

AVT THESIS

Students' Metacognitive Knowledge about the Use of Reading Strategies

Trained by Peer-Led Discussions

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Word count: 7965 words

Date: July 5, 2021



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Abstract

Reading comprehension processes involve forming connections between the text and relevant prior knowledge (Kintsch, 1988). To reach this goal, students can use reading strategies and their metacognitive knowledge (Pintrich, 2002; SLO, 2018). In peer-led discussions, students have the opportunity to gain more metacognitive knowledge about reading strategies, because they interact about their interpretations with other students (Gambrell, 2004). This study assessed students' individual reading approaches before and after the peer-led discussions by observing talk-aloud protocols. Six students participated in the peer-led discussions and five classroom peers acted as a control group. The results, both before and after the intervention, showed that all students used higher order metacognitive activities in the taxonomy of Meijer et al. (2006). Students who participated actively in the peer-led discussions were also more certain of their answers to reading questions and they used longer sentences in the post-observations. The results implicate that students who actively talk about their approach with other peers show more metacognitive knowledge. It is therefore recommended for teachers to be aware of the profit peer-led discussions can have on the metacognitive knowledge of their students about the use of reading strategies.

Key words: Reading Comprehension, Metacognitive Activities, Reading Strategies, Peer-led Discussions, Primary School

Students' Metacognitive Knowledge about the Use of Reading Strategies in Peer-Led Discussions

Reading comprehension is a fundamental skill for academic achievement and crucial for understanding a text (Bogaerds et al., 2020). According to Hoover and Gough (1990), reading comprehension can be explained by the 'Simple View of Reading', stating that the main components of reading comprehension are word decoding (i.e. efficient word recognition) and language comprehension (i.e. the ability to understand language). Moreover, the more students' comprehension skills develop, the more complex the texts that they encounter will become. In understanding more complex reading texts, other related components, like strategic competence and metacognitive knowledge, become additionally important (SLO, 2018). Although their relation with later reading comprehension is assumed, the exact role of strategic competence and metacognitive knowledge remains understudied. In addition, it is far from clear how education can contribute to the development of strategic competence and metacognitive knowledge in terms of reading comprehension instruction (Okkinga, 2018).

It could be that peer-led discussions contribute to positive effects in the development of strategic competence and metacognitive knowledge. During peer-led discussions, students have opportunities for practice and peer-support for their use of strategies to comprehend a text (Murphy et al., 2009). Students reflect on their initial understanding, due to questions of fellow students and during explaining their thoughts to each other, which allows students to re-read a text and reconstruct their understanding and use of strategies (Choi et al., 2005). Research seems to expose positive effects of peer-led discussions on the development of reading comprehension components. However, more research is necessary to find out if students improve their use of metacognitive knowledge in reading comprehension also in their individual approaches after practicing in peer-led discussions. Therefore, the aim of this

current research is to find out if peer-led discussions, with more room for students' input during reading comprehension lessons, will improve students' use of metacognitive knowledge about reading strategies. This will be assessed in an intervention study, during which pupils practice with peer-led discussions about the reading comprehension texts. The current intervention study studies how peer-led discussions during class will contribute to how pupils individually approach reading comprehension texts. The results of this study contribute to a deeper understanding of students' use of reading strategies and therefore, it contributes to teachers' knowledge about how to teach reading comprehension in upper primary grades.

Theoretical Framework

Reading Comprehension

Reading comprehension can be defined as a complex cognitive process involving multiple components (Muijselaar & De Jong, 2015). Reading comprehension skills can be divided in lower and higher order skills. A lower order skill is for example the decoding of a word (Kintsch, 1998), whereas a higher order skill includes language comprehension, such as the ability to link the reading of a word to comprehension of the message (Perfetti, 2007). There are different processes involved when students try to comprehend a text. According to the Construction-Integration Model of Kintsch (1998), connections must be formed between the ideas in the text and relevant prior knowledge to comprehend a text. Lower and higher order skills interact with each other, when information is processed (Kintsch, 1998). This process consists of three levels. The first level, the linguistic level, involves recognizing words and understanding the link between the word meanings (Riffo, et al., 2014). In the text-based level, the second level, the aim is to generate meaning from the whole text. The situation model, level three, is about the integration of textual information with reader's prior

knowledge (Kintsch & Rawson, 2007). To integrate the text with prior knowledge, the reader should generate inferences.

Strategic competence

When a student has strategic competence, a student is able to generate an inference, can link prior knowledge to the text, and, therefore can link up ideas and fill in details, which are not explicitly mentioned in the text (Cain & Oakhill, 1999). A study of McNamara et al. (2004) showed that effective use of reading strategies can help students to better generate inferences during reading. It is assumed that students with better developed inferential abilities, are likely to comprehend texts better than students with lower inferential abilities. Cain and Oakhill (1999) found out that if students with poor reading comprehension skills received help (e.g. pointing errors, search through the text again), their inferential abilities improved. When students receive accurate feedback about their performances, they become more aware of their strengths and weaknesses in pertaining such reading comprehension tasks. This awareness could lead to a change in their use of reading strategies for the task (Pintrich, 2002).

Metacognitive Knowledge

As a precondition to become strategic competent, students need metacognitive knowledge. Metacognitive knowledge is knowledge about which reading strategy is useful for which reading goal (Pintrich, 2002). Metacognitive knowledge is a higher order skill and requires active participation of the reader in task analysis and strategic reading (Jacob & Paris, 1987). If students have metacognitive knowledge, they are capable of monitoring and regulating their own cognitive process (Flavell, 1979). The process of gaining metacognitive knowledge occurs through interactions, experiences and actions (Flavell, 1979). Students' reflections about their thinking show their planning, monitoring, evaluations and usage of information to make sense of what they read (Wade, 1990). If students are more conscious

about their own thinking when they read and solve problems, this will enhance their learning, which can improve their academic achievement (Paris & Winograd, 1990).

Strategic Competence and Metacognitive Knowledge in Reading Comprehension

Strategic competence and metacognitive knowledge are two important components for upper elementary school students in reading comprehension. Those components are important in reading comprehension, because without this reflection, readers often get confused about what they should do when they confront an unknown word in a text, why scanning a text can be useful or how rereading facilitates understanding (Jacobs & Paris, 1987). Students with metacognitive knowledge perform better on reading comprehension tasks, because metacognitive knowledge is essential for choosing a strategy to achieve cognitive goals (Meijer et al., 2006). Therefore, metacognitive knowledge contributes to strategic competence. Teng (2020) found that instruction on metacognitive reading strategy results in a deeper awareness of metacognitive knowledge in improving reading comprehension and an increased confidence in handling reading exercises. Furthermore, Muhid et al. (2020) found that high school students profit from the use of metacognitive strategies on their reading achievement.

Peer-Led Discussion

Research found that feedback and interaction can help students in gaining metacognitive knowledge and becoming strategic competent (Flavell, 1979; Pintrich, 2002). Nowadays, there is a discussion in Dutch education how reading strategies should be taught effectively (Okkinga et al., 2018). Peer-led discussions can be a solution for teaching reading comprehension in which students are active constructors of their own learning (Gambrell, 2004). Student engagement in text-based discussions will result in improved reading comprehension and higher level thinking skills (Gambrell, 2004). A few points are important in peer-led discussions. First, learning is enhanced when students have the opportunity to talk

about their ideas and respond to the ideas of others (Mercer, 1993). Second, when students interact with each other, they make comments about other interpretations and share opinions about the text, which supports higher level thinking (Almasi et al., 1996). And last, peer-led discussions should provide opportunities to students to think about confusing aspects in the text, in which the classroom climate should value good reasoning (Gambrell, 2004). So, peer-led discussions provide help to students, which may improve the inferential abilities of students with poor reading comprehension skills (Cain & Oakhill, 1999). Students with high ability reading comprehension skills can serve as scaffolds for other students (Cooc & Kim, 2017), which make peer-led discussions profitable for all students.

Taxonomy of Metacognitive Activities in Peer-Led Discussions

To be able to establish how peer-led discussions can improve students' use of metacognitive knowledge about reading strategies, it is necessary to know what processes occur in peer-led discussions. Berne and Clark (2006) analysed transcripts of nine graders' peer-led discussions of a text, which showed that a majority of the talk in each discussion was comprehension related. Moreover, within this comprehension-related talk, they found that about 50 to 70 percent of the talk segments reflected comprehension strategy use. Anderson et al. (2001) examined the snowball phenomenon in peer-led discussions; if students share their own cognitive models about the comprehensive processes they are going through, fellow students can become more conversant in the recognition and use of comprehension strategies (Berne & Clark, 2008).

If it is known which activities students carry out when they read a text, research can find out if students take the strategy use of fellow students in peer-led discussion also to their individual approaches in reading comprehension. Meijer et al. (2006) combined different classifications of reading strategies in one hierarchically taxonomy of metacognitive activities. The taxonomy has six main categories: orientating, planning, executing,

monitoring, evaluation and elaboration (Meijer et al., 2006). Orientating is about the first idea of the text, so it includes activating prior knowledge, hypothesising and establishing task demands. The second category, planning, consists of an activity like selecting particular pieces of a text to look for required information. Executing, the third category, is about the technical reading and includes for example highlighting an important part of the text. Monitoring is important for the understanding of a text. So, this fourth category involves activities in which students check if they have understood the text and found the required information. The fifth category, evaluation, is a step further in the comprehension process and includes for example interpreting and finding similarities. At last, elaboration is about concluding, inferring, and summarising texts (Meijer et al., 2006). Although those last two categories involve the most complex skills, those activities are also included in the reference levels which students should accomplish before they go to secondary education (Expertisecentrum Nederlands, 2010).

Present Study

The present study aims to gain insight in the value of peer-led discussions in reading comprehension lessons for students' individual approaches. Peer-led discussions provide students the opportunity to share ideas, discuss each other's interpretations, and challenge each other (Gambrell, 2004). Therefore, students are stimulated to reflect on their metacognitive knowledge about the use of reading strategies. This may lead to different individual approaches when students read a text, which can be reflected in the metacognitive activities taxonomy of Meijer et al. (2006). This research aims to gain insight if students will change their approach in reading a reading comprehension text, after they participated in a four-week peer-led discussion intervention. If students change their approaches in terms of use of metacognitive knowledge about reading strategies, teachers can use this information to

structure their reading comprehension lessons and make sure students profit from peer-led discussions for their metacognitive knowledge about the use of reading strategies.

This leads to the following research question: *How do students' individual approaches to a reading comprehension text differ, in terms of metacognitive knowledge about reading strategies, before and after the peer led discussion intervention in the upper elementary grades of a Dutch school?* It is hypothesized that students, after participating in the peer-led discussion intervention, will use higher order metacognitive activities more often than before they participated in the peer-led discussions. So, this study expects students to have more metacognitive knowledge about the use of reading strategies after participating in the peer-led discussion intervention. Therefore, students will execute more activities and use more activities in the higher order categories of the taxonomy of Meijer et al. (2006).

Methods

Research Design

This research contained an intervention study with a mixed methods design, to find out how students read texts for understanding, how they use reading strategies during reading, and how their metacognitive knowledge about reading strategies develops after a period of classroom instruction with a focus on reading texts in peer-led discussions. This goal fitted to the sequential explanatory design, in which qualitative and quantitative data are collected and analysed (Boeije, 2010). Using qualitative data, allowed for description, interpretation, and explanation of participants' behaviours (Boeije, 2010). Quantitative data were used to support the descriptions and explanations, in which characteristics of students' approaches could be found (Boeije et al., 2009). The present study was part of a WOU-group in Utrecht, in which a primary school, together with higher education institutes, conduct practice-based research (Henrichs et al, 2017).

Participants

This research intended to have a total of fifteen students of grade 4, 5, and 6 participating. Those students also participate in the larger study of the WOU-group. The participants were all students of the same Dutch primary school in Utrecht. The students participated in the intervention in their own class with their own teacher. The participants' mean age is 11 years old and fourteen of the fifteen students have Dutch as a second language. The social economic status of the neighbourhood is 0.227, which is low. The school has a complexity weighting of 38.51, whereas the mean of all Dutch primary schools is 30.10 (Ministry of Education, Culture and Science, 2020). This means that the school has a complex student population. The students participated in this study in March and April. The participants and their parents actively agreed on taking part in this study and knew, after instruction of the observer, there would be no judgment about right or wrong answers, which allowed them to speak freely (Shenton, 2004).

Due to the covid pandemic, three students were not present in class during the post-observations. During the think aloud observation of one student, the internet connection faltered a lot, which made it impossible to code the think aloud protocol in a valid way. Eventually, the pre- and post-test observations of eleven participants were transcribed and coded; three from grade 4, four from grade 5 and four from grade 6. Accidentally, not all those eleven students actively participated in the peer-led discussions. Some teachers did not feel comfortable in having a whole class full with small discussion groups, and therefore, let only one or two groups discuss. The five students who did not actively participate in a discussion group, received a different reading related task, but were still in the same classroom, which enabled them to listen to the discussion. Of these five students, three participants did not participate in the peer-led discussion intervention, and two participants participated once in the peer-led discussions. The other six participants participated fully (three times) or almost

fully (two times) in the peer-led discussion intervention. Analyses for answering the current research question were based on the subsample of the six participating students, but the eventual sample allowed for a comparison of the findings between students who (almost) fully participated and classmate peers who did not, or only once, participated.

Materials

In this research, the materials consist of the intervention (peer-led discussions), think aloud protocols and the reading test. The coming paragraphs include information about the content of those materials. The observations of the think aloud protocols were most important for answering the research question.

Peer-Led Discussions

Each week, a plenary reading comprehension instruction took place on Thursday. The focus of this instruction differed each week, modified to the topic of the text and the reading goal. The exact protocol, which was made by other researchers of the WOU-group and the teachers, can be found in Appendix A. The students participated in peer-led discussions every Friday. They worked in groups of four on the reading text of *Nieuwsbegrip*, which has a different topic per week. All students participated in the discussion in small groups and one of the students had a specific role as chair student. The exact protocol also focussed on the discussion part and contained a talk sheet for the chair student during the peer-led discussions. This student could ask questions from the sheet to stimulate peers to talk about their procedures and ideas during reading and to foster the discussion about the reading goal. During the small group peer discussions, the teacher walked around all small groups to help with the discussion and to explicitly label the use of reading strategies (Pintrich, 2002). The peer-led discussions took about 30 minutes.

Think Aloud Protocols

Think aloud protocols are verbal reports about thinking processes of students and produce valuable information about readers' processing styles (Wade, 1990). In the think aloud instruction, each individual student was asked to read the text, answer the written questions aloud and immediately share any thoughts that arose during reading. The observer told the student to explain everything like they would do if they explained something to another student and that there were no wrong answers or verbalizations. When the student did not verbalize any thoughts, the observer stimulated the student to think aloud (for example: 'What are you doing right now? Why are you doing this? Tell me exactly what you are doing, so I can learn from you.'). During the think aloud observations, the observer was focussed on stimulating the students in the verbalization of their thoughts, so notes were made after the student finished the test.

Reading Test

The reading comprehension test in this study was from *Nieuwsbegrip*, which is the method for teaching reading comprehension in this primary school. *Nieuwsbegrip* is based on the daily news and is aimed at making students good readers. The method *Nieuwsbegrip* provides reading strategies tests to measure students' capabilities in using reading strategies. This test is used during the think aloud process. *Nieuwsbegrip* adjusts texts by level, and this research uses level B, which is common for students in grade 4, 5, and 6. This study uses two tests, which were randomly used during the pre- and post-test. If students executed test one in the pre-test, they executed test two in the post-test and vice versa. One test is about hay fever and contains nine questions. The other test is about a supermarket for children and contains eight questions. The questions in both tests are quite similar. The questions are about word meaning in specific sentences, about which strategies the students used to come to an answer, and multiple-choice questions about which sentence contains the most important part of the

text. *Nieuwsbegrip* is a paid method (published by CED-group), so it is not allowed to distribute the tests in the Appendix.

Procedure

All parents of the underaged students filled in an active informed consent (Appendix C), which was distributed by their teachers. This is in line with the applications of the ethical principle 'respect for persons' in action research in education (Nolen & Putten, 2007). The think aloud observations took place during school hours via an online scheduled meeting in Microsoft Teams, due to the COVID-19 pandemic. This was done with one individual student and the observer. The meetings were recorded with a voice recorder. All students were asked to read the reading strategy test carefully, as they would in preparation for the normal *Nieuwsbegrip* test. There was no time limit for reading the text and filling in the questions. The procedure for the pre-test in March and the post-test in April was the same. The intervention time in between lasted three weeks. The second application of the ethical principle (Nolen & Putten, 2007), protecting the confidentiality of participants, is maintained by the storage of all data (such as recordings and transcripts) in a save place (YoDa), provided by the University of Utrecht. Before the data collection, this study was ethically approved by the Faculty of Social and Behavioural Sciences of the University of Utrecht.

Videotaped Discussions

In addition, video recordings of some classroom lessons during the intervention were recorded. Each week, a different peer-led discussion was videotaped to observe the processes in the discussion and to keep track of what was going on during the intervention period. The observer has focussed on which strategies from the taxonomy of metacognitive activities occur in the peer-led discussions videotapes to guarantee intervention fidelity. The video tapes showed that the students discussed their opinions about the subject of the text. They discussed the (dis-)advantages of the subject and complemented each other. Students also asked content-

related questions to each other, such as 'Who is the designer?'. The answers students provided to each other were correct, but did not include an explanation of their strategy. Students' experiences with the peer-led discussion intervention, which was asked after the post-test observation, supported the recorded. Students stated they thought it was educational and fun to discuss together, mostly because the peer-led discussions provided an opportunity to share opinions about subjects. Students also stated they learned to read back in the text more often as a strategy for coming to an answer to a question, due to the peer-led discussions. The video recordings and students' opinions showed that the expected procedure of the peer-led discussion intervention is executed.

Teacher Verification Questionnaire

After the intervention period, all teachers who executed peer-led discussions in their class, received a short online questionnaire. Those questions are used to verify the intervention and the results of the think aloud observations and provides additional information. Teachers filled in those verification questions in the online Qualtrics survey software. The first question asked teacher to describe students individual approaches in reading comprehension, before the intervention of peer-led discussions started. The second question asked the same, but was focussed on the students' approaches after the intervention. The third question focussed on the similarities and the fourth question focussed on the differences in students' individual approaches in reading comprehension, before and after the peer-led discussion intervention. So, those questions provided some additional information to verify and interpret the results.

Data Analysis

Thirty think-aloud observations were scheduled to record, in which one half of the observations were before the intervention and the other half after the intervention. As described before, four students dropped out during the process, so their observations were not

transcribed or coded. Twenty-two observations (from eleven participants, pre- and post-test) were completely transcribed and coded in QSR International's NVivo 12 software. It was expected that twenty observations were enough to answer the research question and to receive saturation.

Analysis of Think Aloud Protocols

The taxonomy of metacognitive activities (Meijer et al., 2006) was used to analyse the think aloud protocols (Appendix B). Every spoken expression from the participants was interpreted in the coding scheme based on the taxonomy of metacognitive activities, which ensures the trustworthiness of the present study (Shenton, 2004). Axial coding relates categories to subcategories; in this research it relates the six main categories of the taxonomy of metacognitive activities to the activities in each main category (Boeije, 2010). The use of the taxonomy as think aloud protocol was tested in a pilot test with two six grade students. The pilot allowed the researcher to get familiar with the field (Boeije, 2010). This pilot resulted in example expressions for each activity, which are also added in Appendix B, and showed the observer that it is necessary to purely focus on the verbalizations of thoughts of the students. The pilot also resulted in the removal of three activities, which were focussed more on technical reading instead of metacognitive knowledge about reading strategies. The quality of this taxonomy is assessed in the research of Meijer et al. (2006) and they found a reasonable correlation between the frequency method and the quality method for coding thinking-aloud protocols.

To answer the research question, this study assessed which different patterns could be found in the utterances of the participants before and after the intervention. All categories of the taxonomy of metacognitive activities (Meijer et al., 2006) were checked on the frequency they were used and discussed what that means for students' used approaches in pre- and post-test. Students were assessed qualitatively, in terms of which patterns can be found in handling

a reading comprehension text and the execution of the codes in terms of length of sentences and word choice. The students were also assessed quantitatively, in terms of the number of executed activities and the distribution among different categories of metacognitive activities. This research has also compared the findings between students who (almost) fully participated and classmate peers who did not, or only once, participated. This additional analysis might provide insight in the nature of the findings (since it acted as control group).

Interrater Reliability. Interrater reliability is assessed qualitatively with two other researchers, to calibrate the main researcher's coding. First, a transcript of one of the participants is shared with another researcher. After an explanation of the coding scheme and goal of the code session, the other researcher and main research coded the transcript individually. After the coding, both researchers discussed each utterance of the participant and the code they wrote down. An overall agreement of 57.14% was calculated, which is a moderate strength of agreement (Landis & Koch, 1977). After individual coding, the researchers discussed the codes, the utterance of the participant and checked which activities were most suitable. The same process took place with another transcript and another researcher to pursue reliability (Boeije et al., 2009). This resulted sometimes in splitting up the utterance, so that the first half of an utterance was coded with an activity and the second half of the utterance was coded with another activity. It also resulted in more examples for some codes, to clarify the activities in the taxonomy of metacognitive activities (Meijer et al., 2006). For example, the two researchers had different expectations of the activities 'Commenting on (explanation) in text' and 'Explaining strategy, justifying'. The added examples made more clear which (higher order) processes are expected to see in these activities. In the end, the researchers reached agreement on all codes in the transcript.

Verification Analysis

Besides the main analysis of the think aloud observations, teachers filled in a short verification questionnaire about their experiences and observations of students' individual approaches before and after the intervention. Those verification questions provided some insight about the extent to which the results are attributable to the intervention, as additional information. Also, the videotapes of the peer-led discussions were watched to better understand the proceeded patterns of students during the intervention. This provided more insight in the subject under study, because all utterances of the students were recorded and it was clear who was talking or responding (Boeije, 2010).

Results

The aim of this result section is to show students' individual approaches to a reading comprehension text before and after a 3-week classroom intervention (peer-led discussions). First, some descriptive statistics are reported. In the second section, the first two categories of the taxonomy of metacognitive activities of Meijer et al. (2006) are presented. Third, the categories executing and monitoring are analysed. The fourth section explores the higher order categories evaluation and elaboration. As additional information, the last section provides a short overview of the teachers experiences during the intervention.

Descriptive statistics

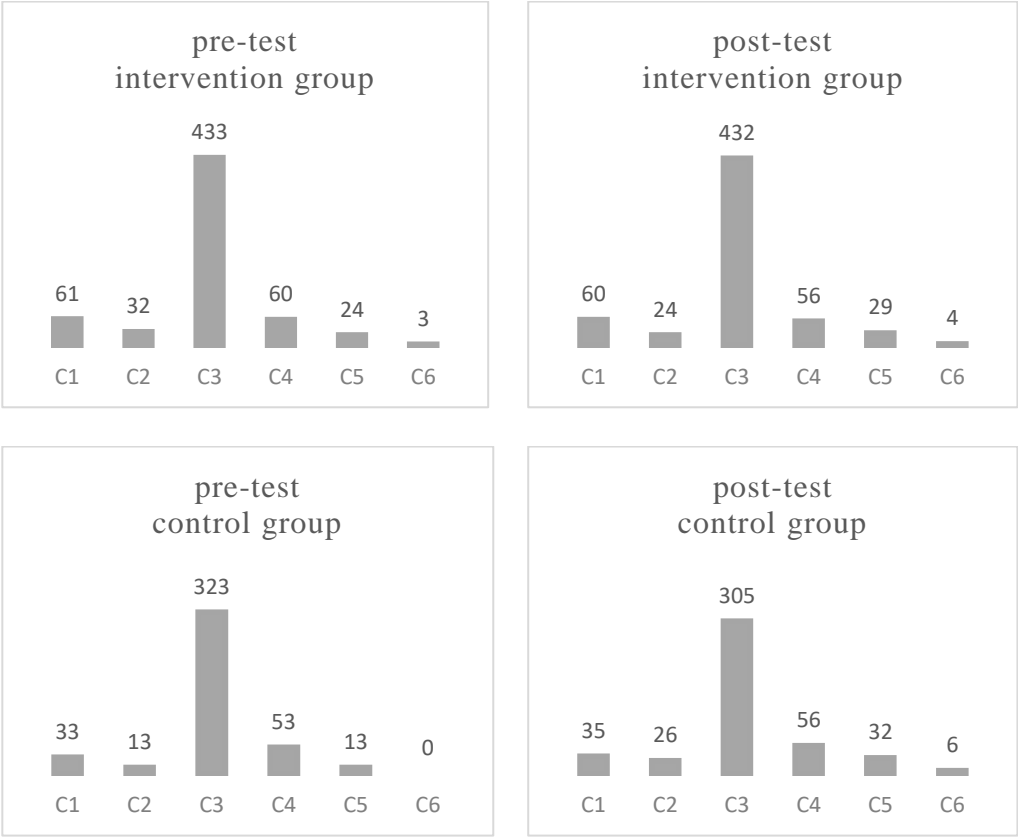
There were no missing data for the eventual sample of eleven students. With regard to the time spend on task by all students, the mean time for executing the think aloud protocol was 20 seconds longer in the pre-test observations as compared to the observations after the intervention. This difference was neglectable in the perspective of the complete assignment (pre-test: $M = 21$ minutes and 41 seconds, post-test: $M = 21$ minutes and 21 seconds). The same accounted for the differences between students who did participate and students who did not participate. Those differences were also neglectable. The difference between the number

of executed activities by all students was small as well, namely 0.63 more executed activities in the post-test as compared to the observations before the intervention.

To see if there were differences between the pre- and post-test and between the intervention group and control group, bar charts and means were analysed. The bar charts shows no major differences between the intervention group and the control group in pre- and post-test (see Figure 1). Table 1 shows the utterances of all participants per category and the means of the total utterances per category and overall. This provides the opportunity to see differences for individual students.

Figure 1

Comparison Between the Total Utterances of the Intervention Group the and Control Group in Pre- and Post-Test.



Note. C1 = orientating, C2 = planning, C3 = executing, C4 = monitoring, C5 = evaluation, C6 = elaboration.

Table 1.

The Cumulative Number and Mean of Occurrences in Each Category of the Taxonomy of Metacognitive Activities (Meijer et al., 2006) (N = 11).

| <i>Student</i> | <i>Pre-test before intervention</i> | | | | | | | <i>Post-test after intervention</i> | | | | | | |
|----------------|-------------------------------------|------|-------|------|-----|-----|----------|-------------------------------------|-----|-----|------|------|------|----------|
| | C1 | C2 | C3 | C4 | C5 | C6 | <i>T</i> | C1 | C2 | C3 | C4 | C5 | C6 | <i>T</i> |
| A | 26 | 12 | 105 | 23 | 3 | 1 | 170 | 15 | 7 | 92 | 13 | 0 | 0 | 127 |
| B | 7 | 6 | 53 | 5 | 5 | 1 | 77 | 9 | 2 | 56 | 3 | 4 | 1 | 75 |
| D | 7 | 6 | 63 | 7 | 0 | 1 | 84 | 9 | 4 | 66 | 11 | 0 | 0 | 91 |
| E | 14 | 6 | 105 | 10 | 11 | 0 | 146 | 18 | 9 | 104 | 12 | 14 | 3 | 160 |
| K | 6 | 1 | 68 | 8 | 4 | 0 | 87 | 6 | 2 | 65 | 8 | 7 | 0 | 88 |
| N | 1 | 1 | 39 | 7 | 1 | 0 | 49 | 3 | 0 | 49 | 9 | 4 | 0 | 65 |
| Mean 6* | 10.17 | 5.33 | 72.17 | 10 | 4 | 0.5 | 100.5 | 10 | 4 | 72 | 9.33 | 4.83 | 0.67 | 101 |
| G | 6 | 2 | 79 | 11 | 3 | 0 | 101 | 9 | 10 | 88 | 10 | 9 | 0 | 126 |
| H | 11 | 3 | 63 | 9 | 0 | 0 | 86 | 10 | 4 | 61 | 9 | 8 | 1 | 93 |
| I | 7 | 2 | 86 | 6 | 2 | 0 | 103 | 8 | 5 | 55 | 7 | 3 | 0 | 78 |
| J | 6 | 3 | 35 | 6 | 6 | 0 | 56 | 4 | 4 | 54 | 15 | 7 | 1 | 85 |
| O | 3 | 3 | 60 | 21 | 2 | 0 | 92 | 4 | 3 | 47 | 15 | 5 | 4 | 78 |
| Mean 5** | 6.6 | 2.6 | 64.6 | 10.6 | 2.6 | 0 | 87,6 | 7 | 5.2 | 63 | 11.2 | 6.4 | 1.2 | 92 |

Note. C1 = orientating, C2 = planning, C3 = executing, C4 = monitoring, C5 = evaluation, C6 = elaboration, T = total utterances in all categories. *Mean 6 is about the six students who participated fully or almost fully in the intervention. **Mean 5 is about the five students who participated once or did not participate in the intervention.

Orientating and Planning

In the C1 category (orientating) all students mostly used the activity 'establishing task demands' in pre- and post-test. Most students established their task demands by repeating the question in their own words. It was found that students who participated in the intervention, executed this activity 20 more times and in longer sentences (about 8.81 words per sentence versus 7.79 words in the control group) in the post-test than students who did not participate. However, the mean score of students who did not participate in the intervention is raised by one student. This is also shown by the modus, which was 9 words for students who did participate in the intervention and 4 words for students who did not participate.

The activity 'selecting particular piece of text to look for required information' in category two was used most frequently by all students in both the pre- and post-test. If students were asked about a particular piece of the text, students selected that piece for rereading, to be able to answer the question. Remarkable is the non-use of reading notes (category C2 planning). In the pre-test, only student A, has read back his notes or highlights. In the post-test, nobody looked back to see what they had highlighted or written down during reading. However, in the post-test two more activities of the category planning were executed. Even more, all students executed the activities from the category 'planning' in the pre-test with a range from 1 to 3 activities, against 10 students with a range from 1 to 5 activities in the post-test. This implicated that students used more activities from the category planning in the post-test, regardless if they participated in the intervention or not.

Executing and Monitoring

In both the pre- and post-test, the category C3, 'executing', was used most by all the students, as compared to the other categories (see Figure 1). In this category, no big differences between pre- and post-test were found. In both tests, the cumulative count of utterances was around 750 in total. The students also executed the activities quite similar in both pre- and post-test. Besides reading aloud, students executed the activity 'commenting on (explanation in) text' a lot. All students commented on the text while reading or answering the questions. This activity involved utterances such as *'I doubt between A and D.'*, *'I don't think so'* or *'I think that is weird.'* The activity 'concluding, answering without checking text, offering explanations' is not used by students who participated in the intervention during the post-test. This means that all six students did offer an explanation while answering their question. However, two students who did not participate in the intervention did execute this activity in the post-test, which means those students answered questions without any explanation.

If the activity 'note-taking, underlining, circling, highlighting' is compared between the pre-test and post-test for all students, a difference was found. Where some students in the pre-test highlighted parts of the text, with reasons like *'maybe they are going to ask about that'* (student H), most students in the post-test highlighted parts of text with more fundamental reasons. For example, student D executed this activity in the pre-test only once (*'I am going to highlight this, because I don't know what this word means'*). However, in the post-test, student D executed this activity multiple times, for multiple reasons, like: *'I am going to highlight this, because I think this is important'* or *'I highlight: 'in a lot of meals are hidden vegetables, for example in the meatballs', because parents want their children to eat vegetables'*, which illustrated that this student thought about the content and message of the text as a whole more often.

The category 'monitoring' was used more in the pre-test than in the post-test among all students. Only 8 activities were executed in the post-test, against 11 activities in the pre-test. However, the utterances in this category were quite similar: 113 utterances were coded in the pre-test and 112 utterances were coded in the post-test. All students executed the activity 'claiming (partial) understanding' in the post-test. Students who did not participate in the intervention, claimed their understanding with more doubts: *'Elaborately... To elaborate... That is something to elaborate... So maybe it is elaborately tested.'* Or *'No, I changed my mind, the answer is D.'* Students who did participate in the intervention could provide more reasons: *'I know for sure the answer is not B, because we cannot change that it is getting warmer'* or *'I am going to answer C, because that is a summary of the whole text.'* Those quotes show that students who participated in the intervention were more confident in their understanding.

Evaluation and Elaboration

Table 1 showed that the only interpretable difference concerned the utterances in the fifth and sixth category during the observations after the intervention. This indicated more use of higher order metacognitive activities. In category 5, evaluation, the utterances of all the participants were almost doubled (37 utterances in pre-test, 61 utterances in post-test). For example, the activity 'explaining strategy, justifying' was executed 16 more times in the post-test. The transcripts showed that students were more aware of signal words, such as: *'I took a look at the signal word 'therefore' and read the sentence before, so now I know the reason'*. Also, according to the transcripts, the length of students' sentences to explain their strategies is longer in the post-test than in the pre-test. The range of number of words was spread from 9 to 174 words in the pre-test and from 38 words to 290 words in the post-test. Those ranges showed that, among all students who executed this activity, the maximum of words is higher in the post-test compared to the pre-test. Despite the fact that the students executed one less activity in the post-test, 10 students executed an average of 2,4 activities in this C5 category, whereas 9 students executed an average of 1,7 activity in the pre-test. There were no major differences found between the students who did participate in the intervention and students who did not participate, meaning that both groups increased in the activities of the category C5, 'evaluation'.

In the pre-test, only one activity was executed in the category 'elaboration'. Three students executed the activity 'paraphrasing, summarising what was read'. In the post-test, three activities are executed. Two of those activities were also about summarising the text. However, the activity 'inferring' was new and executed by two students (student E and J). Student E participated in the peer-led discussions and stated: *'I learned a lot from other students, because other students can elaborate more on certain topics, I learned from that'*. This might indicate that student E uses the activity 'inferring' because of the peer-led

discussions. Student J did not participate in the peer-led discussion, but said: *'I did listen to other students discussion, heard all the questions and answered it by myself'*. In total during the post-test, six students executed activities from the category elaboration: three students who participated in the intervention and three students who did not participate.

Teacher Verification Questionnaire

The short questionnaire concerning teachers' experiences and observations, to verify the intervention, was filled in by four teachers who executed the peer-led discussion intervention in class. Those results provided additional information on the think aloud observations. This way, insight was gained in what actually happened during the intervention phase, in order to better interpret our findings in the think aloud sessions. All teachers described the main focus on passively reading the text (without text comprehension and the use of reading strategies) as students' approaches before the intervention. Teachers indicated that students were not using strategies nor specifically focused on trying to comprehend the complete text. Instead students rather focussed on answering the text-based questions by searching the literal answer in the text.

Students' approaches after the intervention are described differently in the questionnaire. Two teachers thought that students had a higher level of text comprehension after the intervention, because students actively work with the text twice a week, instead of reading (more) passively once a week. Asking questions and consciously thinking about the text, makes students more aware of their own level of comprehension, according to two teachers. Two teachers also described the difficulties for some children to come up with a critical question or to answer such evaluative questions, also during and after the intervention. Three teachers observed a higher motivation for the subject reading comprehension among the students, as a consequence of the peer led discussion intervention. This could influence students' awareness about their metacognitive activities. Students showed, according to the

teachers, a more active attitude by discussing with peers, instead of a passive attitude by just reading the text, before the intervention.

Discussion

This research assessed the valuableness of peer-led discussions in reading comprehension lessons for students' individual approaches in handling a reading comprehension text. Students' individual approaches were reflected in the metacognitive activities taxonomy of Meijer et al. (2006). The following research question was central in this study: *How do students' individual approaches to a reading comprehension text differ, in terms of metacognitive knowledge about reading strategies, before and after the peer led discussion intervention in the upper elementary grades of a Dutch school?*. This study provides a contribution by practical insights related to this research question.

Differences in Students' Individual Approaches by Peer-Led Discussion

The results show that students' individual approaches, in terms of metacognitive knowledge about reading strategies, before and after the peer-led discussion intervention only differed interpretably concerning the utterances in the fifth and sixth category of the taxonomy of metacognitive activities (evaluation and elaboration). This is in line with the hypothesis, which stated that students, after participating in the peer-led discussion intervention, will use higher order metacognitive activities more often than they did before they participated in the peer-led discussions. The results shine a careful, but positive light on the development of strategic competence and metacognitive knowledge. Okkinga (2018) stated that it is not yet clear how reading comprehension instruction can contribute to the development of strategic competence and metacognitive knowledge. The practical insights of this study shows that peer-led discussions might have a positive influence on the development higher order metacognitive activities of students.

The students who did not participate in the peer-led discussion, however, also show more higher order metacognitive activities in the post-test. There are two possible explanations for this. First, the students who did not participate in the peer-led discussions, might have listened to the discussions in class. Listening to the peer-led discussion could have triggered the same processes as participating in a peer-led discussion. According to Berne and Clark (2008), fellow students can become more conversant in the recognition and use of comprehension strategies, when other students share their thinking processes. This can also be linked to the observational learning theory, which states that skills and strategies can be acquired by observing others (Bandura, 2008). Students do not exactly copy what is modelled, but they adapt the general form or strategy. Teachers and peers can be important role models in a classroom (Muenks & Wentzel, 2016). In peer-led discussions, they take on this function as role models. Second, the think aloud protocol itself could have made students more aware of the metacognitive activities and reading strategies. It might be, therefore, that the pre-test counts as a brief intervention for the post-test to follow. This explanation is endorsed by Seng (2007), who found that an instructional procedure of think-aloud could be considered as a technique in reading instruction. Despite the fact students did not explicitly train the think aloud procedure, the pre-test could act as an intervention.

Besides the differences in the higher order metacognitive activities, the results also show that students who participated in the intervention, answered the questions with more certainty and in longer sentences, when compared to students who did not participated. This indicates that students, after participating in the peer-led discussion intervention, could come up with more reasons to choose an answer or had more skills to express their understandings than students who did not participate. Teng (2020) also found that students had an increased confidence in handling reading exercises after metacognitive reading strategy awareness instruction. The teachers experienced this difference as well, when they compared students'

individual approaches before and after the intervention. They indicate that students were more aware of their own level of text-comprehension, because, after the peer-led discussion intervention, the students asked more questions to the teacher and consciously thought about the texts. Teachers also observed a higher motivation for the reading comprehension lessons among the students. This can be beneficial for students' metacognitive knowledge of strategy, because intrinsic motivation is a significant and positive predictor of metacognitive knowledge of reading strategy use (Miyamoto, 2019).

Strengths, Limitations and Future Research

This research has a rich database which include the pre- and post-test as think aloud protocols, the videotaped discussion sessions, students' opinions, and the teacher questionnaire. Consequently, not only the observers' interpretations are included, but also the observations and interpretations of the teachers during the intervention period, which is beneficial for the reliability (Boeije, 2010). Another benefit of the quality of this data includes the use of full transcripts. The transcription of the audio recordings improves the quality of the data, because the researcher does not have to select what to take notes on (Boeije, 2010). The gathering of data in an ecologically valid environment is also a strength of this study, because results gathered in an ecologically valid environment may be essential for understanding processes, and, thus, the design and implementation of effective interventions (Smyth et al., 2017).

However, some limitations were also worth mentioning. The results are gathered in a school with a complex student population and only one student has Dutch as the first language. This is a limitation for the generalization of the results, because the school population is specific and therefore not relatable to all schools. Future research should find out if peer-led discussions are profitable for schools with an average or less complex student population. Future research could also focus on the differences in students' individual

approaches in reading comprehension between students with Dutch as a first language and Dutch as a second language, because it is found that the reading comprehension components have different regression weights for first and second language learners (Van Gelderen et al., 2004).

Due to the COVID-19 pandemic, students needed to be in cohorts during this research. Consequently, the small group of peers discussing together did not change during this intervention period. Cooc and Kim (2017) have found that peers matter in their contribution to other children's reading skills, which implicates it may be beneficial to change peers during the weeks. Another consequence of the COVID-19 pandemic was the strict planning of the school. The school had to deal with shifted tests, holidays and quarantined classes. This resulted in only three weeks of peer-led discussion intervention, possibly the results would differ when the intervention runs for a longer time period. Research found that interventions with a duration from 7 to 20 weeks result in reliable scores and yield higher gains than shorter or longer interventions (Elbaum et al., 2000; Griffiths et al., 2006). Therefore, future research could be conducted on what happens to students' individual approaches when students' switch peers each week and when the peer-led discussion intervention is implemented for a longer time.

The last limitation concerns the execution of the intervention by the teachers. First, it turned out that some teachers were not be able to follow the intervention protocol with the whole class. This impacted the quality of the intervention, since some student got less opportunity to practice. Therefore, the intended sample changed in less fully participating students and a control group by accident, in which the students were able to listen to the peer-led discussion. It also impacted the transparency of this research, because it is unknown to what extent the students did listen and how much they learned from this. This may have an influence on the conclusions and interpretations. Future research should make sure that all

students participate in peer-led discussions, or that the differences between students who do and who do not participate is clear.

Besides this, some teachers were not able to walk around all peer-led discussions, because the teachers chaired only in one peer-led discussion group. According to Pintrich (2002), it is important that students receive accurate feedback about their performances during the discussion, so they could change their use of reading strategies. It is also possible to have a student with a higher level of reading comprehension skills to provide feedback to other students (Ros et al., 2021). Due to the anonymity of all students, it is unknown which students had a higher level of reading comprehension skills and if they had provided feedback to other students during the intervention period. Future research should aim to generate insight in the differences in students' individual approaches, if a more skilled person provides accurate feedback during the peer-led discussions.

Recommendations

The findings of this study are important, since it shows that students, by listening to or participating in peer-led discussions are better able to use more and higher order metacognitive activities. It is recommended to further explore this with more research. This study provides a contribution by practical insights in the ecological valid environment of a classroom and provides an optimistic view about the possible effects of small peer-led discussions in reading comprehension. With that in mind, it is recommended to let students participate in peer-led discussions, because it provides an opportunity to share opinions and discuss interpretations. This is an opportunity for students to learn from each other and to use the reading strategies and metacognitive knowledge from other students in their own approaches. Teachers can use this information to structure their reading comprehension lessons and therefore, make sure students profit from peer-led discussions each week.

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Appendix A

Guideline reading comprehension instruction

This instruction contains the following elements:

- Facing text words in another context
The school uses the method *Weerwoord* to make sure the students know the words.
This is done before the reading comprehension instruction takes place.

The reading comprehension instruction will follow the next steps:

1. Discussing lesson and reading goal
2. Activating of prior knowledge
3. Modelling reading strategy
4. Differentiating between students working further on their own or with the teacher
5. Evaluating the lesson and reading goal

This will take place on Thursday. This guideline is based on the principles of *Nieuwsbegrip* and on the experiences and needs from teachers and students in this particular school.

On Friday, students will discuss about the reading comprehension texts. Students will use the 'key-questions' from the method *Nieuwsbegrip* as guideline in this discussion.


To make sure all students are capable of participating in the classroom discussion, teachers will build up the participating students. In the first week, only three students participate in a discussion with the teacher. In the following week, those three students participate in a discussion with two students who did not participate before and the teacher participate with three other students. When all students have participated with experienced students or the teacher, the teacher will guide all students by walking around. This setting will be reached in three weeks.


However, not all teachers felt competent in their class management to arrange different discussion groups. Therefore, some teachers chose to discuss with one group of students and let the other students read a book quietly.

The chair of peer-led discussion session (one student) used next protocol in leading the discussion.

HET SCHATEILAND

PRAATPLAAT LEERLINGEN






LEESDOEL


ROL VOORZITTER

- Zorg ervoor dat iedereen aan het woord komt.
- Daag je groepje uit om kritische vragen te stellen en te redeneren.
Je wilt dat er bij ieder argument een uitleg wordt gegeven, daarvoor moeten woorden als 'omdat' of 'want' worden gebruikt.
- In de gaten houden of er aan alle doelen gewerkt wordt.




DOEL 1: VEEL PRATEN

- Geef tijd om na te denken (even stil zijn mag).
- Zeg meer.
Kun je daar meer over vertellen?
Wat bedoel je daarmee?
Kun je daar een voorbeeld van geven?
- Controleren of je het begrijpt.
Dus je zegt eigenlijk...?
Even kijken of ik het begrijp. Zeg je nu...?




DOEL 2: GOED LUISTEREN

- Controleren of je na kunt vertellen wat er net is gezegd.
Kun je herhalen wat Bilal net zei?
Wie kan in eigen woorden zeggen wat Sonne net zei?



DOEL 3: HARDOP NADENKEN

- Vraag elkaar naar onderbouwing of redenering.
Waarom denk je dat?
Waarom zie je dat?
- Help elkaar met moeilijke woorden in een tekst.
Welke moeilijke woorden staan er in de tekst?
Hoe ben je achter de betekenis van het moeilijke woord gekomen?
- Daag elkaar uit of geef een tegenvoorbeeld.
Is dat altijd zo?
Past dat bij wat Abigail net zei?



DOEL 4: REAGEREN OP ELKAAR

- Ga na of jullie het met elkaar eens zijn.
Ben je het eens of oneens met wat je hoort? Waarom?
Wie iemand reageren op wat Liam net zei?
- Vul elkaar aan.
Wie kan iets toevoegen aan wat Sophia net heeft gezegd?
- Uitleggen wat iemand anders bedoeld.
Wie kan uitleggen wat Alden bedoeld met wat hij net zei?
Wie kan zeggen hoe Ezra op dat idee is gekomen?
Waarom denk je dat hij/ze dat net zei?



NA JULLIE GESPREK VRAAGT DE JUF OF MEESTER OF JULLIE HET LEESDOEL BEHAALD HEBBEN EN HOE DE ANDERE DOELEN ZIJN BESPROKEN IN JULLIE GROEPJE. DIT KUN JE ALVAST BEDENKEN DOOR EEN SMILEY TE OMCIRKELEN.



Appendix B

The taxonomy of metacognitive activities (Meijer et al., 2006).

| <i>Activity</i> | <i>Code</i> | <i>Examples</i> |
|--|-------------|---|
| Orientating | | |
| Activating prior knowledge | APK | I already know about this subject, that ... |
| Establishing task demands | ETD | So, I have to find out which.../ To fulfil this task, I have to... |
| Hypothesising | HYP | I think it will be.../I expect that |
| Identifying or repeating important information (to be remembered) | IMP | This (read text) is important. |
| Studying, rereading question carefully | SQC | So, the question is... |
| Planning | | |
| Keep on reading hoping for clarity further on | KRH | I read further to know what... |
| Looking for particular information in text | LPI | I am looking in the text to find out.../I search in the text to remember which year is was. |
| Organising thought by questioning oneself | OT | So, is this caused by XXX?/Should I do this or that first? |
| Resuming | RES | *student take a break and continues reading* |
| Subgoaling | SG | Before I have to do XXX, I will do... |
| Selecting particular piece of text to look for required information | SPP | I read this paragraph again, because this was about XXX./ I read the preface again to see if they wrote something about this. |
| Using external source to get explanation | UES | I will check this in a dictionary./I will search this on the internet. |
| <i>Change of strategy by reversing arguments (e.g., cause and consequence)</i> | CSA | I thought this was the cause, but now I think it is that. |
| <i>Deciding to read difficult parts of text again</i> | DRD | I did not understand this part, so I read it again. |
| <i>Reading notes or highlights</i> | RN | I read my notes. |
| Executing | | |
| Commenting on (explanation in) text | CET | I think this is remarkable/nice/.../Maybe they are going to ask this. |
| Error in technical reading | ETR | *student read a word differently: e.g. hele hoop – heleboel/gote - grote* |
| Note-taking, underlining, circling, highlighting | NUL | I highlight this part./I take my marker. |
| Reacting to question of experimenter | RE | Yes./No./Can I ask you a question? |
| Reading aloud | R | *reads the literal text* |
| Rereading | RR | I read this again, *reads literal text again*. |

| | | |
|---|------|---|
| Skipping word(s) | SK | *student did not verbalize a word from literal text* |
| <i>Concluding, answering without checking text, offering explanations</i> | CEC | I think this is the answer and I go on./ It is B, because that is more important. |
| <i>Empathising</i> | EM | I feel sad for her. |
| Monitoring | | |
| Checking memory capacity | CMC | I am thinking what I remember from this part. |
| Claiming (partial) understanding | CPU | I think I understand this./I now understand that hay fever is caused by XXX./I think this is important, so this is the answer. |
| Comprehension failure | CF | *student give the wrong answer on the test* |
| Error detection (plus correction, keeping track) | ED | I read that wrong, but I read further./ I did remember something else, but the text says XXX, so that is the answer and let's move on. |
| Found required information | FRI | This part gives answer to the question./Oh yeah, here is what I was looking for. |
| Information required not found | IRF | I can't found what I am looking for./I do not find what I need to. |
| Noticing inconsistency, confusion, checking plausibility | NIPS | I do not understand this part./So, is it possible that XX have some to do with this? |
| Noticing unfamiliar words or terms | NUT | I don't know what this word means. |
| Noticing retrieval failure | NRF | I forgot what I just read. |
| Commenting on task demands or available time | TD | What should I do again?/I have still some time to read it again. |
| <i>Deliberately pausing, going back in text</i> | DP | I will go back in the text. |
| <i>Noting lack of knowledge</i> | NK | I do not have to knowledge to answer this. |
| Evaluation | | |
| Checking | CC | I will check if my answer is correct./I will check in the text if I did chose the right answer. |
| Explaining strategy, justifying | EGJ | I will do this, because that is useful in this case./I am going to use predicting as strategy./I chose this answer, because in my summary.../Strategies can be: predicting, asking questions, summarizing, making connections & clarifying uncertainties. |
| Finding similarities, analogies | FSA | This was also in another part of the text./Hey, this is the case for hay fever but also for this illness. |
| Interpreting | I | I think this means that XXX./The text says this as features, so I think that I have also hay fever. |
| Uncertainty about conclusion | UC | I don't know for sure, but I think the main message is. |

| <i>Reading goal(s) accomplished</i> | RGA | I have read the text with this goal and I have accomplished it because XXX. |
|--|-----|---|
| Elaboration | | |
| Concluding | CON | So, the conclusion is.../I have read the text and hay fever is becoming bigger because... |
| Connecting parts of text by reasoning | CPR | This part was about XXX and this part is an answer to that./So, in the first paragraph they told something about the causes and in the second paragraph they wrote something about the effects. |
| Inferring | INF | So, if that is the cause, XX will happen. |
| Paraphrasing, summarising what was read | PS | In short, I have just read XX. |
| Summarising by rereading (sub)heading or words in bold print | SRH | I will read the parts I have highlighted to summarize the text. |
| Summarising (entire) text by dates and events, checking representations, words and symbols; preparing for posttest | SUM | I will summarise the text in my own words so I can use it for the questions I need to answer soon. |

Note. The six main categories are represented in **bold**. Specific text-studying activities are represented in *italics*.

The codes are used while analysing students' expressions during reading and thinking. Examples are verbalized expressions of students to use as guideline for analyzing the transcripts. Sentences between * * is something students can do, the other sentences are something students can say.

Appendix C

Information letter:

Datum

xxx

Onderwerp



<logo school>

Informatie deelname onze school aan de Werkplaats
Onderwijsonderzoek Utrecht – Gelijke Kansen. Extra
onderzoek: Leerlinggesprekken over Nieuwsbegrip op het
[redacted]

Beste ouders,

Onze school werkt sinds januari 2020 samen met Universiteiten en Hogescholen uit Utrecht. Die samenwerking heet de **Werkplaats Onderwijsonderzoek Utrecht – Gelijke Onderwijskansen**, afgekort de **WOU-GO**. Deze samenwerking duurt 2.5 jaar. Het doel is: gelijke onderwijskansen voor alle kinderen in Utrecht.

Onderzoek naar de effecten van de Corona crisis op het leren

We hebben in het onderzoek gevonden dat de leerlingen in de groepen 5, 6 en 7 last hebben gehad van de schoolsluiting. Zij hebben minder geleerd dan wij wilden. Daar gaan wij nu wat aan doen!

Samen praten over Nieuwsbegrip teksten

We gaan samen met de kinderen nu extra in kleine groepjes oefenen met begrijpend lezen. We weten uit andere onderzoeken dat dit goed kan werken! Om te kijken of het echt werkt, gaat een student van de Universiteit Utrecht met onze lessen meekijken. Haar onderzoek heet: *Leerlinggesprekken over Nieuwsbegrip op het Schateiland*.

Geluid opnemen van de les

De student zal een geluid-opname van de les maken. Zodat zij de les nog eens terug kan luisteren en kan onderzoeken hoe het gaat. De opname wordt alleen door de student geluisterd. Als de student alles heeft opgeschreven wat er in de les gebeurt wordt de opname verwijderd.

Mag uw kind meedoen?

Wilt u de juf of meester voor 1 maart 2021 laten weten of uw kind mee mag doen? Wij zorgen dat uw kind niet te horen is als u dat niet goed vindt. U krijgt een aparte brief van de juf of meester voor toestemming. U mag altijd later zeggen dat uw kind toch niet mee mag doen.

Vragen?

Het onderzoek wordt bij ons op school geleid door juf [redacted]. U kunt haar / hem bereiken op [redacted].

De onderzoekers van de universiteit waar we mee samen werken zijn Moniek Schaars en Lotte Henrichs. U bereikt haar bij vragen op [redacted] of [redacted]. Bij een klacht kunt u contact opnemen met: klachtenfunctionaris-fetsocwet@uu.nl.

Vul het toestemmingsformulier in! Die krijgt u bij deze brief

Active consent letter parents:

| | |
|---------------|--|
| <Logo School> |  |
|---------------|--|

Toestemmingsformulier voor leerkrachten**Titel onderzoek:**

Werkplaats Onderwijsonderzoek Gelijke Onderwijskansen (WOU-GO) en de covid-crisis

- Ik weet wat het doel is van het 'WOU-GO en de covid crisis' onderzoek op de school waar ik werk
- Ik weet dat we dit onderzoek nu uitbreiden met de vraag: "Wat is het effect van in kleine leerling-groepjes praten over de Nieuwsbegrip teksten op de begrijpende leesvaardigheid van onze leerlingen?"
- Ik geef toestemming om geïnterviewd te worden voor het onderzoek
- Ik weet dat de gegevens van het onderzoek 10 jaar zonder mijn naam veilig bewaard worden door de Universiteit Utrecht.
- Ik weet dat ik op elk moment mijn toestemming voor deelname weer mag intrekken.
- Als ik een klacht heb weet ik dat ik kan mailen met de klachtenfunctionaris van de Universiteit Utrecht.

| |
|---------------------|
| Naam: |
| Datum: |
| Handtekening |

Active consent letter teachers:

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| <Logo School> |  |
|---------------|--|

Toestemmingsformulier voor leerkrachten**Titel onderzoek:**

Werkplaats Onderwijsonderzoek Gelijke Onderwijskansen (WOU-GO) en de covid-crisis

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| Naam: |
| Datum: |
| Handtekening |