in dialogic and reciprocal teaching.

3. Problem analysis.

What is exactly the problem?

While experimenting working together at a common goal, as a team we designed a reading card, which could function as a model for reciprocal teaching in our classrooms. The card was designed according to the four principles of reciprocal teaching and the lesson methods used in our Dutch language lessons. Some of the team members tried out the reciprocal teaching strategy in their lessons, adapted to the subject they were teaching.

At some extent it worked in practice: pupils liked working in groups and confirmed the strategy being helpful in understanding the text. They also mentioned it helped them to summarize and catch the main idea and they appreciated the help of other group members. Teachers found the strategy to be useful to their own practice; however, they lacked time to implement the strategy properly in their lessons.

As a teacher I discovered how difficult the students experienced taking the role of the leader and asking critical questions about the text. Indeed, there existed a kind of dialogue in the groups, but it was in my opinion not as critical as it could be. Pupils could learn more of this strategy than they actually did within the lessons.

I discovered also another problem. 'A good teacher sees a child's difficulty in learning to read not as a defect in the child but as a defect of his own instruction' (Schön in Mesman & Schut, 2011). Probably, my own teaching skills weren't appropriate. I didn't enough show the modeling before, and I too early transferred the responsibility to the pupils, who weren't able to take over that responsibility yet.

The principles of dialogic teaching, which I learned about during the team intervention September 2011 until February 2012 and the CamTalk lessons, brought me to new insights and ideas:

- What if I could integrate the dialogic teaching strategies in the reciprocal teaching strategy?
- What if I could spend substantial time to learn and teach this strategy?

I decided to focus on:

1. Learning to model and demonstrate the key activities appropriate and focus especially on the activity of question generating. This would be the opportunity for dialogic teaching: a dialogue between teacher and the group with emphasis on purposeful, reciprocal and cumulative talk.
2. Transferring the responsibility to the groups: fade where possible, and act like a coach. The pupils would especially be working on the activity of question generating. Because I wouldn't be able to coach all groups together at the same time, I decided to address the following task to the students: they had to write down their questions and I could provide feedback on the quality and content of their questions in the next lesson.
3. Preparing a plan to implement what I could learn in my next year school practice.

Whose problem is it?

Decreasing comprehensive reading ability is a school wide general problem, or even a national problem (results PISA 2009). In particular it is a student's problem, but that makes it a teacher's problem as well.

Where/when does it occur?

The problem occurs when training comprehensive reading skills in collaborative groups with the students. It's not exclusively a problem of the language subjects. Reading skills are also important in subjects like history, geography and science. In addition, it is important that students increase the skills to work in groups, discuss about topics and learn from each other.

Why is this a problem?

Critical thinking skills and reading skills are very important, because of preparing the students to take part in society and because of the increasing governmental emphasis on lingual skills (especially Dutch and English in the Dutch educational system). One of the core goals of the language subjects is comprehensive reading, but also extending the vocabulary, and discussing in a group (Rijksoverheid. 2010).

The results in languages in the second year classes are moderate and should be raised. Discussing and learning to ask critical questions about a text can contribute to a better understanding and a deeper learning. Not only language teachers are responsible for reading skills, but also teachers in other subjects, like geography, history and science. That means I'm involved as well, as a biology teacher.

What could possibly cause the problem?

The main, current focus of education on test results also implicates a focus on scoring reproductive skills. There is less and less time to practice tasks which don't guarantee an instant test result, but are an investment in future performance. Students aren't challenged to experience deeper learning and deeper understanding, which could contribute to transfer what is learned to other contexts.

SMART:

- Specific:
 - What: improve the quality of the dialogue by question generating in reciprocal teaching;
 - Why: developing critical thinking skills is important;
 - Who: students should improve their dialogic skills;
 - Where: in the lessons;
 - Which: dialogue integrated in the reciprocal teaching strategy.
- Measurable:
 - How many: 3 lessons;
 - How will I know when it's accomplished: written tasks of the students (questions about the text and summaries) can show if there will be a switch from surface, detail questions to deeper, main idea questions, which contain the summary of the text (according to Palincsar & Brown, 1984 and Palinsar, 1986).
- Attainable:
 - The goal can be accomplished by modeling the strategy in dialogue with the students, and then transfer the responsibility to the students themselves by scaffolding the process.
- Relevant:

- Does this seem worthwhile? This will be an investment in a longer term; it will be useful to learn to teach the strategy appropriate and the students will benefit from that.
- Time bound:
 - April and May 2012, 3 lessons in one month.

4. Research questions.

Main research question.

The main research question is:

- How can I raise the level of the pupil-pupil dialogue in collaborative groups using the dialogic teaching strategy incorporated in the reciprocal teaching strategy?

Sub questions.

The sub questions are:

1. What kind of dialogic teaching skills do I need to learn to model and demonstrate key activities appropriately?
2. Under which conditions can I transfer responsibility to the groups?
3. Is it possible to determine progress in question generating ability of the students and how can I determine that?
4. What can I do to encourage the dialogue in the different collaborative groups as a coach when 6-8 groups are working at the same time?

5. Participants and instruments.

Participants:

- A second year class (year 8 students): 13 and 14 years old.

Instruments for observing and monitoring the process:

- Lesson plans of 3 lessons Biology / study skills, in which is focused on reciprocal teaching by modeling the strategy and transfer responsibility to the students in their group work analyzing texts.
- Video registration of the three lessons: this will show the improvement of my teaching skills in dialogue and provide information about the students' skills in dialogue.
- Lesson reports: student's work containing their questions and summarizations: this will show the progress the students make.

The video registrations will be transcribed and used to answer the sub questions and main question.

Research function:

- This research will be a designing intervention.

6. Timeline.

Unless the initial experiments (Palincsar & Brown, 1984; Palincsar, 1986) were 20-day daily sessions, in this project I will have only three lessons to train the students in this small-scale enquiry. In-between those three registered lessons I will practice dialogic teaching in an informal way. The timeline is visualized in Table 2.

Timeline	December 2011	March 2012	March 2012	May 2012	June 2012
Activity	<p>Starting CamTalk Dialogic Teaching module.</p> <p>Lesson 1: starting to teach the reciprocal teaching strategy December, 17</p>	<p>Writing the research plan</p> <p>Discussing with COL and course leaders</p>	<p>Lessons 2a and 2b: groups presenting their own designed case study, peer feedback and peer assessment</p> <p>March, 21 March, 26</p>	<p>Lesson 3a: groups exercising the reciprocal teaching strategy.</p> <p>May, 8</p> <p>Lesson 3b: peer feedback and on the product of lesson 3a.</p> <p>May, 15</p> <p>Collecting data</p>	<p>Writing the final research report</p>

Table 2. Timeline

7. Ethical issues.

There are no students in this class objecting video registration for the CamTalk project. We agreed on that in December 2011.

8. Conceptual design.

The three, videotaped lessons will consist of the following steps (Figure 3):

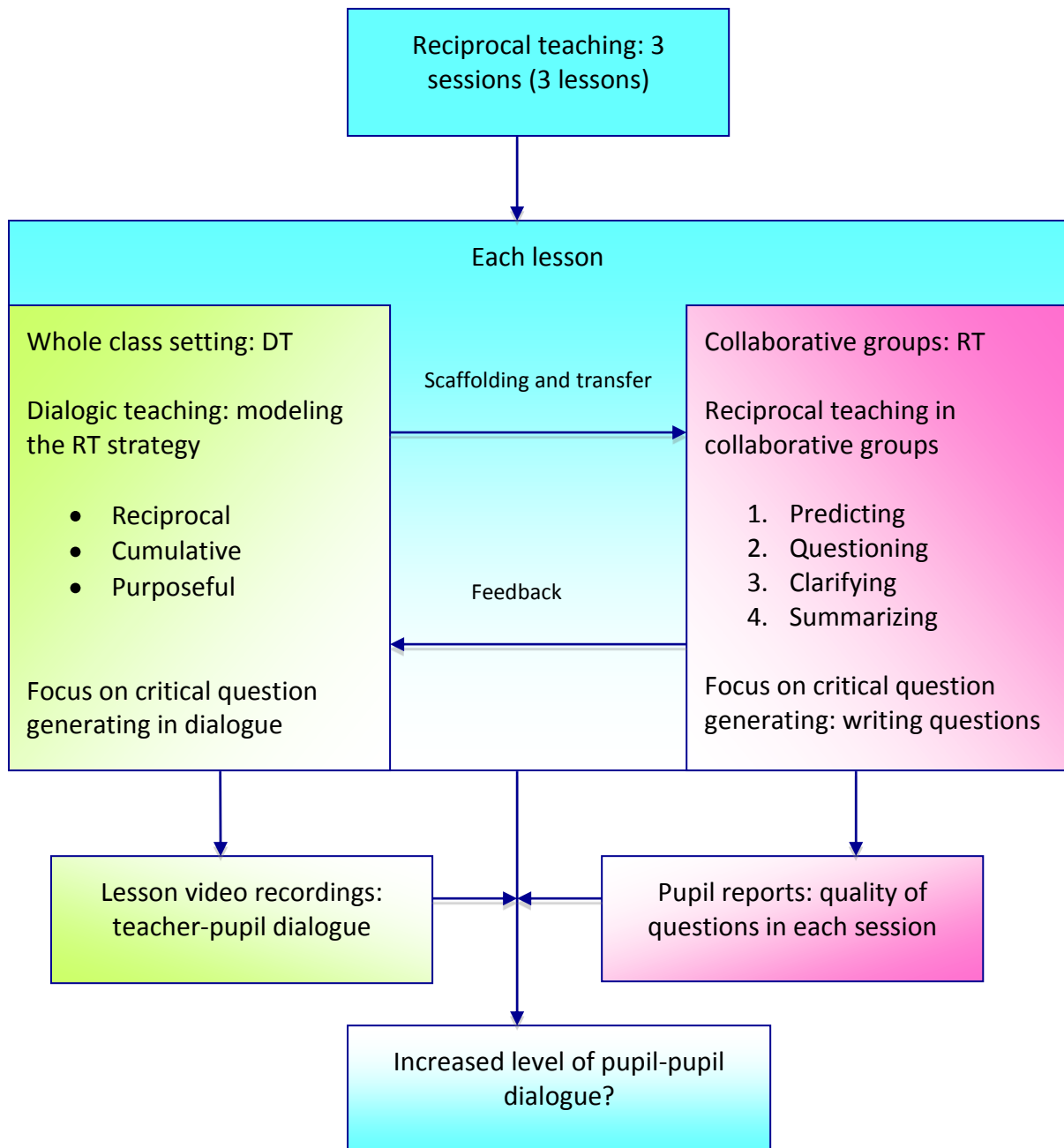


Figure 3. Conceptual design.

9. Results and conclusions for sub question 1-4 and the main question.

To answer these questions in this report is focused on:

- Teacher-class interaction: lesson 2a, 2b and 3b.
- Student-student interaction (in groups): lesson 1 and 3b.
- Teacher-student interaction (in groups): lesson 1 and 3a.

Sub questions.

Sub question 1. What kind of dialogic teaching skills do I need to learn to model and demonstrate key activities appropriately?

Results.

To answer this question there is focused on the teacher-class interaction in lesson 2a, 2b and 3b. In lesson 2a and 2b groups of students presented their own designed cases after a project. After each presentation there was peer assessment and a teacher-class dialogue. In lesson 3b groups of students had been commenting on summaries of another groups, followed by a teacher-class dialogue.

Three examples of these dialogues are illustrated below in Table 6, Table 7 and Table 8. Transcripts of all dialogues are in Appendix 1, 2 and 3.

The different kinds of dialogic teaching are color-coded.

Coding: Dialogic teaching (Alexander, 2008).

- **Collective**: teachers and children address learning tasks together, whether as a group or a class
- **Reciprocal**: teachers and children listen to each other, share ideas and consider alternative viewpoints.
- **Supportive**: children articulate their ideas freely, without fear or embarrassment over 'wrong' answers; and they help each other to reach common understandings.
- **Cumulative**: teachers and children build on their own and each other's ideas and chain them into coherent lines of thinking and enquiry.
- **Purposeful**: teachers plan and steer classroom talk with specific educational goals in view.

Reciprocal Teaching (Alexander, 2008):

- **Reflection**
- *Discussion*
- Arguing

T = teacher	Dialogue 1. Peer feedback on a presentation of another group.	
P = pupil	Lesson 2a, March 21, time 3.57-6.27	
	Teacher-class interaction.	
T	Ladies... compliments. Well, you can stay there, and I'd like to ask the class to hold up the card, from which you think, this is my card. I'll take the criteria. I see all of you have green cards, so I'm going to ask two people with a green card to, oh, I see that P1 even has three cards...	Collective
P1	Yes,	
T	Green, orange, well, P1, can you explain, can you say, this is the reason you chose this card?	Reciprocal
P1	Well, I think the acting and explaining the subject were good.	Supportive
T	Yes, nice compliment ladies. Somebody else in the class, eh, P2, can you add something you say that...	Reciprocal
P2	Yes, I liked it, there was a pause sometimes and someone explained, just a play and explanation.	Supportive
T	Yes, and an explanation, if you would summarize this in your own words, macula degeneration, how would you describe that, for example, P3?	Cumulative
P3	Well, a problem with the cones causes the problem with seeing.	Cumulative
T	That you see less, I think they have well depicted that. Ladies, would you like to react on that?	Reciprocal
P4	Well, we spent a lot of time on the small card...	Supportive
T	The card, very good, and do you say now: the effort we spent on that card, was it worthwhile?	Reciprocal
P4	Well, nobody did actually see it, but it was fun to design it.	Supportive
T	And what could you do to, you have spent a lot of time on the card, which nobody did see, what could you have done to...	Purposeful
P4	Give everybody an example, but we couldn't do that	Cumulative
T	Give everybody one, indeed	Reciprocal
P5	And pass it through	Cumulative
T	Ladies, I want to thank you very much, you have spent a lot of time preparing, I found the content well explained, good basic story, attractive presentation, I agree with the class, compliments.	Purposeful
P4	Thank you	

Table 6. Dialogue 1. Teacher-class interaction.

T = teacher	Dialogue 2. Peer feedback on a presentation of another group.	
P = pupil	Lesson 2b, March 27, time 12.49-15.58	
	Teacher-class interaction.	
T	Eh, ladies and gentlemen, can I have a round of applause for this group... and ladies; please come up front, then we have a look at the opinion of the class.	Collective
T	Ladies and gentlemen, please hold up the cards. I see double combinations: green-orange and I see green combinations. I'd like to do this as followed: I ask one with a green and one with a green-orange card. P1, would you like to react, what is the reason you chose a green card?	Collective
P1	Eh, content was good, because they have explained what a retinoblastoma is, and they have done some inquiry, and I liked it that, because of the PowerPoint you could go into the story, and I liked it.	Supportive
T	Thank you. P2, I see that you have taken a green and an orange card. Can you explain what the reason is for that?	Reciprocal
P2	Well, I liked both groups, but the playing I preferred in the other group, here there was sometimes some noise, and it was less clear.	Supportive
T	And can you explain what do you think the cause is? Could you explain that? Difficult question.	Cumulative

P2	I don't know, because... I found the other presentation a little tighter, you know.	Supportive
T	Tighter. Is there someone, P3, you had also a green-orange card, can you add something to what P2 said?	Cumulative
P3	Well, I thought: the PowerPoint was very nice, but it wasn't actually involved, I think, but if you did not notice that, than you didn't see it, like that, you know.	Supportive
P3	Oh, didn't you notice the PowerPoint?	Supportive
P3	And further, I mentioned that they were throwing the baby, like.... Here it is.	Supportive
T	You were very much like in the story. Would you like to react on that, ladies?	Reciprocal
P4	Well, we added the PowerPoint to help seeing what the story was about.	Supportive
P5	At first, we had a beautiful one, but it was cleared during the break, so we had to create a new one very quickly.	Supportive
T	Well, you did restore the problem in a very short time, which I find very clever. Can you imagine the feedback the class has given to you?	Reciprocal
Group (P4 + P5)	Yes,	Collective
T	Could you also draw lessons from that? What could you do if... where would you work on a next time, this, or that or that?	Purposeful
P5	Yes, but you will not succeed in that, because I always had to laugh, and...	Supportive
T	Yes, so basically holding your role.	Cumulative
P3	I didn't expect anything else with you...	Supportive
T	Well, ladies and gentlemen, I would at least give you compliments, because you had chosen a difficult case, and you worked out the content very well. Indeed you can hold your roles more, that is a matter of practice a lot. I find it quite amazing that you, despite the bad luck with the PowerPoint that was lost, I know how much time you spent on this presentation. What I would like to say is the point of acting itself, it may take some more concentrated, I sometimes had the idea there were pauses, and than you lose some attention, and you grab back the attention, but, that's something to improve. Well done. Next group.	Purposeful

Table 7. Dialogue 2. Teacher-class interaction.

T= teacher	Dialogue 3. Peer feedback on writing a summary of a text and an additive paragraph for the textbook.	
P = pupil	Lesson 3b, May 15, time 20.59-25.03.	
	Teacher-class interaction.	
T	Well, ladies and gentlemen, I want like to ask every group if you agree with the opinion of the other group with your written piece. P8, please take attention. I would give the word to, at random... please listen. I would give the word to the group of P1. P1, maybe would you...	Collective
P1	Oh, you mean the ...	Supportive
T	Tips and tops...	Reciprocal
P1	Eh, eh, the tip is eh, longer and it should say more about the text, and, actually it it's not a top, but...	
P2	Oh, yes, but that is in the plus sign above...	Cumulative
P1	Oh, and it's a nice color, and well written, and it also says, it's very short and it does not include the text, but it includes what Anne has experienced.	
T	And is there also something mentioned how it could be improved?	Reciprocal
P1	No	
T	Nothing?	Reciprocal
P3	Indeed, it says 100 times longer	Cumulative
T	P3, you wrote this, P3 would you like to react on this?	Reciprocal
P3	It says that, say; it has to be longer next time.	Supportive
P1	Yes, but what has to be longer?	
P4	You can also write down a line of aaaaaaaa's, and then it is also longer.	
P2	It says only: in general	
P1	Yes, but in biology in the textbook you just don't...	

T	Eh, ladies and gentlemen, we go a bit further... I notice that it sometimes provokes discussion. I keep my conclusion for myself for a while, you will hear that later, and now go the four gents. P5, what is the feedback you have received and what is your reaction on that?	Collective
P5	Eh, we had two tops, the information was top and the info is useful, and the tip was: give each other also... but the tip was just in... at HIV.	
T	You say: give information about HIV, but you have mentioned that in your summary.	Reciprocal
P5	Yes, not very specific, but what it implies about.	Supportive
T	But how would you want to conceive, as they describe that?	Cumulative
P5	Yes, to mention it more specific.	Cumulative
T	Next group. P6, you may react later. Or do you want to react on what P5 says?	Reciprocal
P6	Yes,	
T	Yes, because you wrote the feedback for them, okay.	
P6	Yes, because you said it should be written for the textbook of biology, so that's why we didn't make it personal, because that is not in the biology book, and they had made it very personal and that's why we advised them to give more information about...	Supportive
T	Please listen, because it's also useful for you guys...	
P6	The disease and how you can prevent that.	Supportive
T	Yes, so you actually say: the assignment was: write a paragraph for the biology book, that shouldn't be too personal, because otherwise you would write another kind of text.	Reciprocal
P3	But sometimes there is a personal note...	Supportive
T	You say, indeed, there is a personal item. I'll be there shortly to return, because maybe my assignment should have been clearer, I should have said something about that. It could have been a personal assignment or a general story. I didn't do that.	Supportive
P6	We made it generally.	Supportive
T	So it's how you conceive...	Cumulative
P7	So both are good.	Cumulative
T	But you get there by working with each other in dialogue.	Purposeful

Table 8. Dialogue 3. Teacher-class interaction.

Conclusions.

All kinds of dialogic teaching skills are needed. First is started with collective talk (mostly provided by the teacher), followed by reciprocal talk (teacher) and supportive talk (students). Later in the dialogue cumulative talk will appear (teacher and students) and finally there is purposeful talk (teacher).

In lesson 2a, 2b and 3b it became clear that there was advancement in the dialogue. A dialogue in peer assessments starts with collective talk (mostly from the teacher), then focuses on reciprocal talk (mostly from the teacher) and supportive talk (mostly students), in the second half of the dialogue there is cumulative talk (teacher and students) and finally there is purposeful talk (teacher). More examples in Appendix 2.

Sub question 2. Under which conditions can I transfer responsibility to the groups?

Results.

It's not easy to answer this question, because this hasn't been analyzed structurally. But in this case study it's possible to indicate some points of interest in the video-stimulated-recall of lessons 1, 2a, 2b, 3a and 3b.

In lesson 1 transfer of responsibility to the groups is tried for role taking and making a summary of a text. All groups were able to produce a summary, but the roles weren't clear for all groups.

In lessons 2a and 2b transfer of responsibility to the groups occurred within the task of preparing a presentation of an own designed case. That worked out. For the peer feedback and peer assessment there was a shared responsibility between the class and the teacher.

In lessons 3a and 3b transfer of responsibility occurred for role taking and making a summary of a text. Compared to lesson 1 there was a progress visible in role taking skills. Shared responsibility between the class and the teacher was taken for peer feedback and peer assessment.

Conclusions.

So transferring responsibility to the groups depends on the kind of responsibility and on the task. If students are able to take responsibility for their roles (i.e. group leader), they can learn to take responsibility for their dialogue. If they are not able to deal with a relative easy task, they cannot be asked to work on a more complex task. The level of dialogic skills of the students should be related to the level and complexity of the task. It's the way of scaffolding and the opinion of the teacher that determinate whether and to which level the responsibility can be transferred to the students.

For example: if the students in this case study can't deal with their roles in the group, are not familiar with the reciprocal teaching strategy and do not know in which way they can give feedback to each other, they can't be asked to generate questions in the question stage of reciprocal teaching. Taking as much exercise as possible in these skills will increase their skills.

Sub question 3. Is it possible to determine progress in question generating ability of the students and how can I determine that?

Results.

T = teacher	Dialogue 4. Discussion about the task and role of group leader (RT)
P = pupil	Lesson 1, December 19, time 23.35-24.37
	Student-student interaction.
P1	We are not really like a group.
P2	Oh, you are going to designate the group leader.
T	Group leader, you had the heart card.
P2	Eh, okay.
T	No, P2, today you are the group leader
P2	What is this? Yes, yes, you take the text and tell P3 what he has to do, which words he finds difficult.
P3	Okay
P2	And you write them down.
P1	Okay, but I think no one is difficult
P2	But you write one down.
P1	Guys, we just tell that we think no one is difficult, however, more nicely said?
P2	Shall we...
P1	Then I do it differently...
P3	Who are policy makers?

Table 9. Dialogue 4. Student-student interaction.

T = teacher	Dialogue 5. Discussion about the task and role of group leader (RT)
P = pupil	Lesson 1, December 19, time 27.59-28.27
	Student-student interaction.
P1	Chil-dren, brains, what are you laughing about, P2?
P2	I'm really not going to write down your story, because I ...
P3	I'll bet you do!
P2	The substances in alcohol...
P4	That's even not in the text
P2	Yes, but I know
P4	Yes
P3	But it's not about that!
P2	Yes, but that doesn't matter
P3	...
P2	Not
P3	Therefore, I'll write affected instead of that other...

Table 10. Dialogue 5. Student-student interaction.

T = teacher	Dialogue 6. Discussion about the stage of question generating (RT):
P = pupil	Lesson 3, May 8, time 27.32-28.11
	Student-student interaction.
P1	Why isn't it 'why'?
P2	Why
P3	But that is... it's not a question
P2	Yes, it is.
P3	But that's not one of the five...
P4	True, why
P1	Just do 'why', or not?

P4	The group leader
P2	Why, just write... how, how did she get it
P3	When, what...
P4	Why
P4	And when, you can also say when
P1	Yes, but we already have...
P2	What, what what what what did she get
P2	Who
P2	Who can get it, or something
P3	Yes
P4	Or when do you get it
P4	Why do you get it?

Table 11. Dialogue 6. Student-student interaction.

Conclusions.

Dialogue 4 (Table 9, lesson 1) is an example of roles (reciprocal teaching) not being clear.

Dialogue 5 (Table 10, lesson 1) is an example of the task (reciprocal teaching) not being clear.

Dialogue 6 (Table 11, lesson 3) is an example of roles and task (both reciprocal teaching) being clear, but there is a discussion on the question generating stage in the reciprocal teaching strategy. It's not possible to determine progress in question generating yet, but there is a progress in how to deal with task and roles. Students are still practicing.

Sub question 4. What can I do to encourage the dialogue in the different collaborative groups as a coach when 6-8 groups are working at the same time?

T = teacher	Dialogue 7. Question of one group member reading a text about a possible vaccine for HIV.
P = pupil	Lesson 1, December 19, time 39.10-40.59
	Teacher-group interaction.
P1	Summary was not that.... They were already thinking, which vaccine can neutralize HIV, and, I don't know, but that's it I think.
T	But does that vaccine already exist? Or has it yet to be invented?
P1	No, according to me they make...
P2	What can neutralize something?
P1	Eh, the vaccine against HIV...
P1	That can neutralize it and then they are, well, it has been investigated for a long time, because it's a problem.
T	Is there still somewhere something in the text why it's a problem?
P1	It's probably because so many people die or something.
T	Well, I can give you some additional information, the problem of HIV is that it settles in the cells, which make antibodies, or help other cells to make antibodies, and if these cells are no longer able to help, those other cells can't produce antibodies anymore. The immune system is, as it were, inactivated.
P1	O, so that means that you don't die from HIV, but from a very small thing.
T	Yes, it's not because of the HIV virus itself, but more often because of having another virus infection, that your immune system can do nothing to. That's the biggest problem of aids. You can die from an ordinary pneumonia, if you have aids.
P1	But why they call it HIV, and not aids?
T	Aids is the disease, that is the acquired immune deficiency syndrome, and HIV is a kind of ... (no longer possible to be understood).

Table 12. Dialogue 7. Teacher-group interaction.

T = teacher	Dialogue 8. Question of one group member about text of a HIV infected girl.
P = pupil	Lesson 3a, May 8, time 21.19-25.44
	Teacher-group interaction.
P1	What does self-insemination mean?
T	Ask your group.
P2	That means that you...
P3	That means that you can have children, but that you don't have sex, so he doesn't get infected. But I have also a question.
T	All right that you ask a question now. You are now following this step (Teacher points on the reading card).
P3	But I have another question. Is the HIV in your blood? Does it?
P2	Yes
T	Maybe...
P3	Yes, because if you could replace all the blood of somebody.
T	What do you guys think about that?
P2	It's in your blood.
P4	Yes, oh...
P1	Maybe it's also...
T	Do you remember what you have learned in chapter 2, about the immune system?
P3	Yes, that breaks down because of that, eh., something. Well, those HIV cells destroy everything and that makes that those cells can't attack an ordinary infection.
T	And which cells do they destroy?
P3	Those, which can heal you again.
P1	White blood cells.

T	Yes, you know two types of white blood cells, it' has been a while ago, that story
P4	The eating cells and the memory cells.
T	Yes, and which part of the, what does which cell do?
P4	That eating cell beats... o, and those eating cells, eh, ... memory cells, which, eh...
T	Yes, those eating cells indeed ate something; they ate a kind of bacteria.
P1	Cells which apparently are smaller
T	Yes, and how did the virus work, what had it to do with the memory cells?
P3	O, but then it probably destroys memory cells, so you can't be immune for different diseases.
T	Eh, could be possible, but those memory cells, there was something else. What did these cells, which can attack viruses, make?
P1	Antibodies.
T	Antibodies. What happens if somebody cannot make antibodies?
P3	You can receive blood from every other blood group.
T	So, suppose you have no more cells left which can make antibodies. A virus infects your body.
T	P2, what did you say?
P2	Can it not be beaten?
T	It cannot be beaten. And what happens then?
P1	Then it makes all kinds of...
T	So, for example a cold, a virus comes in and you have to fight that virus. What could happen?
P3	That, I don't know, but I don't understand, because if you have aids, you need a cleaning infusion, or something, where your blood is purified, so that you...
T	Well, they have a lot of medicines, but if you...
	That HIV, we agree, attacks cells that make antibodies, in any case the cells, which fight diseases. So the cells that fight diseases are no longer able for that. And then you get other diseases, like an ordinary cold, which infects the lungs as well, you have pneumonia and eventually you even can die from a simple pneumonia. That's HIV; it destroys the cells that fight diseases. And now back to your question, because your question was...
P3	If you, actually, what should, it would, or where is, if, suppose, HIV would only settle in your blood, you could replace all the blood?
T	Yes, you mean every day a blood transfusion, to speak, with healthy cells, maybe that would be possible, but in reality that doesn't work like that.

Table 13. Dialogue 8. Teacher-group interaction.

In Dialogue 7 (Table 12) the teacher gives answers and provides feedback to the student, but doesn't let the student think herself. The teacher does not involve the other students of the group in the dialogue. In Dialogue 8 (Table 13) there is a progress visible in teaching skills of the teacher. The teacher involves all group members in lesson 3a in answering the question rather than in lesson 1 and is directing the dialogue. Teacher gives back the questions to the students referring to what they have learned before to let them think themselves about the question of their group member, with a final goal in mind. But the other dialogues (i.e. Dialogue 1, 2 and 3) demonstrate that, when the teacher is away, students have to learn to dialogue themselves. Whether they succeed in dialoguing or not, depends on the composition of the group or of other factors.

10. Conclusions.

Main question. How can I raise the level of the pupil-pupil dialogue in collaborative groups using the dialogic teaching strategy incorporated in the reciprocal teaching strategy?

It's complex. Raising the level of the dialogue depends on different factors. It has to do with:

- The kind of instruction provided by the teacher.
- The complexity of the task
- The scaffolding the teacher provides.
- Involving all students in peer feedback and peer assessment.
- Providing opportunities to practice.

But it's clear that if the conditions are right for dialogic teaching, this is a condition for dialogue in groups when practicing the reciprocal teaching strategy. What the teacher demonstrates, practices and scaffolds, finally will convince the students to do the same.

If looked at the levels of interaction the following conclusions can be drawn:

- Teacher-class interaction (lesson 2a, 2b and 3b). All kinds of dialogic talk are needed in an order.
- Student-student interaction within groups (lesson 3b compared to lesson 1). Interaction depends on the task they do. Increasing complexity in the task means that dialogic skills of the students have to increase as well.
- Teacher-student interaction in groups (lesson 3a compared to lesson 1). Interaction has improved. The teacher does involve the group members more than before. Also the teacher challenges the students to think about their own questions and answers rather than providing the answers for the students.

The link between theory and practice is illustrated in Table 14.

Theory	Practice mini research
<p>'Scaffolded instruction should provide a powerful means of guiding students in the acquisition of new skills' (Palincsar, 1986).</p>	<p>In this mini research design I found out that it's true. Students have been practicing new skills like taking roles, have been working on new tasks, have been giving peer feedback and peer assessment and have practiced dialoguing.</p>
<p>'Reciprocal teaching has been designed to be dialogic'. (Palincsar, 1986).</p>	<p>Indeed, there is a dialogue in reciprocal teaching. There is a dialogue between student and student, between student and teacher in groups and between the class and the teacher. But the quality depends on the scaffolding the teacher provides.</p>
<p>'Finding the good right question was the most difficult activity' (Palincsar & Brown, 1984)</p>	<p>It still is for my students.</p>
<p>'Summarizing was the most helpful activity'</p>	<p>And it helps when students work on a</p>

(Palincsar & Brown, 1984).

meaningful task like sharing their summarizations in the expert method in lesson 1 or write a paragraph for their textbook in lesson 3.

Table 14. Theory and practice.

In this case study the propositions above (Table 14) are confirmed.

It has not yet been possible to indicate a higher-level dialogue between the students. Still there is a lot of discussion in the groups, and there is no advancement in the talk between the students in the groups. But there is a progress in taking responsibility for their roles. There is more focus on the task, and less irrelevant and inferring matter in their talk.

If dialogue is guided by the teacher (i.e. in whole class peer feedback and peer assessment) it is discovered that there is an order in dialogue. Collective talk is followed by reciprocal and supportive talk. Afterwards cumulative talk appears and finally purposeful talk. Teacher skills have improved: there is more dialogue in the lessons than there was before starting the Dialogic Teaching course.

11. Discussion.

In this Dialogic Teaching course I did find some answers. My teaching skills will never be appropriate. But I'm a learner. I have learned to teach in a more dialogic way. I've learned that I can direct the process of dialogue in the class. Besides, I have learned to integrate the dialogic teaching strategy in the reciprocal teaching strategy. I have learned to transfer responsibility to the groups, indeed not in the reading tasks, but in their presentations of the eye project (lesson 2a and 2b). I have learned to practice peer feedback and peer assessment in my class. It increases the engagement of the students in their lessons. In that way lesson 2a and 2b were the climax: students have been creating their lessons themselves. They had prepared their presentations well, presented them to their peers, and provided feedback to each other. They learned from and with each other.

But I'm just a beginner. I have to practice and practice again. Scaffolding students involves scaffolding myself. At first, I had to learn to build the scaffold around myself. Then, I had to climb the scaffold. Now I've learned to stand on my own two feet. Learning to walk is the next step.

12. Acknowledgements.

In this learner report I focused on developing my own teaching skills in dialogic teaching. It was an orientation on a subject that needs more research. But it's not more than a case study. To do valid and reliable research it is necessary to follow certain groups in a range of lessons to find out if discussion evolves in dialogue. That will need a certain amount of time.

Next school year I will continue the reciprocal teaching strategy with my team. We will start in September 2012 with our first year (year 7) students. We will scaffold the process in the following way:

- At first in September all year 1 students will learn to use the basic strategy in comprehensive reading in their Dutch course.
- Then in October/November the mentors of the classes will continue teaching shared learning strategies like role taking in the course Study skills.
- From December till June all teachers will exercise the reciprocal teaching strategy and integrate it in their lessons.
- Meanwhile there will be supervision, collegial consultation and peer feedback between the involved teachers.

Dialogic teaching needs to be explored more than there is now. I have started to train my own teaching skills in dialogic teaching and reciprocal teaching. The most important acknowledgement therefore is: keep practicing!

13. Literature.

Alexander, P.A. (2006). *Psychology in learning and instruction*. New Jersey: Pearson Merrill Prentice Hall.

Alexander, R (2008). *Towards dialogic teaching. Rethinking classroom talk*. Cambridge: Dialogos UK Ltd.

CED Groep. *Handleiding Nieuwsbegrip. Begrijpend lezen met het nieuws van de dag*. Algemene handleiding bij alle versies. Obtained on January 25, 2012 via http://www.destrandwacht.nl/leerlijnen/images/6/6c/Algemene_handleiding_nieuwsbegrip.pdf

Cooper, T. & Greive, C. (2009). The effectiveness of the methods of reciprocal teaching. *Education Papers and Journal Articles*. Paper 7. Obtained on November 15, 2011 via http://research.avondale.edu.au/cgi/viewcontent.cgi?article=1007&context=edu_papers&ei-redir=1&referer=http%3A%2F%2Fwww.google.nl%2Furl%3Fsa%3Dt%26rct%3Dj%26g%3Dreciprocal%2520teaching%2520hattie%26source%3Dweb%26cd%3D3%26ved%3D0CDkQFjAC%26url%3Dhttp%253A%252F%252Fresearch.avondale.edu.au%252Fcgi%252Fviewcontent.cgi%253Farticle%253D1007%2526context%253Dedu_papers%26ei%3DkuUrT9_cK4-aOs2Jnf8N%26usg%3DAFQjCNFNDNeVhuOHorqxyakfB3zym4M8Sg#search=%22reciprocal%20teaching%20hattie%22

Doolittle, P.E; Hicks, D.; Triplett, C.F; Nichols, W.D & Yong, C.A. (2006). Reciprocal teaching for reading comprehension in higher education: a strategy for fostering the deeper understanding of texts. *International Journal of Teaching and Learning in Higher Education*. Volume 17, Number 2, 106-118. Obtained on February 29, 2012 via <http://www.isetl.org/ijtlhe/pdf/IJTLHE1.pdf>

Ebbens, S. & Ettehoven, S. (2005). *Samenwerkend leren*. Groningen: Wolters-Noordhoff.

Gille, E., Loijens, C., Noijons, J. & Zwitser, R. (2010). *Resultaten PISA-2009 in vogelvlucht. Praktische kennis en vaardigheden van 15-jarigen. Nederlandse uitkomsten van het Programme for International Student Assessment (PISA) op het gebied van leesvaardigheid, wiskunde en natuurwetenschappen in het jaar 2009*. Rijksoverheid. Obtained on April 21, 2011 via <http://www.rijksoverheid.nl/documenten-en-publicaties/rapporten/2010/12/07/rapporten-resultaten-pisa-2009-in-vogelvlucht.html>

Hattie, J. (2009). *Visible learning*. Oxon, London: Routledge.

Hattie, J. (2012). *Visible learning for teachers. Maximizing impact on learning*. Oxon, London: Routledge.

Marzano, R. & Miedema, W. (2010). *Leren in 5 dimensies*. Assen: van Gorcum.

Mesman, C. & Schut, R. (2010). Talent alleen is niet voldoende. *Van twaalf tot achttien. Vakblad voor voortgezet onderwijs*. Februari 2011, 22-23.

Ministerie van Onderwijs, Cultuur en Wetenschappen (2011). *Actieplan leraar 2020 – een krachtig beroep*. Kamerstuk 23 mei 2011. Obtained on May 31, 2011 via <http://www.rijksoverheid.nl/documenten-en-publicaties/kamerstukken/2011/05/23/actieplan-leraar-2020.html>

Ministerie van Onderwijs, Cultuur en Wetenschappen (2011). *Actieplan Beter Presteren: opbrengstgericht en ambitieus*. Kamerstuk 23 mei 2011. Obtained on December 20, 2011 via <http://www.rijksoverheid.nl/documenten-en-publicaties/kamerstukken/2011/05/23/actieplan-vo-beter-presteren.html>

Onderwijsraad (2011). *Advies Naar hogere prestaties in het voortgezet onderwijs, uitgebracht aan de Minister van Onderwijs, Cultuur en Wetenschap*. Den Haag: Onderwijsraad.

Palincsar, A. & Brown, A. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and instruction*, 1984 I (2) 117-175. Lawrence Erlbaum Associates Inc. Obtained on November 15, 2011 via <http://people.ucsc.edu/~gwells/Files/Courses Folder/ED%20261%20Papers/Palincsar%20Reciprocal%20Teaching.pdf>

Palincsar, A. (1986). The role of dialogue in providing scaffolded instruction. *Educational Psychologist*, 2 (1&2), 73-98. Lawrence Erlbaum Associates Inc. Obtained on February 29, 2012 via http://dx.doi.org/10.1207/s15326985ep2101&2_5

Pol, J. van de, Volman, M. & Beishuizen, J. (2009). Patterns of contingent teaching in teacher-student interaction, *Learning and Instruction*, doi: 10.1016/j.learninstruc.2009.10.004. Article in Press obtained on October 16, 2010 via http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VFW-4XR5W37-1&_user=10&_coverDate=11%2F18%2F2009&_rdoc=1&_fmt=high&_orig=search&_origin=search&_sort=d&_docanchor=&_view=c&_searchStrId=1507738279&_rerunOrigin=scholar.google&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=61168598b4dbc87d11f690b88b22aa23&searchtype=a

Pol, J. Van de, Volman, M. & Beishuizen, J. (2010). Scaffolding in Teacher-Student Interaction: A Decade of Research. in *Educ Psychol Rev* 22:271–296. DOI 10.1007/s10648-010-9127-6. Online article obtained on October 16, 2010 via <http://www.springerlink.com/content/48x3111740uw6255/fulltext.pdf>

Rijksoverheid (2010). *Kerndoelen onderbouw voortgezet onderwijs*. Obtained on January 25, 2012 via <http://www.rijksoverheid.nl/documenten-en-publicaties/besluiten/2010/09/17/kerndoelen-onderbouw-voortgezet-onderwijs.html>

SLO (2010). *SLO-Analyse Nieuwsbegrip*. Obtained on January 25, 2011 via http://backend.nicl.nl/data/documenten/1034_rapportage%20kerndoelanalyse%20nieuwsbegrip%20definitief%20_2_.pdf