

Writing
with
peer
response
using
genre
knowledge

A CLASSROOM INTERVENTION STUDY

MARIËTTE HOOGVEEN

**WRITING WITH PEER RESPONSE
USING GENRE KNOWLEDGE**

A classroom intervention study

Mariëtte Hoogeveen

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VOORWOORD

Het doel van deze studie is om een bijdrage te leveren aan de oplossing van problemen in de praktijk van het schrijfonderwijs. Met die problemen kwam ik al lang geleden in aanraking. Tijdens mijn afstudeeronderzoek, een case study naar de praktijk van het schrijfonderwijs van scholen die participeerden in het SLO project Taalvaardigheid in de basisschool (Hoogeveen & Verkampen, 1985), ontdekte ik dat de praktijk weerbarstig is en dat leerplanontwikkeling geen rationeel verlopend en bestuurbaar proces is. In de schrijfprojecten die ik later bij de SLO uitvoerde werd dit beeld gedetailleerd bevestigd: de overwegend traditionele praktijk stond ver af van het procesgerichte schrijfonderwijs dat door leerplanontwikkelaars, didactici en onderzoekers gepropageerd werd. Ik ontdekte ook hoe moeilijk het is om een vakinhoudelijk vernieuwingsvoorstel zo uit te werken in leerplannen dat leerkrachten en leerlingen ermee uit de voeten kunnen, en het ook nog didactisch te verantwoorden is.

In de schrijfprojecten die tussen 1986 en 2011 bij SLO in nauwe samenwerking met scholen, opleidings-, begeleidings- en onderzoeksinstituten uitgevoerd werden, is een aanpak voor procesgericht schrijfonderwijs in de basisschool ontwikkeld waarin het leren schrijven van teksten met peer response centraal staat. Kenmerkend voor deze aanpak is dat leerlingen elkaar met behulp van commentaar op elkaars teksten helpen bij het verwerven van kennis en vaardigheden die bij het schrijven ingezet kunnen worden. De ervaringen met het lesmateriaal in de projectscholen leerden dat deze aanpak voor het schrijfonderwijs uitvoerbaar is in de praktijk en door leerkrachten en leerlingen gewaardeerd wordt. Zij wezen echter ook uit dat leerkrachten behoefte hadden aan een verfijnder didactisch instrumentarium om het gewenste schrijfonderwijs te realiseren zoals het bedoeld was. Daarnaast kwam van leerkrachten vroeg of laat steeds weer de vraag: kun je ook iets zeggen over de effecten ervan? Leren mijn leerlingen er nu ook beter door schrijven? Tot op heden moest ik hen een antwoord schuldig blijven. De ervaringen in de

projectscholen met deze didactiek en de reële vraag uit de praktijk naar de effectiviteit ervan, zetten me aan om een herontwerp van het materiaal op effect te gaan onderzoeken.

Dit onderzoek is geworteld in de praktijk van het schrijfonderwijs en van leerplanontwikkeling. Ik hoop dat de resultaten ervan, via te entameren vervolgprijekten schrijfvaardigheid, hun weg naar die praktijk zullen vinden. Dat er nog veel te verbeteren valt aan die praktijk wordt breed gesignaleerd. Aan deze meest complexe taalvaardigheid wordt in het onderwijs nog steeds het minste tijd besteed, en praktijkbeschrijvingen laten zoveel jaar later nog steeds zien dat procesgericht schrijfonderwijs nog lang geen gemeengoed is. De geringe tijdsinvestering is verbazend omdat schrijfvaardigheid in het dagelijks leven vrijwel niet geleerd wordt en er dus voor de ontwikkeling ervan op het onderwijs een tamelijk exclusieve taak rust. Onderwijsonderzoek waarin het effect van didactische aanpakken beproefd wordt, kan aan deze ontwikkeling een bijdrage leveren. 'Vastgestelde effectiviteit' is een krachtig argument om een bepaalde didactische aanpak te implementeren. Ik haast me eraan toe te voegen dat achter 'vastgestelde effectiviteit' een complexe materie schuilgaat. Hoewel de resultaten van dit onderzoek geïnterpreteerd kunnen worden als een empirische onderbouwing van de effectiviteit van de didactiek van leren schrijven met peer response, zal het niemand verbazen dat de vraag: leren mijn leerlingen er nu beter van schrijven? een genuanceerd antwoord behoeft.

Bij het uitvoeren van dit onderzoek ben ik door velen geholpen en ik dank graag een aantal van hen bij naam. Allereerst mijn copromotor Amos van Gelderen, die als deskundige op dit vakgebied de begeleiding op zich nam. Hij maakte me wegwijs in een voor mij nieuw type onderzoek. Opgegroeid tijdens en na mijn studie in een wetenschapscultuur waarin kwantitatief onderwijsonderzoek met enige scepsis bekeken werd, was het zeer verfrissend om nu van binnenuit de mogelijkheden (en beperkingen) ervan te leren kennen. Amos, je zeer deskundige, enthousiaste en prettige begeleiding maakten het uitvoeren van dit onderzoek tot een heel boeiend en leerzaam avontuur. Je socratische aanpak en de tekstbesprekingen (!) bleken bij het uitvoeren van het onderzoek en het schrijven van dit boek onmisbare instrumenten. Ik zal onze besprekingen gaan missen! Mijn promotor Jan van den Akker dank ik voor de facilitering van het onderzoek in de tweede fase, voor zijn reflecties op de inbedding ervan in de context van leerplanontwikkeling, en voor zijn inhoudelijke commentaar op mijn teksten. Jan, ook dank ik je voor de ruimte die je me gaf en voor de steun die ik ondervond van je visie dat leerplan-

ontwikkeling niet alleen gebaat is bij beschrijvend en construerend onderzoek, maar ook bij effectonderzoek. Dit was een stimulans bij het uitvoeren van deze studie. Jos Letschert dank ik voor de steun bij het entameren van dit onderzoek en voor het faciliteren van het onderzoek in de eerste fase. Mijn (voormalige) manager Ria van de Vorle en (huidige) manager Berthold van Leeuwen en mijn collega's Harry Paus en Anita Oosterloo dank ik voor het begrip dat het uitvoeren van een promotieonderzoek een tijdrovende klus is, die inzet in leerplanontwikkelingsprojecten in sommige fasen beperkt mogelijk maakte. De leerkrachten en leerlingen van de onderzoeksscholen dank ik voor hun enthousiaste deelname aan het onderzoek. Het vereiste de nodige organisatorische rompslomp om alle leerlingen de lessen te kunnen geven volgens schema, in aparte computerlokalen. De experimentleiders en observatoren Nassira Attadmiri, Ellen Breeman, Iris Dijkema, Kiki van der Neut, Anand Ramsaroep en Paulien Walsmit dank ik voor de betrokken en nauwgezette wijze waarop zij het onderzoek op de scholen uitvoerden. Het is aan hen te danken dat het experiment op rolletjes verliep en er niet één leerlingtekst verloren ging. Bert Kouwenberg dank ik voor de inspirerende bijdrage aan de ontwikkeling van het experimentele lesmateriaal en voor de uitvoering van de proeflessen op zijn school. Yvonne Otten, Shairoen Ransing, Irma Munters (SLO), Brigit Triesscheijn (SCO) en Sandra Schele (UT) dank ik voor de onmisbare secretariële ondersteuning. Ten slotte bedank ik mijn gezin: Helge, Hannah en Lucas. Hoewel onze verschillende levensfasen (en temperamenten) soms op gespannen voet met elkaar stonden, dank ik jullie voor de steun en voor de verfrissende, vaak humoristisch relativerende reacties op deze onderneming. De hectiek van het gezinsleven was zeker ook een welkome afwisseling op het werken in stilte en afzondering, dat inherent is aan het schrijven van een proefschrift.

CHAPTER 1

Introduction

1.1 TRADITIONAL AND INNOVATIVE APPROACHES TO WRITING INSTRUCTION

Writing proficiency of students in primary and secondary schools is a point of concern for many years already (Bonset & Hoogeveen, 2007; Gilbert & Graham, 2010; Graham & Harris 2012; Hoogeveen & Bonset, 1998; Inspectie van het onderwijs, 1999, 2010; Kennedy, 1998; Krom et al., 2004; OFSTED, 2005; Persky, Daane & Jin, 2003; U.S. department of Education, 1999). From the 1970s calls for innovation and improvement of writing instruction sound (Aarnoutse et al. 1995; Alliance for Excellent Education, 2006; Bullock, 1975; Cutler & Graham, 2008; Van de Gein, 2005; Inspectie van het onderwijs, 1999, 2010; Rouchette, 1971). Many studies have shown that the acquisition of this complex language ability needs more support than usually provided in primary and secondary writing instruction.

Van Gelderen and Blok (1991) described the practice of writing instruction in primary education in the Netherlands using the following characteristics. First, little time is spent on writing complete texts in language arts lessons. Second, students receive very 'open' and vague writing assignments about topics given by the teacher ('write a story about.....'). These writing assignments do not contain specific criteria for what is expected of the students writing and it is unclear how the texts will be evaluated. Third, writing is regarded as a solitary activity. When assignments are given, students are supposed to write their texts without further instructional support. Fourth, during language arts lessons, students use textbooks to do exercises in related aspects of writing (grammar, spelling, punctuation, vocabulary), but without explicit connection to their writing of complete texts. Fifth, little attention is given to the communicative context in which texts are written and to the functions of written texts in real life situations: goal- and audience oriented

communication of meaning with readers (Franssen & Aarnoutse, 2003). The teacher normally is the only reader of the texts and the main purpose of writing in school seems to be that students produce texts with few formal errors. Sixth, the assessment of texts is restricted to these formal aspects (spelling, punctuation, grammar). This practice is strongly related to the emphasis placed in language teaching on such aspects: a good text is a text without errors in spelling, punctuation and grammar (Hoogeveen & Verkampen, 1985). In addition, assessment of the contents of students' texts is problematic for many teachers. Given the observed open character of writing assignments, there are no specific demands the students are required to meet on the content level of their texts. For that reason, there are also no specific criteria for assessing the students' text contents. In addition teachers are hesitant assessing text contents because these are regarded as products of their students' creativity (Van Gelderen & Blok, 1991).

Several studies have documented that writing education in most schools in other countries is dominated by similar approaches as in the Netherlands: much attention for isolated practice in grammar and spelling, little attention to the writing process, and poorly defined writing assignments in terms of discourse type and communicative setting (Applebee & Langer, 2006; Connors, 1997; De la Paz, 1999; Duffield & Peacock, 1999; Graham & Perin, 2007a; Hillocks, 2006). In addition, it has been documented for schools in several foreign countries that little time is spent on systematic instruction of writing skills. According to Corden (2002) the call for teachers to move beyond initial stimulus for writing to more explicit teaching and skillful intervention during composition is repeated in many research findings (Allington & Wamsley, 1995; Applebee, Langer & Mullis, 1986).

Modern societal and scientific developments resulted in a challenge of the traditional perspective on writing education, because views were changing in the direction of a communicative view on writing instruction (Chapman, 2006; Sturm, 1988). From a societal point of view, the use and meaning of language were considered more and more important. Language education was supposed to contribute to emancipatory and democratic ideals and much attention should be given to the development of communicative competence of language users (Hymes, 1971). For that reason, language teaching, should focus on the various aspects of the communicative situation in which language is used (the writer, the reader, the meaning and function of texts). Students who are aware of the different aspects of the communicative situation were supposed to be better able to function in society. Language was no longer seen

as a formal system of rules, but primarily as a functional tool in communicative situations (Van Gelderen, Hoogeveen & Zijp, 2004).

From a scientific perspective, new insights into the development of writing were proposed. They were based on the assumption that writing proficiency can be improved by giving attention to writing processes. Flower and Hayes (1980) and Bereiter and Scardamalia (1987) describe writing processes as complex cognitive processes which make high demands on writers' knowledge and skills. Writing is seen as a process of problem solving. During the writing process, writers have to take steps to create the meaning of the text: they have to plan, to formulate and to revise their texts in the light of the purpose of the text and the needs of the readers.

Accordingly, theories and handbooks on writing education (Atwell, 1987; McCormick Calkins, 1986; Leidse Werkgroep Moedertaaldidactiek, 1986; Nijmeegse werkgroep taaldidactiek, 1978) shifted their attention from the formal aspects of texts to influencing the writing process: process-oriented approaches to writing instruction were developed. In these approaches there is much attention to how students write text (e.g. the use of writing strategies), the characteristics of the situation in which students are writing (e.g. motivation), and to the adaptation of language use to the purpose of writing and the audience.

Communicative writing instruction emphasizes what writers are doing and how they can be supported. The absence of instructional support during the different stages of the writing process (planning, formulating, revision) in traditional writing lessons is therefore criticized. The purpose of process-oriented writing instruction is to help students to learn to regulate their writing behavior during the different stages of the writing process. They have to learn to plan, write and revise their texts taking into account the communicative functions of their texts. To realize these functions, they have to learn to reflect on their texts with the eyes of the intended readers. In addition, the importance of knowledge of the functions and characteristics of specific text genres (narrative, expository, argumentative etcetera) is emphasized.

1.2 WRITING WITH PEER RESPONSE

1.2.1 Backgrounds and functions

Writing with peer response, the subject of this study, is a process-oriented approach to writing instruction based on a communicative view on writing.

Characteristic for writing with peer response is that students collaborate (in pairs or groups) during the different stages of the writing process (planning, formulating, and revising texts) to help each other in applying knowledge and skills for writing goal- and audience oriented texts (Topping & Ehly, 1998). MacCarthy and MacMahon (1995) link the interest for writing with peer response to the growing interest for a socio-constructivist view on learning in the 1980's, which has its roots in the theory of cognitive development of Vygotsky. The core of this theory is that knowledge is construed in social interaction between individuals and that all thinking is social in nature. Learning takes place in social interaction, and is the result of a transfer of transactions between individuals to cognitions of the individual. Cognitive growth and knowledge construction take place by internalization of dialogues in social contexts. Conversations within an individual take the form of reflective thought. Reflective thought is a key factor in cognitive development.

In terms of Vygotsky (1978) this learning process occurs within the "zone of proximal development", defined as: the distance between a child's actual level of development (as determined through independent problem solving) and the level of potential development (as determined through problem solving under adult guidance or in collaboration with peers). In problem solving in social interaction, students develop cognitive abilities, and learn to regulate learning processes. It is the task of the adult or the peer to stimulate the learner to make a new step in cognitive growth. Collaboration between students during writing with peer response creates opportunities for verbal interaction on writing processes.

In this fashion, learning to write is mediated by verbal interactions among peers. During verbal interactions with readers in writing conferences, students gain knowledge about writing and characteristics of texts. The actual presence of readers and their comments on the drafts produced provide insight in functions of the text in the communication process. The collaborative interchange with peers helps students to reflect on the text and writing processes, to develop a sense of audience and to empower them with skills to revise for meaning (Bruffee, 1984; Dyson, 1993; Murray, 1980).

In the practice of writing instruction, peer response can be used as a didactic tool to help students going through the stages of the writing process facilitated by a reader commenting on their writing in different stages. During the stages of planning, formulating and revising peers can help each other by discussing the writing process and texts to be written.

Peer response is supposed to have several functions for the development of writing ability. First, the interaction between writers and readers during the different stages of the writing process helps writers to reflect on their writing process. Through this reflection writers develop knowledge about their own writing processes, so called metacognitive knowledge (Bracewell, 1992; Hayes, 1996). By discussing the text and the writing process with the reader during planning, formulating and revising, writers gain insight in their thoughts during writing and in the extent to which these thoughts and strategies serve their intended communicative functions.

Second, peer response is supposed to have positive effects on students' motivation for writing in school. When writers know that their texts are actually read by readers who are interested in the contents of the text, they will become involved in writing and experience pleasure while writing.

Third, on the basis of writing motivation and knowledge about writing processes writers learn to regulate their writing behavior by attuning the text to the intended goals and the needs of the audience (Elbow, 1973). For example, when a reader comments that an unclear structure impedes understanding of the text, the writer can conclude that he has to pay special attention to planning- or revising activities with respect to text structure. Writing motivation is supposed to be the basis for development of such self-regulated writing behavior (Zimmerman & Risemberg, 1997).

Fourth, for discussing texts with peers writers need to use specific language to talk about texts. Therefore, peer response can contribute to the development of meta-language based on a growing awareness and explicit knowledge of language and language use (Carter, 2003).

Fifth, peer response supports the development of genre knowledge (Richardson, 1991; Wyatt-Smith, 1997). Knowledge of genre characteristics is important for writing development because it determines whether writers are able to achieve their goals using appropriate forms and functions suited for specific genres (Halliday, 1975; Martin, Christie & Rothery, 1987). By reflecting on the forms and functions of texts during peer conferences within a specific genre (such as narratives, argumentative texts or texts written for expository purposes such as instructions or descriptions) students develop genre knowledge.

Sixth, writing with peer response can be an efficient didactic approach. When students are commenting on each other's texts there is no need for teachers to evaluate all texts written by students. Writing assessment becomes less time consuming for teachers; this can stimulate teachers to provide more occasions for practicing writing.

1.2.2 Writers' Workshops

Process-oriented writing instruction with an emphasis on peer response was developed early in the 1980s under the label "Writers' Workshop approach". Several handbooks promoting this approach were published in those years (Graves 1983; McCormick & Calkins, 1986) and later on (Anderson, 2007; Calkins, 1994; Dorn & Sofos, 2001; Gillet & Beverly, 2001; Lattimer, 2003). Researchers described classroom practices in which teachers worked according to this approach (Freedman, 1987). In general this approach is typified as 'founding a writing community in school' (Corden, 2003). It is directed to the affective (involvement, motivation, self-confidence), communicative (goal- and audience orientation) and process-oriented (planning, formulating, revising) aspects of learning to write. In this approach, much time is devoted to writing on self-selected topics and genres for a variety of purposes and audiences. Students are given the opportunity to work on compositions in Writers' Workshops sharing their progress and complete their work with peers. In writing conferences they gain critical but constructive feedback. Writing progress is viewed as dynamic. It can be significantly improved by the writing of multiple drafts and by several rounds of revision (Dyson & Freedman, 1990). The purpose of discussing and revising drafts is to support writers in reflecting on authorship and on texts from a readers' perspective. Graves (1983), the founding father of the Writers' Workshop approach, McCormick-Calkins (1986) and Atwell (1987), mentioned the following key points of the Writers' Workshop approach:

1. Students receive frequent opportunities to work independently on compositions in their own time in a positive writing atmosphere. There is diversity in writing tasks; students are working on the writing that they have chosen to do. Writing assignments have to be completed within some weeks and students learn to regulate their own development as they work through a wide variety of writing assignments in a sustained and self-directed way.
2. There is a classroom routine in which students go through different stages: prewriting (planning, generating contents), drafting (writing of first text version), conferencing/sharing (discussing first draft and writing process), revising/editing (revision of the text on the basis of commentary), publishing (publishing the text for a real audience). These stages make students aware of the fact that writing is a recursive process in which planning, formulating and revising are interchanging and recurrent

activities. Students are required to write more than one draft as they have to learn that it is necessary for good writing. The stages are published on wall charts in the classroom to remind students of their importance. In the Writers' Workshop students work independently while writing, but writing conferences are organized for different stages of the writing process (planning, formulating, revision).

3. Writing conferences, in which students' drafts are discussed with peers, are organized frequently. Writing conferences can occur at any stage and can be directed to different topics (e.g. text structure, goal- and audience orientation). No checklists with fixed criteria for peer response are used. Students are instructed by the teacher starting conferences by asking questions directed to the writing process and to evaluation of the text (e.g. 'What problems did you run into while you were writing this piece'? 'What part of the text is the best and what makes it the best?'). Thereafter the writer asks questions to the reader (e.g. 'Did you enjoy the text'? 'Where there unclear parts of the text'? 'Do you have suggestions for changes in the text?'). Texts are seen as an expression of the voice of the writer who wants to communicate his ideas. It is important that the writer remains the owner of the text: a text is only discussed with permission of the writer and revisions are made on the condition that the writer agrees with them.
4. Instruction is provided through mini-lessons; a short (5-10 minutes) teacher led discussion of a single writing issue (e.g. topic search, brainstorming for a title, introducing a genre, writing a lead, punctuation of dialogues) or procedural issues (e.g. What resources are available? What are helpful ways of responding? What is the difference between revising and editing?). Mini-lessons are usually organized according to the teachers' judgments about what the students need to work on next, or about observed problems in students' writing.
5. The assessment of writing takes place using portfolios. In such portfolios students collect multiple drafts of their texts, reports of writing conferences, and reflections on their own texts and writing processes. In these reflections they describe what they have learned and what they want to learn. Portfolios are intended to demonstrate development over time from early to later work, to nurture self-reflection about writing, and to help students to develop an identity as a writer (Yancey, 1992). Finally, students also select texts for which they want to be graded.

1.3 DEVELOPMENT OF A NEW WRITING CURRICULUM

Inspired by this Writers' Workshop approach, a curriculum for writing instruction in the Netherlands was developed by the Netherlands institute for curriculum development (SLO). The curriculum 'Learning to write' (Hoogeveen, 1993) aimed at improving primary school teachers' competence in realizing process-oriented writing with peer response in the classroom. The curriculum consists of ideas for writing lessons that teachers may use, but does not contain materials for students or prescribed lesson contents (in conformity with the Writers' Workshop approach). The curriculum contains the following materials:

- a. An explanation of the basic assumptions of the curriculum. Characteristic for this curriculum is the process-oriented and communicative approach to writing instruction with peer response. It is emphasized that writing can be learned by writing and reflecting on texts and writing processes during writing conferences. In addition the communicative function of writing is explained and the importance of a motivating learning environment for writing is underlined.
- b. A global structure for the planning of writing activities (suggestions for topics, genres, teaching materials are given) during a school year in the different grades of primary school.
- c. Instructions for teachers for what has to be done in each stage of the writing lessons.
- d. Examples of lesson plans (3 for each grade) in which the activities of the students and the teachers are described on a global level.
- e. A model in which the different stages of a writing lesson are described. This model is the core of the curriculum. The model has the function to help teachers with the planning and implementation of process-oriented writing with peer response. The model exists of the following stages:
 1. Orientation on the writing assignment: in this stage prewriting activities are organized, such as choice of the topic, content generation, planning of the text and the writing process in the light of the genre and communicative function of the text.
 2. The formulation of the writing assignment. On the basis of clear criteria, the writing assignment is given. The following criteria are important to be explained to the students: genre and purpose of the texts, the length of the texts, audience and methods for publishing.

3. Assistance during formulating the first draft. In this stage, students who have problems with formulating are supported by the teacher or by peer partners. For example, they can be assisted with writing conferences on formulating a first sentence or the use of appropriate vocabulary.
4. Discussing and revising texts. During this stage, writing conferences are organized in which the first drafts are discussed. Students learn to start conferences with positive comments on the texts, to ask the writer questions about the text and the writing process, to give arguments for their evaluations of certain aspects of the text, and to help the writer with suggestions for revision. On the basis of the comments of peers during the writing conferences, students revise their first draft.
5. Editing and publishing of the texts. In this stage the texts will be checked for grammar, spelling, punctuation and lay-out. Publishing contributes to the creation of a real communicative situation in which the texts will be read by an audience instead of assessed by the teacher.

There are both similarities and differences between the Writers' Workshop approach and the curriculum 'Learning to write'. In the curriculum 'Learning to write' writing lessons are more strictly structured according to the different stages of the didactic model. In addition, while students work independently on their compositions in their own time in the Writers' Workshop, in the Dutch curriculum the same writing assignment is given to all students and they all write their texts during writing lessons. Furthermore, writing conferences do not take place during all the stages of the writing process (as in the Writers' Workshop), but only during the stage 'discussing and revising texts'. During writing conferences, there is less concern about 'the text as an expression of the voice of the writer' than in the Writers' Workshop. Peers comment on the texts from a readers' perspective. Assessments of texts are carried out by the teachers, grading all students' texts, instead of making use of portfolios as in the Writers' Workshop.

1.3.1 Design and implementation strategy

Studies into curriculum innovation show that teachers frequently experience problems with the implementation of innovative curricula (Fullan, 1982, 1999). Proposals for innovation are received by teachers on the basis of a complex of factors, e.g. their own experiences as student, their teacher training, their teaching objectives, their subject matter knowledge, and the conditions at their schools (Hammersly, 1977). Due to all these factors influencing the reception of

a curriculum innovation, discrepancies can emerge between the formal curriculum (the curriculum document), the perceived curriculum (the curriculum as interpreted by the teacher) and the operational curriculum (the curriculum as carried out in the teaching learning process) (Goodlad, 1979). Fullan (1991) suggests that curriculum products themselves can complicate the implementation process: "Too often the curriculum documents are not 'debugged' and lack the clarity and program characteristics necessary to help users know what to do to" (p. 52-53).

The curriculum 'Learning to write' was developed in a project that aimed to contribute to the resolution of implementation problems using a school-based design and implementation strategy (Kemmis & McTaggart, 1988; Walker, 1990). Characteristic for such a strategy is that curriculum development takes place in close collaboration with teaching practice and is understood as a process that implies a range of decisions concerning the development of curriculum materials, taken by different actors at different levels (e.g. experts, teachers, schools, researchers), carried out in the context of schools. The curriculum can be characterized as 'open'. It offers global suggestions for writing lessons and subject matter content, but the teaching learning process is left to the teachers. It is assumed that teachers are able to design lessons with the materials supplied (Lentz & Van Tuijl, 1987). The strategy in this project can be characterized as an adaptive evolutionary approach (Fullan, 1982). In this approach it is argued that changes of educational practice cannot be achieved by 'programming' teacher behavior with curriculum materials. Practitioners are stimulated to use their practical situational knowledge for implementation and are invited to reflect on a curriculum and to further develop it for the specific circumstances they are working in (Altrichter, 2005). According to Stenhouse (1975): "A curriculum is an attempt to communicate the essential principles and features of an educational proposal in such a form that it is open to critical scrutiny and capable of effective translation into practice" (p. 4).

In this project curriculum developers, a teacher trainer, a school counsellor and researchers collaborated in the development and implementation of teaching materials to improve writing instruction. The research accompanying the development of the curriculum in this project can be characterized as 'design and development research' (Richey & Klein, 2007). It aims at designing an intervention in the real world and incorporates a cyclic approach of curriculum development: design, evaluation and revision. The focus of this research is on helping participants to understand and improve

interventions. In addition, such research estimates the merits of the intervention from the perspective of the prospective users (Van den Akker, Gravemeijer, McKenney & Nieveen, 2006).

The project was carried out in two phases. In the first phase, the didactic model was developed in a primary school on the basis of half-products available from preceding SLO-projects on writing instruction (Lentz & Van Tuijl, 1982; Lentz, Sturm & Van Tuijl, 1986). In the second phase, the concept curriculum was implemented in three schools that were not involved in the first phase (Bok, 1991). Research played an important role in the project. During both phases, the researchers carried out case studies in which they described and analysed what happened with the proposals of the curriculum developers, the teacher trainer and the school counsellor in classroom practice (Sturm, 1988; Hoogeveen & Sturm, 1990). In addition they analysed documents and interviewed the teachers about their experiences with the lessons and the feasibility of the curriculum. The experiences of all participants as observed by the researchers have resulted in suggestions for the revision of the curriculum into the final product (Hoogeveen, 1993).

The curriculum was distributed and implemented in schools, in the initial teacher training for primary school (Van der Leeuw, 1994), in in-service teacher training (Hoogeveen, 1996), and in different writing projects of the SLO, carried out on requests of the government and the field of education. In these projects the curriculum was adapted to the wishes of the applicants (Hoogeveen, Seelen & Wijnbergh, 2002; Hoogeveen, et al., 2004; Kouwenberg & Hoogeveen, 2007; Hoogeveen & Kouwenberg, 2011; Hoogeveen & Brouwer, 2011). In a number of these projects case studies were carried out. Again, writing lessons were observed by researchers and teachers kept logs of lesson preparation and the way the lessons were given. In addition, they were interviewed about their experiences with the curriculum in general and commented on the lessons they had given.

1.3.2 Trouble in paradise

The case studies conducted during the development of the curriculum (Hoogeveen & Verkampen, 1985; Sturm, 1988; Hoogeveen & Sturm 1990) and during the distribution in the successive writing projects (Heijmans, 2001; Maren & Van Waele 2002; Tieben, 2005; 2007) gave insight into the way the curriculum was implemented in school practice. The interviews with teachers show that they generally endorse the purposes of the innovative curriculum. They characterize

their current practice as traditional writing instruction and see communicative writing instruction with peer response as a solution for the problems they observe in their own teaching practices. These problems were already discussed before: difficulty to motivate students for writing, no instruction in learning to write, and assessments by the teacher only, without evaluation of the communicative functions of the students' texts (Hoogeveen & Verkampen, 1985). After giving writing lessons according to the didactic model, teachers expressed positive feelings: they experience the model as supportive for the planning and realization of process-oriented writing lessons (Sturm, 1988).

The observations of classroom practice by the researchers, however, revealed discrepancies between the teachers' perceptions of their new writing lessons and the way the lessons were actually carried out. In the operational writing curriculum, communicative objectives were seen to play a subordinate role. Although teachers organized their writing lessons according to the stages of the didactic model, during these different stages there was little concern for students' writing processes, the text genres students were writing, the communicative functions of the texts, and goal- and audience orientation during writing conferences. Teachers and students were observed to stay strongly focused on what they were used to do in their language lessons. For example: an important characteristic of the stage of orientation is the introduction of model texts to be read by the students to give them an idea of characteristics of the genre. Instead of treating these texts as examples of a specific genre, the teachers used these texts as exercises in reading comprehension. The students were asked to read the texts aloud, to explain all the difficult words in it, and to answer questions about the main idea in the text (Sturm & Hoogeveen, 1990). This treatment of a text is typical for traditional instruction in reading comprehension.

Formulating writing assignments during the second stage of the didactic model appeared to be difficult for the teachers as well. The following criteria for writing assignments had to be mentioned: genre, purpose, length of the text, audience and methods for publishing. In practice, teachers persisted in their routine to indicate texts of any genre as 'stories' and to formulate the assignment as 'write a story about...'. Instead of explaining the genre related criteria for commenting on texts, teachers pointed out that it was important that texts did not contain spelling errors and were written neatly. This was a central issue in the new curriculum, because when criteria for reflection related to the genre and the communicative function are not provided, it is difficult for students to write and revise their texts with a goal and audience in mind.

The main problem observed in the writing lessons occurred during the stage of discussing the texts in writing conferences and the revision of the texts, the core of this writing curriculum with peer response. This stage was observed to be frequently neglected in actual practice. Teachers persisted in their routine to organize class discussions in which they have influence on the topics to be discussed and the interaction processes between the students. In these class discussions, the focus was frequently on the topic of the text or on editing aspects (spelling, punctuation, grammar). No attention was paid to the criteria for the texts to be mentioned in the writing assignments: the genre, the function of the texts, the purpose and the audience. When teachers organized writing conferences in pairs or small groups, it was observed that peers did not give more than superficial feedback. Their comments on each other's texts appeared to be very generic or merely directed to formal issues as pointed out in the writing assignments (e.g. 'I like your text', 'You could write a little bit more', 'You have to use capital letters'). Because students did not receive concrete criteria for the discussion of their texts, these discussions remained limited to very global evaluative remarks and editing of formal aspects. Such superficial comments do not support students revising their texts for meaning related issues.

From interviews with the teachers and logs of their lessons, it became clear that they had problems with getting students respond effectively to each other's writing (Heijmans, 2001; Tieben, 2007). Due to their routine in focusing on formal aspects of the texts in their writing assignments and during the writing lessons, they did not succeed in focusing students' feedback on concrete, genre-related criteria that are relevant for communication with readers. Teachers and students apparently were unable to produce sensible comments in writing conferences or sensible reflection on the form and function of texts from a readers' perspective.

Nevertheless, the curriculum materials offered the teachers support for teaching students to comment on each other's texts. It is suggested, for example, to ask questions regarding the characteristics of different genres ('Does the text have characteristics of a report or a story?'), the content of the text ('Is the topic interesting for the readers?'), the text structure ('Is the structure clear?') and the style ('Are main characters vividly described?'). Such suggestions for the application of general aspects of communicative writing without the specification of characteristics of different genres, however, were apparently not guiding most of the writing conferences observed.

It was concluded that teachers appeared to be able to organize their writing lessons according to the stages of the didactic model, but that they did not succeed in realizing the principles of the new curriculum as intended by the curriculum developers. Their usual practice of writing instruction and the predominant position of formal aspects of writing seemed to inhibit adoption of the new views of process-oriented, communicative writing (Sturm, 1988, Hoogeveen & Sturm, 1990).

1.4 REDESIGN OF THE CURRICULUM

A review of empirical studies on writing with peer response was carried out in order to update our knowledge about writing with peer response and its relation with process-oriented communicative writing instruction (chapter 2 of this dissertation). The curriculum 'Learning to write' was primarily based on didactic handbooks and articles describing the Writers' Workshop approach', but at that time little research on writing with peer response had been conducted into the effects of different approaches. Most intervention studies on writing with peer response were carried out from the 1990s.

The literature review gave insight in the current theoretical and empirical foundations of writing with peer response and in the instructional aspects that make writing with peer response effective in classroom contexts. The intervention studies showed that writing with peer response is effective in improving students' writing proficiency compared to individual writing. The review also underlined the importance of additional instruction in writing with peer response. In nearly all studies peer response was accompanied by instruction in writing strategies (for planning, formulating and revising texts), rules for regulating the interaction between students during writing conferences, genre knowledge, or any combination of these instructional components. In addition, in several studies the same problems with peer response in classroom practice were reported as described above: students are overly occupied with formal matters (spelling, grammar, punctuation), give quite generic and superficial comments on each other's texts, and fail in providing concrete suggestions for improvement. Letting children collaborate during writing lessons is not sufficient to ensure productive interactions; additional instruction for writing with peer response is necessary.

The curriculum materials developed in the project 'Learning to write' were redesigned on the basis of the literature review. The redesign aimed to give students concrete genre-specific criteria for writing and for commenting on each other's text, an issue that had appeared insufficiently covered in the 'Learning to write' curriculum. As observations of lessons had shown, teachers did not focus students' attention on specific criteria for improving their texts in their writing assignments and during writing conferences.

For that reason, the redesign attempted to improve the curriculum materials by adding specific genre knowledge as a central focus of instruction. This type of knowledge (of linguistic features expressing typical functions in specific text genres) was to be used during the different stages of the didactic model, and was supposed to offer concrete support to students while discussing and revising texts. The addition of this instructional focus in the different stages of the writing lessons is the major adaptation of the lessons. Other characteristics, such as the organisation around a central theme, the writing of different genres, the stages of the didactic model, and the writing conferences are quite similar in the redesign and the 'Learning to write' curriculum.

1.5 EXPERIMENTAL STUDY INTO THE WRITING COURSE

Educational research increasingly shows the importance of the role of curriculum materials as agents of instructional improvement (Fullan, 1982; Davis & Krajcik, 2005; Van den Akker, 1988). This is also the context in which this intervention study was undertaken. The effectiveness of writing with peer response with additional instruction in specific genre knowledge, was investigated in an intervention study using an experimental design with randomized assignment of groups within classrooms.

Ball and Cohen (1996) typify the dissemination of curriculum materials as one of the oldest strategies for attempting to influence classroom instruction. Studies on curriculum innovation have shown that certain characteristics of curriculum materials (e.g. indicating which elements are essential for achieving the intended change, or integrating teacher and student materials) have a positive influence on curriculum implementation (Keursten, 1994; Ottevanger, 2001; Van den Akker, 1988). Thijs and Van den Akker (2009) observed that new curricula are frequently distributed in education without any indication that they are better than preceding curricula. Curricular innovations in education

are quite often observed to fail in classroom practice. For that reason research into the effectiveness of curricula becomes more and more important.

The Dutch Education Council (2006) pleaded for a more evidence-based approach to educational development: an approach in which empirical evidence is sought through targeted evaluation of the effectiveness of an intervention (Cook, Smith & Tankersly, 2012). According to Nieveen, McKenney and Van den Akker (2006) external summative evaluation in the form of effect-studies is part of the multiple cycles educational research goes through. After stages that share an exploratory emphasis including speculation, observation, identification of variables/processes, modelling, prototyping and initial implementations in which design research is conducted, later stages share a confirmatory emphasis in which causality is tested, for instance with intervention studies with randomized experimental designs. The exploratory emphasis is necessary to arrive at well-designed innovations, the confirmatory emphasis is necessary to test the impact of an innovation and to provide sound inputs for future exploratory studies. Intervention studies indicating a positive impact of a curriculum on students' learning outcomes can convince teachers to implement the curriculum in their classroom practice. In addition, it can help them to overcome their resistance against curriculum innovation (Fullan, 1982; Loucks & Lieberman, 1983; Van den Akker, 1988).

The focus of the current study is restricted to the effectiveness of the writing course in an experimental setting. The implementation of the writing course in schools, carried out by teachers who were not involved in the development of the materials or the experiment, is not covered in this study. We decided that the effectiveness of writing with peer response on students writing ability first has to be established in principle. This means that the curriculum has to be carried out according to its basic principles. To eliminate implementation problems as observed in the formative evaluation described above, several measures were taken. First, the lessons were developed in such a way that students received step-by-step directions (instruction books, workbooks and answer books), making it possible for them to work without much teacher interference and guidance. It was impossible for teachers, for example, to change the instructional contents of the writing lessons, because everything was explicitly provided in the students' workbooks. By neutralizing the teacher role, we avoided much of the observed disturbance in the formative evaluation, allowing us to evaluate whether writing with peer response and genre specific instruction is effective in improving students' writing proficiency. Second, all

lessons were given by teachers who were specifically trained by the research team, especially for those instances in which they had an indispensable role, such as demonstrating how interactions in peer groups were supposed to be held, or reacting to questions of students about assignments, procedures, etcetera.

Finally, in order to compare the experimental group with a credible control group, a parallel condition was developed, containing the same writing assignments, global ordering of lessons and peer response sessions, but without the instruction in specific genre knowledge. Instead, this parallel control group received instruction in general aspects of communicative writing, similar to the knowledge about texts that was provided in the original 'Learning to write' curriculum.

1.6 STUDIES IN THIS THESIS

This thesis consists of five chapters¹. Chapter 1 (this chapter) outlines the historical backgrounds and aims of the study.

In chapter 2, a literature review of empirical studies (1990-2011) directed to the effects of writing with peer response is presented. Several meta-analyses already indicated that peer response is effective in improving students' writing proficiency. In these studies however, the effects of different interventions for writing instruction were compared, and peer response was one of the interventions studied. The literature review in this study focuses on specific instructional factors accompanying peer response in 26 studies on writing proficiency. In these studies the effectiveness of peer response is evaluated in combination with several other instructional components (such as strategy-instruction, interaction-instruction and instruction in genre knowledge). The underlying theoretical perspectives of these studies are described and the interventions are analysed in detail to answer the question which additional components contribute to the effectiveness of writing with peer response.

Chapter 3 reports an experiment on the effects of a writing course with peer response combined with instruction in genre knowledge on students' writing proficiency. From the review, it was concluded that in most studies peer response is accompanied by additional instructional components, but that relatively little is known about the role of genre knowledge, specifically

¹ Chapters 2, 3, 4 have been submitted separately to international journals.

knowledge about the use of linguistic features in different genres. Therefore, in this experiment the effectiveness of two approaches of peer response were compared: peer response with specific genre knowledge (SGK; the function of specific linguistic features for different genres) and peer response with knowledge of general aspects of communicative writing (GACW; the functions of different genres, goal- and audience oriented writing). The latter approach was characteristic for the original 'Learning to write' curriculum. The approach with instruction in specific genre knowledge was a model for the redesign of that curriculum, aiming at more concrete support for students' writing and responding to each other's texts in a helpful way. Both experimental groups were compared with a baseline control group. The experiment tested whether instruction in specific genre knowledge enriches students feedback on each other's writing by providing specific criteria for the evaluation of texts and finally resulting in better writing quality. In addition, video recordings of students' writing conferences were analysed to determine whether students who received instruction in specific genre knowledge used this knowledge in their comments to their peers' texts.

Chapter 4 focuses on the effect of instruction in specific genre knowledge as well. However, this time the effect is established by comparing the use of linguistic features in students' texts and during the revision of their texts in the different conditions (experimental and baseline control). The experiment tested whether instruction in specific genre knowledge leads to the use of more functional linguistic features (cohesive ties) in students' first drafts and in their revised texts. In addition, the importance of the use of cohesive ties for text coherence, which is an important aspect of text quality, is assumed in several theories. A positive relationship between the use of these linguistic features in students' texts and writing quality is therefore expected. The correlation between the presence of these linguistic features in students' texts and quality of writing is analysed in this chapter.

Finally, in chapter 5 the main outcomes and conclusions of the study are synthesized and discussed. Directions for future research and implications for the next steps in the innovation of writing education with peer response and genre knowledge will be suggested.

CHAPTER 2

What works in writing with peer response?

A review of intervention studies with children and adolescents

Peer response is viewed as an important aspect of writing instruction. Several meta-studies indicated that peer response is effective. However, these studies did not focus on the specific aspects of peer response that made it effective. The present review analyses the effects of instructional factors accompanying peer response in 26 studies on writing proficiency. Three theoretical perspectives are distinguished: a cognitive, a social-cognitive and a genre perspective underlying the reviewed studies. Many studies appeared to combine instruction in strategies, rules for interaction, and/or genre knowledge. Such combination seems effective compared to individual writing. A few studies show also positive effects of peer response without additional instruction. Recommendations for future investigations are directed to methodological issues for separating the effects of instructional components for writing with peer response. In addition, it is advised to direct future studies towards more controlled research into the effects of instruction in genre knowledge.

2.1 INTRODUCTION

Learning to write with peer response has been the focus of research for at least forty years (Gere, 1987; Gordon & Gordon, 1990; Toth, 1997). In the late sixties of the last century peer response was promoted to optimize writing instruction for children and adolescents (Elbow, 1973; Graves 1983; Murray, 1980). Writing instruction in those years was criticized of being too much 'product oriented' (Bruffee, 1973; Rayers, 1987). Writing with peer response was intended to call attention to the important role of students' writing processes in writing

instruction (Dyson & Freedman, 1990; Hairston, 1982; Prior, 2006; Roen, Gogging & Clary-Lemon, 2008).

We define peer response as an umbrella term for many forms of collaboration between students. Topping and Ehly (1998) describe these forms (e.g. peer response, peer tutoring, peer collaboration, peer feedback, peer evaluation, peer assessment) all as different forms of Peer Assisted Learning (PAL), which is defined as "people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by teaching" (p. 1). In this article, we use the term peer response broadly as a form of cooperation between students (in pairs or groups) during the different stages of the writing process (Louth, McAllister & McAllister 1993; Topping & Ehly, 1998).

Writing with peer response is assumed to be beneficial for the teaching of writing for various reasons. First, the presence of readers commenting on texts during different stages of the writing process is supposed to help writers to go through the complex writing process. Young writers become aware of the needs of their readers and develop goal- and audience orientation when writing texts (Dorn & Soffos, 2001; Gill & Beverly, 2001; Rijlaarsdam, 1986). Second, by means of reactions on texts by readers a communicative context for writing is created. The interaction between students causes a rather natural situation for writing, which is supposed to increase students' motivation to write meaningful texts (Graves, 1983; McCormick-Calkins, 1986). Third, discussing texts with peers is assumed to help the writer to develop genre knowledge (Lewis & Wray, 1995). Such discussions can make students aware of forms and functions of different sorts of texts helping them to realize the purpose of their texts. Finally, writing with peer response is seen as an instrument to develop meta-language (Cazden, 1991). To be able to reflect on texts, writers need a language to talk about the linguistic means they are using. This meta-language is supposed to be beneficial for writers' monitoring (and revising) the sentences they produce.

Several meta-studies on writing instruction have been carried out comparing the effects of different interventions for writing instruction (Andrews, Torgerson, Low & McGuinn, 2009; Chapman, 2006; Graham & Perin, 2007a; Hillocks, 1984, 1986). In these studies peer response is one of the interventions studied. Hillocks (1984, 1986) analysed interventions for writing instruction from grade six to freshman level. In his study peer response is a component of the "environmental" and "naturalistic" modes. These modes using peer response appeared to be effective compared with interventions without peer response. Graham and Perin (2007a) conducted a meta-analysis of writing

interventions (grades 4-12) in which 'peer assistance when writing' is one of the discerned treatments. They concluded on the basis of 7 studies that peer response was effective in increasing writing abilities of students. A review by Andrews et al. (2009) on teaching argumentative writing (grades 1-8) included three studies with peer response. They concluded that peer response was effective for increasing students' ability in writing argumentative texts. The conclusions of these studies suggest that peer response is effective for improving writing proficiency. However, these studies were directed to the comparison of the effects of different approaches to teaching writing in *general*. As a consequence they provide no insight into the instructional factors that make writing with peer response an effective intervention. Is it sufficient to allow peers to react to each other's texts or do the peers need support to direct their attention to specific aspects of texts, or to the way they interact with each other or formulate their comments? In addition, two of the meta-studies included a small amount of studies as a result of the restriction to true experimental or quasi-experimental designs (Andrews et al., 2009; Graham & Perin, 2007a). The present review study is intended to fill in the gap in our knowledge about instructional factors, and aims to give an overview of all data collected in recent research concerning the question of 'what works' in writing with peer response.

2.1.1 Theoretical perspectives

The treatments in intervention studies directed to writing with peer response are based on several theoretical perspectives. These theoretical underpinnings have played an important role in shaping the treatments in the studies reviewed in this study. Therefore we give an overview of these theoretical perspectives.

The attention to processes opposed to product oriented writing instruction from the 1970s, is viewed as a turning point in thinking about writing and the teaching of writing (Prior, 2006). Cognitive psychology (Payne & Wenger, 1998), based to a great extent on the work of Piaget and Luria in which the study of cognitive processes was the main focus, made a major contribution to the thinking about writing (McCutchen, Teske & Bankston, 2008). Writing was considered as a recursive cognitive process in which stages, such as global planning of the writing activity, formulation of ideas and revision of text had to be passed in a non-linear fashion. Moving through this complex process puts writers in a permanent juggle of dealing with different demands (such as attending to the writing assignment, rhetorical demands,

characteristics of the intended readers, logical connections, conventions of grammar, spelling and idiom). Two models of writing deeply influenced the development of writing theory (Bereiter & Scardamalia, 1987; Flower & Hayes, 1980). Flower & Hayes (1980) described in their model of expert writing the main parts which make up the process of writing: the task environment, the writers long-term memory, and the writing process (planning, formulating and revising). Taking into account the aspects of the task environment (subject, assignment, audience) and using knowledge from long-term memory (about writing plans, subjects and audiences) a writer has to go through several thinking processes when writing a text, such as generating, selecting and organizing ideas and specifying the goal of the text. The writer uses strategies during the different stages of the writing process, and reflects on what he is doing while writing, to control the writing process. This control is described in the literature as 'metacognitive monitoring' (Dinsmore, Alexander & Loughlin, 2008; Flavell, 1971). This means that writers think about their own thought processes while writing. The awareness of one's writing process enables the writer to manipulate activities leading to the production of text (Bracewell, 1992). Therefore, learning to write is seen as the development of awareness of the own writing process and of the ability to use writing strategies.

Bereiter and Scardamalia (1987) viewed writing as a recursive cognitive process as well, but offered a model in which they explained how writing can be accomplished by inexperienced writers without the sophisticated strategies described by Flower and Hayes (McCutchen et al., 2008). This model consists of four components: the mental representation of the task, knowledge of content, knowledge of the 'rhetorical problem space', and the writing of the text. Inexperienced and experienced writers differ in how they deal with these components. Inexperienced writers use an approach called 'knowledge telling': they write down what comes to their minds, without much attention to the relations between these ideas. Doing so they do not produce texts adapted to the goals and demands of the genre and the intended readers. Being used to an interlocutor in oral text production helping them to keep it going, inexperienced writers have to learn to make use of other motors for producing written texts. In contrast, experienced writers use a 'knowledge transforming' approach. They do not write down what comes to their mind instantly, but transform their ideas into a form that is adapted to the rhetorical demands of the situation. They do not only transform the contents of their ideas, but also attempt solutions for rhetorical problems (how to achieve their goals, reach

their audience and conform to genre conventions). From this model it can be derived that inexperienced writers have to learn to transform the ideas they want to communicate to adapt them to the rhetorical situation. Therefore, they have to develop awareness of readers' expectations.

From this cognitive perspective on the writing process, the role of peer response for the development of goal and audience orientation is emphasized. By discussing their texts with a reader, especially during text revision, writers become aware of the needs of readers and develop goal- and audience orientation (Dorn & Soffos, 2001, Gill & Beverly, 2001; McCormick Calkins, 1986; Rijlaarsdam, 1986). In addition, peer response is supposed to be beneficial for learning writing strategies and for becoming aware of one's writing process. Commentaries of the reader force writers to reflect on their text and their writing process. By means of this reflection inexperienced writers learn to get control of the complexities of the writing process (Hayes, 1996).

From the 1980s, research attention shifted to writing as a social process. Gee (1996) and Chapman (2006) referred to a 'social turn', based on a revival of social-cognitive theories of Vygotsky (1978) and Bandura (1986). In the social-cognitive perspective writing was primarily viewed as an interaction between writer and reader. The dialogue between them has an important role in the writing process. Zimmerman and Risemberg (1997) presented a social-cognitive model of writing, in which writing is described as a social process. In addition, attention is paid to motivational and behavioural processes involved. As in the cognitive perspective it is stated that writers develop awareness of their own writing process of reader's expectations, but in the social-cognitive perspective the emphasis is on *how* this awareness develops. The writer must devote personal time and effort to revise drafts until the text meets the demands of the rhetorical situation. A basic notion in this model is 'self-regulation' (see also Graham & Harris, 2000) referring to more or less conscious decisions writers take in steering their writing processes. They steer their writing in the desired direction to attain various goals, including improving their writing skills, as well as enhancing the quality of the text they write. The basis for self-regulatory actions is motivational. Writers' confidence in own ability ('self-efficacy') determines their motivation and the quality of self-regulation. Three types of self-regulation processes are distinguished: the writers' behaviour (e.g. talking aloud while writing), the mental process (e.g. making an outline while planning), and the authoring environment (e.g. using a tutor as source for knowledge about writing). In summary, Zimmerman and Risemberg (1997)

integrated the role of cognitive processes with social and motivational aspects (see also Hayes, 1996).

From a social-cognitive perspective the social function of writing with peer response is emphasized. The presence of a reader in interaction with the writer contributes to the social character of writing. Bruffee (1984) explains the relationship between social-cognitive theory and learning to write as follows: "If an individual's thoughts are internalized conversations, writing can be perceived as the re-emergence of this internalized interaction" (p. 642). Peer response provides interaction partners who can help writers by confronting them with overt reactions to their 'internalized conversations'. In doing so, they make writers aware of possible misunderstandings or misplaced assumptions about the social situation and give them occasions to repair them, both mentally and in their texts. In addition, such peer interaction provides writing in school with a realistic communicative context contributing to writing motivation and self-efficacy. For that reason, peer response can also be beneficial for the development of self-regulatory activities for writing.

Another contribution to writing theory, initiated in the 1980s, was provided by genre- theory. This theory had much impact on the debate on teaching writing (Christie, 1992; Prior, 2006; Richardson, 1991; Rose 2009; Wyatt-Smith, 1997). The genre perspective is inspired by the functional model of language as outlined by Halliday (1975, 1978, 1994) and further developed by Halliday and Matthiessen (2004). The emphasis is on the *function* of language and on how language expresses meaning in different contexts (Halliday & Matthiessen, 2004). The central notion in the model is 'genre'. This concept is roughly defined as the way in which a text is organised to achieve its social purpose (Martin, Christie & Rothery, 1987). Texts are structured according to their purpose, and texts with the same purpose will have a similar structure (Lewis & Wray, 1995, 21). Instructive texts, a manual for example, are structured by an enumeration of instructions with the use of bullets or numbers to help the reader follow along the process of execution. In the genre 'report ' the social purpose of 'telling what happened' is realized with the structure: orientation-events-reorientation (Buss & Karnowski, 2002; Donovan & Smolkin, 2011). From a genre perspective, learning to write is seen as the development of genre knowledge and knowledge of the social contexts in which texts function. When a text complies with the required form (linguistic features and structure) for a genre, the social purpose of the text can be achieved. It is assumed that genre knowledge can be instructed, although there are differences between

theorists of genre (cf. Bazerman, 1994; Carter, Ferzli & Wiebe, 2004; Devitt, 1991; Flowerdew, 1993; Forman & Rymer, 1999; Miller, 1984; Swales, 1990). The genre approach can be characterized as oriented on both product and process. It is product-oriented in that writing is seen as applying knowledge about linguistic features of text genres for good writing. At the same time it is emphasized that texts function in a rhetorical context; their meaning is created through the interaction between writer and reader.

Emphasis in writing instruction to the form and function of texts is also propagated by theorists from the Language Awareness- (LA) and Meta-Linguistic Awareness movements (MLA) (Carter, 2003; Cazden, 1991). The LA movement is based on applied linguistic theory and is concerned with second language learning. The MLA movement has its roots in psycholinguistics and cognitive theories and is directed to language learning in general. These approaches both underline the importance of consciousness and explicit linguistic knowledge in the process of language learning (Nagy, Berninger & Abbot, 2006). Meta-linguistic awareness is defined as "an indicator of what learners know about language through reflection on and manipulation of language" (Masney, 1997, p. 5). To be able to reflect on language and language use writers need a meta-language: a language to talk about texts. With this meta-language they verbalize their knowledge about language and language use, and demonstrate their meta-linguistic awareness. For writing instruction, metalinguistic awareness is seen as a necessary condition for students to be able to formulate, and revise texts, and to be able to give useful commentaries on texts written by peers.

From the genre perspective, peer response has an important function in making students aware of the specific genre-related social purpose of writing. During 'writing conferences' readers and writers reflect on texts to determine whether the writers realized the specific purpose of the text by using appropriate linguistic means (linguistic features and structure) (Badger & White, 2000; Elbow, 1973). Writers discover whether the features that they use in their texts have the intended effect on their readers and whether other features can or should be used to achieve a desired outcome. In this way writers and readers develop genre knowledge. Because students need meta-language in this kind of discourse, peer response is considered to stimulate the use and development of meta-language. By reflecting on linguistic features of texts peer response contributes to the development of meta-linguistic awareness as well (Cazden, 1991).

Summarizing, it can be concluded that the cognitive perspective focuses on writing as a mental process of problem solving, in which awareness of the own writing process and the use of writing strategies are seen as the main aspects. The social-cognitive perspective focuses on writing as social interaction, leading to self-regulation and stresses motivational and behavioural aspects. The genre perspective focuses on writing as the application of knowledge of the functions and forms of written language in different genres. In addition, reflection on language and language use is emphasized. The theoretical perspectives distinguished here are complementary rather than competing, emphasizing different dimensions of writing development (Chapman, 2006).

2.1.2 Research questions

This review is intended to acquire insight in the instructional components of writing with peer response that seem to be beneficial for writing. Therefore, a detailed analysis of the treatments in intervention studies directed to writing with peer response is required. Given the theoretical perspectives discussed above (cognitive, social-cognitive and genre), our focus will be on peer response supported by instruction in writing strategies, interaction activities and genre knowledge. More specifically, the following research questions are asked:

1. Does writing with peer response without additional instructional support have a positive effect on writing proficiency?
2. Which indications can be derived from existing research about the contribution of additional instructional components (strategies, interaction-instruction and genre knowledge) to writing proficiency?

2.2 METHOD

2.2.1 Criteria for inclusion

Research on writing with peer response is carried out since the 1980s (Louth, McAllister & McAllister, 1993). Up to the 1990s, research existed predominantly of descriptive (ethnographic) studies (Sutherland & Topping, 1999). These studies showed that process-oriented writing instruction with peer response was feasible, but they did not demonstrate whether writing instruction with peer response is effective in terms of increased writing proficiency. Interest in

the effects of writing with peer response grew during the 1990s. Most intervention studies directed to writing with peer response were carried out from the beginning of the 1990s (Sutherland & Topping, 1999). Therefore, the year 1990 was chosen as the starting point for the collection of studies. The literature search was terminated in April 2011.

Intervention studies that examined the effects of writing instruction with peer response were selected. The following inclusion criteria were used:

1. Studies concerned with peer response in the context of writing instruction.
2. Intervention studies with clear descriptions of the treatments and a post-test to measure writing proficiency.
3. Students in the ages of 6-15 learning to write in the dominant language of the country (L1).

We used a broad definition of peer response. No restrictions with regard to the form of peer response (oral and written response, dyads and groups) were applied. Given that there are relatively few intervention studies directed to writing with peer response involving children and adolescents (Sutherland & Topping, 1999) no selection criteria were adopted with respect to the designs used; (quasi-) experimental as well as case studies were incorporated. By including weak designs for intervention studies, such as case studies, we extended the scope of the review to trace qualitative issues of writing with peer response that may be helpful to formulate hypotheses for future (more controlled) testing.

Intervention studies on writing with peer response directed to second (or foreign) language learners as target group were not included. For literature about writing with peer response with second language learners we refer to Liut and Hansen (2002).

2.2.2 Search procedures

ERIC and Psych LIT were searched for published studies. The following descriptors were used in the search: peer response, peer tutoring, peer collaboration, peer editing, peer feedback, peer teaching, writing, writing instruction and writing conference. Over 300 titles were identified. Abstracts were read to determine whether the studies might be relevant for this review. Reference lists from identified studies were examined for potentially relevant studies. Finally, 26 studies were included in this review (see Appendix 1, for an overview of the characteristics of the studies).

2.3 RESULTS

Appendix 2 presents an analysis of the focus of instruction during writing activities with peer response in the 26 intervention studies of this review. The three foci of instruction (strategy, interaction and genre knowledge) are derived from the three theoretical perspectives discussed in the introduction section. From a cognitive perspective instruction in strategies is emphasized, from a social cognitive perspective both interaction- and strategy-instruction are considered important and from a genre perspective genre knowledge is an important focus of instruction.

The five blocks in appendix 2 refer to stages of the writing lessons. 'General instruction' refers to instruction given before students start collaborating. 'Planning' refers to instruction in prewriting activities during peer response sessions, such as collecting content elements, orientation on goal- and audience, and planning strategies. During the stage of 'formulating', students may receive instruction in how to write their first drafts during peer sessions. In the stage of 'discussing first draft', instruction may be given on how to read and evaluate each other's texts. 'Revision', refers to instruction into how to review and rewrite texts. 'Revision' in appendix 2 is the last stage of writing because no studies were found in which students received instruction in evaluating their final draft and/or their writing processes after writing their final draft.

2.3.1 Strategy-instruction

Under the heading 'strategy-instruction' we describe studies in which the main focus of instruction is on writing strategies. Nine studies were qualified as having strategy-instruction as their main focus (Olson, 1990; Mac Arthur, Schwartz, & Graham, 1991; Englert, Raphael, Anderson et. al. 1991; Englert, Raphael & Anderson, 1992; Stoddard & MacArthur, 1993; Goldberg, Roswell & Michaelis, 1996; Chinn, O' Donnel & Jinks, 2000; Mullen, 2003; Graham, Harris & Mason, 2005). Writing strategies are defined as goal directed cognitive operations facilitating the performance of writing tasks (cf. Flavell, 1979; Pintrich, 2000). 'Strategy-instruction' means that the instruction focuses on how to carry out these goal directed writing processes.

Olson (1990) examined the effect of peer response on the quality of writing, and amount and type of revision of narratives written by students (age 11-12) in six intact classrooms. Instruction varied across groups in the following

manner: in one group students received revision strategy-instruction and wrote and revised their narratives with a peer. The instruction existed of strategy-instruction in adding, deleting, substituting, paraphrasing, and rearranging information in the text. In a second group students wrote and revised with a peer but did not receive revision instruction. In a third group students wrote and revised texts without peer assistance but received revision instruction, and in a control group students neither received revision instruction nor help from peers. The first and revised drafts of the groups were analysed by amount and type of revision (spelling, additions, deletions, and substitutions), the syntactic level of revision (word, phrase, simple and compound sentences) and general text quality (content, structure, audience-oriented). Olson found positive effects of peer response compared with individual writing. Students of the peer response groups with and without revision instruction performed significantly better on all measurements than the students of the two other groups who did not use peer response. The peer response students who received revision instruction performed the best when writing first and final drafts. Significant differences on surface structure revision (mechanics, spelling) between the groups were only found in the analysis of the first drafts.

MacArthur, Schwartz, & Graham (1991) investigated the effect of strategy-instruction on the revision of narratives by students with learning disabilities (age 9-12). 4 classes were randomly assigned to two conditions. The strategy-instruction existed of a set of questions which incorporated evaluation criteria and specific revision strategies. (E.g. 'Is anything unclear in the text?' 'Where can you add more details and information?'). The experimental students received explicit instruction, modelling, and guided practice in the collaborative use of the strategy. The students of the control group used the strategy individually. The paired students also received interaction-instruction (e.g. 'Tell the author what the paper is about and what you liked best'). To assess writing and revision quality, two writing assignments were administered as both pre- and post-test. The final drafts were assessed on overall quality and on the number and quality of revisions (content and editing aspects; spelling, use of capitals, punctuation). Revisions were categorized by text level, impact on meaning, and quality. The results on the post-test showed that the peer response students produced texts of higher quality and made more and better revisions than the students who used the strategy individually. Transcripts of peer interactions suggested that the performance of the peer response students was mediated by use of the strategy. All students followed the strategy and

gave suggestions for adding information or detail and for improving clarity or organization as well. Results of a metacognitive interview on the knowledge of criteria for good writing indicated that the peer response students demonstrated greater awareness of criteria for evaluating writing.

Stoddard & MacArthur (1993) examined the effects of an approach that integrated strategy-instruction, peer response, and word processing on the revision of narratives of 6 learning disabled students (age 13-15). Students used a revision strategy consisting of questions which incorporated criteria for evaluation (e.g. 'Does the text follow a logical sequence?' 'Where could more details be added?'), and an overall strategy for regulating the revision process (a prompting sheet with key words for the revision of meaning and mechanical errors). The students received explicit instruction, modelling, and guided practice in the use of the strategy. They were instructed in rules for regulating the interaction process as well. Pre- and post-test performances on 3 writing- and revision tasks were compared. On the pre-tests, the students made few substantive revisions and did not improve the quality of their papers by revising them. On the post-tests all students made more substantive revisions, the proportion of revisions (categorized by surface-level: spelling, punctuation, capitalization, or non-surface level: impact on meaning, quality) rated as improvements increased from 47% to 83%. Second revised drafts were rated as significantly better than first drafts. Furthermore, the overall quality of final drafts increased substantially from pre-tests to post-tests.

Englert et al. (1991) and Englert, Raphael & Anderson, (1992) investigated effects of their program called Cognitive Strategy Instruction in Writing (CSIW) on the writing of expository texts (explanations and comparison/contrast papers). In the first study students (ages 10-11) were selected on the basis of their teachers' participation in the study. Classrooms from both regular schools and schools for special education were involved. Instruction focused on the use of strategies to regulate the writing process and on genre knowledge about text structure. Peer response was used during planning activities. The students used a 'Think sheet' (with questions about who, why, what and how) to plan their texts, and discussed their planning with peers. With regard to text structure, another think sheet was used (containing questions such as: 'What is being explained? Materials/things you need? Setting? What are the steps?') Students in the control group received regular writing instruction of their teachers, working without peer assistance. The results showed that the experimental students of both regular and special education classes produced significantly

better organized compositions than the control students. The students who were exposed to the CSIW treatment with peer response showed more sensitivity to their audiences and to their purposes in writing and better understanding and command of text structure. In addition, experimental students were more successful in transferring their knowledge to a different writing situation (writing expository texts of their own choice). Finally, metacognitive knowledge about writing of both groups was measured with a questionnaire asking for solutions for the problems with planning and editing of imaginary writers. Results showed that the experimental students significantly improved in metacognitive knowledge compared to the control students.

In their second study, Englert et al. (1992) stressed the impact of their CSIW program with peer response on student's metacognitive knowledge as it is expressed through talk during interviews about the writing process (strategies for planning, drafting and revision) and about text structure. The relationship between their metacognitive knowledge and performance on an expository writing task was studied as well. Students (age 9-12) were divided in an experimental and a control group. On both groups half of the students were regular education students, the other half were students with learning disabilities. In the experimental group, peer response with instruction in strategies, genre knowledge, and interaction regulation, took place during planning activities and during discussion of the first drafts. The control group received regular writing instruction from their teachers. Results showed that both the regular and the learning disabled students of the experimental group showed a greater ability to talk about the stages of the writing process, their purposes and audiences and the role of peer conferences. They demonstrated a greater ability to articulate their knowledge about text structure as well. The expository writing performance of the experimental students, measured by holistic scores for content and structure on one writing task showed a positive correlation with their meta-cognitive knowledge.

Graham et al. (2005) used peer response as an additional component in their instructional program called "Self-Regulated Strategy Development" (SRSD). This program emphasizes that "learning to write is a complex process that depends, for a large part, on changes that occur in the learners' strategic knowledge, domain-specific knowledge and motivation" (Graham et al., 2005, p. 8). The instruction in this study with struggling writers (ages 8-9), randomly assigned to three conditions, was directed to planning strategies. Genre-specific strategies for writing narratives and essays were taught, in addition to

regulation of the interaction process. The planning strategy taught for narratives was represented by the mnemonic POW: *pick my ideas, organize my notes and write and say more*. A second mnemonic, TREE, was used for the planning of persuasive essays: *tell what you believe* (e. g.: state the proposition or 'topic sentence'), *give three or more reasons* (to support why you believe this), *examine each reason* (why will my reader buy it?) and *end it* (write a conclusion). The main research question was whether peer response as an additional component improved the effects of the SRSD approach. In addition, it was predicted that 'plain' SRSD strategy-instruction (experimental group 1) was more effective than a so-called Writers' Workshop Approach (control group). This approach was defined as "a classroom routine where students are expected to plan, draft, revise, edit, and publish their work". Secondly, it was predicted that SRSD strategy-instruction plus peer response (experimental group 2) would lead to better writing than the control group, and to better transfer to other writing tasks than both control and experimental group 1 students. Writing performance was measured by time spent on writing, text length, and global text quality. In addition, writing process knowledge and self-esteem were measured with questionnaires. As predicted, the students from both experimental groups outperformed students of the control group for all these variables, except self-esteem. However, the peer response students (experimental group 2) did not perform better than the group that only received SRSD strategy-instruction for the writing and knowledge variables. Nevertheless, as predicted, they significantly performed better than both the experimental group 1 and control group students on transfer tasks to two uninstructed genres; personal narratives and informative texts. They included more content elements in their personal narratives, wrote longer informative texts and spent more time to writing.

Chinn et al. (2000) contrasted two instructional variations during collaboration with peer response in a study with 10-11 years old students who wrote and discussed conclusions of science experiments. The students were randomly assigned to two conditions: in the comparison condition students were asked to compare their texts ('which text is best and which is worst?'), in the succession condition students had to decide on the quality of each separate text ('which text is OK and which is not OK?'). It was expected that the students who used comparison (a cognitively more complex task) would give less superficial comments than the students in the succession condition. Instruction was given by relating rules to features to guide the construction of 'good

conclusions' (e.g. rule: 'The conclusion must not be too general', feature for a scientific conclusion: 'A range of resistor sizes in electrical circuits must be specified'). In addition, interaction-instruction was given prior to the discussion of the first drafts by questions to be answered during the peer sessions (e.g.: 'Did we discuss the structure of the conclusion?'). All students worked in groups of four. The results showed that the students in the comparison condition gave more complex and less superficial arguments for their comments on the texts than the students in the 'succession condition'. The written conclusions after discussion with peers of the comparison group were rated as better than those of the succession group. It is concluded that the comparison strategy is an effective mediator for peer response.

Mullen (2003) investigated the influence of peer response with a focus on the use of editing strategies on text revision of one class with 11 year old students. As a pre-test the students independently edited a text, and wrote a narrative by themselves. The intervention consisted of strategy- and interaction-instruction by a peer-editing checklist (e.g.: 'Are all of the sentences in each paragraph related to the main idea?' 'Tell the writer what you like in the text'). The students discussed and revised their texts in pairs using the checklist. The results on the post-test (editing the same text as in the pre-test, and writing a new narrative) showed that the students made more revisions and that revisions improved their texts.

Goldberg et al. (1996) investigated the number and type of revisions students of three age groups (8-9, 10-11, 13-14) made to their texts, whether the final drafts improved on global text quality after revision, and whether these revisions could be attributed to the peer response they received. There was no control group. Strategy-instruction was given during planning activities and directed to the rhetorical demands of the writing task (goal, audience, text function). It took place with a 'Thinking Guide'. The students were also encouraged to use a graphic organiser (e.g.: a story map, list, web, or diagram) to help them prepare the first draft. Interaction-instruction was given prior to the discussion of first drafts with a so-called PQP form that contained instructions for commenting (Praise, Question, Polish). After comparing the first drafts and the revised texts, it was concluded that the number of revisions of all three age groups was very limited (the youngest students made the least revisions), and focused on surface features of the texts. There was hardly any relationship between the received comments and the applied revisions in the three groups. The texts hardly improved on global text quality after revision.

In all studies described above peer response is accompanied with instruction in strategies. There is only one study (Olson, 1990) in which the focus of instruction is *exclusively* on strategy-instruction. Positive effects of peer response with strategy-instruction were reported. In the other studies strategy-instruction was extended with aspects of interaction- and or genre-instruction. In one of these studies, the descriptive study of Goldberg et al. (1996), no effects of peer response on text quality or revision were found. The other studies, however, show that writing with peer response with strategy-instruction as a component is effective. However, from these studies in which strategy-instruction is combined with interaction- and/or genre-instruction, it is hard to determine to which instructional component the positive effects can be ascribed. In addition, most of the studies did not employ random assignment to groups, making it impossible to be certain about the causal role of the interventions involved.

2.3.2 Interaction-instruction

Interaction-instruction is defined here as rules for the organisation of the interaction process during peer response sessions (e.g.: 'Ask the writer to read the text aloud'). 12 studies were identified with interaction-instruction as their main focal point (Prater & Bermudez, 1992; Daiute & Dalton 1993; Zammuner, 1995 (1); Toth, 1997; Sutherland & Topping, 1999; Nixon & Topping, 2001; Yarrow & Topping, 2001; Boscolo & Ascorti, 2004; Medcalf, Glynn & Moore, 2004; Rouiller, 2004; Ferguson-Patrick, 2007; Duran & Monerero, 2008).

Prater and Bermudez (1992) investigated the effectiveness of peer response groups of 4-5 students (age range 9-11) on the writing of narratives and essays. Students from 4 classrooms were randomly assigned to a small group condition and an individual condition (control group). The teachers composed the peer response groups, distributing Limited English Proficiency (LEP) students evenly among the groups. The peer response students received interaction-instruction using a model of responding based on Tompkins (1990): the author reads the composition out loud, the peers tell the writer what they liked about the composition, the writer asks help on a part of the composition that the peers want to know more about. As pre-test all students wrote a narrative. During the intervention all students wrote 3 texts (essays). The peer students collaborated during all stages of writing activities and used the method of responding when discussing the first drafts. The students of the control groups worked without peer assistance. They were instructed to reread

their first drafts and make sure that their writing was clear for the reader by adding important information. All students revised their texts and received marks on spelling and mechanical errors. As a post-test all students wrote an essay. All texts were assessed on overall quality and fluency (number of words, sentences, and idea units). Results indicated that the experimental group was superior on three fluency measures (number of words, number of sentences, number of idea units). However, there was no significant difference in overall quality between the experimental and control group.

Daiute and Dalton (1993) studied the impact of peer response on the writing of narratives of students of one classroom (age 7 to 9) writing texts alone and in pairs. They used the following sequence: one text alone, two texts in pairs, one text alone, two texts in pairs, one text alone. The purpose of the study was to determine by analysis and comparison of the texts whether there was an increase in the use of narrative elements between a text written in pairs (task 2) and alone (task 7). There was no control group. The students received no instruction when writing alone. When writing in pairs they were instructed to read the writing prompt aloud, to share their ideas, to take turns on the keyboard and 'to be considerate of each other when working together and taking turns'. Peer collaboration processes were investigated. The students' interactions were transcribed and analysed to see whether there were commonalities between the collaboration processes of the students and aspects of teacher- (expert) and student- (novice) collaboration. The presence of generative and reflective processes, (with regard to the initiation and discussion of the use of narrative elements), were regarded as key aspects of teacher-student interaction. Comparison of the texts written alone and in pairs showed that the texts written jointly contained much more narrative elements than the texts written alone. Analysis of the collaboration processes showed that 95% of the narrative elements of the collaboratively written texts were discussed. In addition, student interaction had important characteristics in common with teacher- student interaction; the use of narrative elements was initiated and discussed. Students actually seemed to learn from each other when they talked about writing narratives.

Zammuner (1995) compared the production and revision of narratives of students (age 9-10) randomly divided across three conditions: individual production/individual revision (students wrote and revised their own texts); individual production/dyad revision (students wrote individually and revised cooperating); dyad production/dyad revision (two children wrote and revised

cooperatively). For revising, the students were instructed to re-read their narrative, to detect mistakes to be corrected and "to make the narrative better". The first drafts and revised text versions of all students on one writing assignment were compared to determine whether students were able to improve the quality of their texts on a micro- and macro level, and to determine whether each of the three conditions influenced text quality. Results showed that when children revised they made improvements in errors, narrative structure and idea quantity. The greatest improvements were found when students wrote individually but revised in dyads. Students in this condition realised more syntactic complexity and more information about the characters in their narratives. It was concluded that revision was most effective with a peer who did not contribute to the production.

Toth (1997) examined whether cross-age pairing of students (ages 12 and 7) in peer response sessions had a positive effect on writing quality compared with individual writing. Sixth grade students from two classes were randomly paired with beginning first grade students from two classes. In the control group the students of both ages, both from two classes, worked individually with help of their teacher. In the experimental group, interaction- instruction combined with strategy- and genre-instruction was given at the start of the treatment. The sixth grade tutors received interaction-instruction in helping their peer partners with planning- writing- and revision activities (e.g.: asking questions for brainstorming, giving tips for the use of new words, encouraging the evaluation of their writing). Students in both groups received strategy-instruction in writing process steps, and genre-instruction by means of story starters. All students wrote a narrative at the beginning of the treatment and three post-test narrative writing assignments. Writing quality of the sixth grade students was assessed on ideas and content. The first grade students were assessed on choice of words and total words written. Results showed that the paired writers had greater gains from pre- to post-test than the non-paired writers in both age groups.

In the studies of Sutherland and Topping (1999), Nixon and Topping (2001), and Yarrow and Topping (2001) peer response is used during all stages of the writing process: planning, formulating, discussion first draft, revision. These three studies were directed to the effects of a special training method called "Paired Writing". The key element of this approach is a 'flowchart' for the interaction process during writing conferences. This chart contains directions for the roles of the peer partners (e.g.: 'Helper asks questions for planning:

Who? What? Where? Why?, 'Writer gives answers', 'Helper gives compliments'). The flowchart was introduced at the start of the treatment; subsequently students worked with the chart without further instruction.

Sutherland and Topping (1999) and Nixon and Topping (2001) investigated this program in experimental studies by comparing 'paired writing', in which the students worked with the 'flowchart', with individual writing during regular classroom teaching (control group). There was no randomised assignment of students to the different groups. In the first study the tutee's (writers) and tutors (helpers) had the same age (8 years), but collaborated in same-ability and different-ability pairs. In the second study (Nixon & Topping, 2001) tutee's and tutors of different ages (6 and 11 years) were paired. The older students were the tutors. Students of the control group worked individually. The quality of three narratives written before and after the intervention was assessed. Writing quality was assessed using language use, selection and organisation of ideas, spelling and punctuation as criteria. In both studies the paired students performed better on the post-test writing assignments than the students who worked individually, without or with the flowchart. It is concluded that peer interaction is an important factor. The authors explain this by pointing to the difficulty to internalize the readers perspective when working individually with the flowchart. With regard to the pairing of the students in the first study pre- and post-test gains of the same- and cross-ability pairs were compared. In the second study the pre- and post-test gains of the tutors and tutee's of different ages were compared. The results of the first study showed significantly more gains in writing quality for the cross ability pairs than for the same ability pairs. The second study showed that both tutors and tutee's gained more in comparison to the control group.

In the study of Yarrow and Topping (2001) better writers (tutors) were paired with poorer writers (tutee's) of the same age (10-12 years). The students of the control group worked without peer assistance. The students were randomly assigned to the experimental or control condition. All students showed significant improvements from pre- to post-test writing on one narrative writing task. However, the gains of the experimental group were significantly greater. The tutee's showed the most progress. Furthermore, on the basis of a writers' Self-Perception-Scale it is concluded that the interaction-instruction lead to a greater appreciation of the students of themselves as writers, and to more task oriented behaviour. The effects found in the three studies are attributed to interaction-instruction prior to and during writing conferences.

Boscolo and Ascorti (2004) investigated whether writing and revising narratives in pairs with instruction in rules for interaction combined with strategy-instruction had a positive effect on writing narratives and on identifying ambiguities in texts of others. The experimental condition was compared to students who wrote without peer assistance, but with the same strategy-instruction. Students were randomly assigned to conditions per age group (9-10, 11-12, 13-14). Interaction-instruction was given prior to the discussion of the first drafts ('Read the text', 'Ask for clarification if comprehension is difficult', 'Tell the writer...'). Strategy-instruction was given at the start of the treatment (focus on text clarity: identifying information gaps and inconsistencies in the texts). Students in the control group were instructed to identify ambiguities in their first drafts, explain why something was unclear and give suggestions for improvement without peer assistance. The participants' narratives and revisions performed on one writing and one revision task at the beginning and the end of the intervention were used as pre- and post-intervention measures. Results showed a significant effect on a post-test narrative writing task: the experimental group produced texts with fewer information gaps than the control group. The collaborating students also gave better proposals for revision than the students of the control group. From an analysis of the students' verbal interactions during the peer response sessions, two types of approaches emerged for all age groups: request and suggestion.

Medcalf et al. (2004) studied effects of peer response with interaction-instruction with cross-aged paired students who wrote narratives (tutors' age 10-11, tutees' age 6). The tutors were selected from three classrooms on the basis of their advanced writing ability and voluntary participation. The tutees were randomly selected from a group of students from two classrooms nominated by their class teachers as needing assistance with learning to write. The remaining students in these classrooms were assigned to the control group. They received the class writing program and wrote without peer assistance. The tutors were trained to guide and encourage the tutees to produce a writing plan ('Before writing help your peer to plan what to say'), to use the plan while writing, and to prompt them to make editing changes by asking appropriate questions ("Say the word as you write it, what sounds can you hear?"). Samples of the writing of the experimental and control students were taken before the start of the intervention, during the course of the program, and at the end of the program. Writing gains were assessed with the following measures: number of words- and sentences written, accuracy (percentage of correct punctuation and

spelling) and text quality (ratings of clarity and of enjoyment of reading). Results showed that the progress of the tutees was much greater than that of the control group students on all measures. Comparison of tutees' and tutors' writing from baseline to intervention, and at follow-up showed large gains for both on all measurements. The rate and accuracy of tutee writing showed the largest gains. According to the authors, the cross-age element in pairing students in combination with the interaction- instruction may have been an important factor in improving rate and accuracy of the tutee writers.

Rouiller (2004) expected that students (age 11-12) who wrote and revised narratives in dyads (condition 1) made more and better revisions than those who wrote and revised alone (condition 2). In addition, transfer effects were expected from dyadic text production to subsequent individual text production. Students were assigned to the two conditions on the basis of their grades in French, divided in five strata. Within each stratum, in agreement with the teacher, 2 students participated in condition one, and one student in condition two. All students were instructed to work according to a five-phase-sequence (activation of knowledge and skills, planning, writing first draft, revision of the draft, publication to the intended audience). In addition, the dyads received interaction-instruction (e.g. 'Read the text aloud', 'Ask questions') for discussing the first drafts. Comparison of the first and revised text versions of a narrative showed significant effects of peer response: dyads made more revisions and at a higher text level (organization) than students who revised individually. With regard to the amount of revisions there were no transfer effects of the peer response condition to individual text production. However, for quality of text organization there was a small transfer effect. Post-writing metacognitive reflections about revision of the students of both conditions were compared on the basis of interview data. Results showed that dyads gave more explicit and better descriptions of their revision activities than individuals. Interaction partners tend to consider revisions as reconceptualization, whereas individual writers tend to focus on error correction. Finally, relationships between verbal interactions of dyads and the revisions made were analysed. Results showed that revisions were associated with peer discussion.

Ferguson-Patrick (2007) examined in a case study the writing performance and interaction of students of the same age (age 6-7) collaborating in mixed ability pairs, and in pairs with self-selected partners while formulating. The level of children's writing capabilities was identified on the basis of analysis of writing samples of narratives preceding the intervention.

Interaction-instruction consisted of a so called 'Y-chart', developed to practice turn taking, giving positive feedback, stimulating positive non-verbal behaviour (e.g. 'eyes to person speaking', 'nodding'). There was no control group. Results of narratives written during 14 writing sessions during and at the end of the intervention, showed that writing productivity (amount of words written) increased for all students (with an average number of words from eight to 21 words six months later). The students collaborating in mixed ability pairs recorded the most progress. Because of the lack of a control group, no causal attribution to interaction- instruction can be made.

Duran and Monerero (2008) aimed to discover effects of peer response on students' narrative writing, their self-concepts as writers and satisfaction with the help of interaction partners. The students (average age 14) were randomly assigned to two peer response groups. In one group they worked in pairs with fixed roles (one student took the role of tutor, the other the role of tutee). In the other group students worked in 'reciprocal pairs' (tutors and tutees changed roles). Students received instruction in regulating the interaction process with the Paired Writing method (Topping, 1995) described above. Results of a pre- and post- writing task showed that all students improved their writing skills. No significant differences were found between the group with fixed roles and the groups with changing roles. The self-concept as writer (measured with a pre- and post-test questionnaire; e.g. 'Do I check on my writing?') increased for all students in a tutor role. Only tutee's in pairs with fixed roles felt more satisfied with the help of their peer tutors than with the teacher's help (measured with a questionnaire, e.g. 'My peer tutor gives me feedback about what I write'). It is concluded that peer response can deliver an important contribution to a positive self- concept as writer for students in a tutor role.

The studies in this section have in common that instruction is primarily directed to peer interaction. In most studies the focus of instruction is *exclusively* on the interaction between peer partners. The effects of peer response with interaction-instruction are compared with individual writing. All studies report positive effects of peer response with interaction- instruction in writing- and/or revision: peer response students receiving interaction-instruction write and revise better than students who work individually. The studies of Boscolo and Ascorti (2004) and Toth (1997) combine interaction-instruction with strategy-instruction. These studies report positive effects of peer response as well. The research evidence is not very strong in all respects. Five of the 12 studies had no control groups, and in six studies there was no randomized assignment of

students to experimental and control conditions. Concerning the formation of response pairs (same-mixed ability, same-cross aged) results tend towards positive effects of mixed-ability and cross-aged pairs. Studies in which process aspects were investigated (Daiute & Dalton, 1993; Rouiller, 2004) showed that there were clear relationships between peer response with interaction-instruction and students' writing/revision activities.

2.3.3 Instruction in genre knowledge

Genre-instruction refers to a focus of instruction on genre knowledge: the instruction is directed to the contexts and/or forms of text genres (e.g. story grammar). Five studies have been identified using genre-instruction in combination with peer response (Kos & Maslowski, 2001; Peterson, 2003; Sims, 2001; Corden 2002; Corden, 2007).

Kos and Maslowski (2001) investigated whether the perception of students (age 7-8) of what constitutes good writing of narratives changed as a result of working with peer response in a Writers' Workshop approach (Calkins, 1994; Graves, 1983). In this approach students choose their own topics, consider themselves as writers, go through the different stages of the writing process with the help of peers, and pay attention to goal- and audience-orientation. During mini-lessons prior to the response sessions students received instruction in genre characteristics (story grammar, sentence structure) strategy-use (idea generation) and interaction-instruction (e.g. 'Read your draft aloud', 'Praise the text'). Interview data were collected previous to and after the intervention. The talk of the students during the response sessions was recorded and transcribed. The interview results showed that the perceptions of students of good writing expanded from superficial issues such as correct spelling, capitalization and punctuation, to deeper aspects of writing (story grammar, idea generation and planning). Children's conversation during writing with peers, reflected emphasis on the organization of their narratives and awareness of ownership and audience needs. Analysis of texts suggested that peer interactions were more effective in generating ideas than in generating revisions. Students sometimes showed resistance to peer suggested revisions.

Peterson (2003) examined the functions of students' talk (ages 14-15) about texts during 'formal' and 'informal' interactions, and the impact of their responses on revision of their narratives. The formal interactions about the texts took place during organised peer response groups according to the Writers' Workshop approach with mini-lessons of Graves (1983), as described above.

Informal interactions occurred during classical conversation guided by the teacher. Genre-instruction was given to all students. The teacher modelled writing and provided examples of texts to use in shaping writing. Instruction focused on character description (physical description, using action to develop characters), writing effective leads, and criteria for revising texts. In the peer response groups (4-6 students) students were instructed with response sheets with cues and questions directed to principles for interaction (e.g. 'Provide specific suggestions to the writer') and to the use of appropriate genre-criteria for revision (e.g. 'Does the writer provide sufficient information about the characters and setting?'). The response during the whole class discussions was facilitated by asking the students to talk about the features of the writing they thought well done, and features of the writing they felt could be improved. A qualitative analysis of the topics and functions of the students' talk, and the connection with their revisions was made. Results showed that students in both groups spent most of their time talking about the tasks and texts. In both situations response served the following functions: playing with ideas, clarifying ideas, questioning plausibility, and showing emotional response. In the formal situation one more function was detected: recommending the writer. Analysis of the drafts the students of both groups wrote during the lessons showed that in both situations students revised their texts at different text levels (word, sentence, text organization). They made far fewer spelling and punctuation changes than changes on the meaning level of the texts. Comparison of interviews before and after the intervention showed that all students expanded their understanding of writing from a focus on superficial features, to a focus on meaning and structure of the text. Their audience-awareness increased as well.

Sims (2001) investigated the effects of peer response on the writing of reader response journals by students (age 9-11) assessed as weak writers on the basis of formal writing assessments and teacher observations. Genre-instruction was given by the analysis of model texts (e.g. modelling a specific writing style) and by letting students write in reader response journals (e.g. responding to fragments of model texts, describe what they appreciate, what is clear or unclear). Strategy-instruction was given by modelling the different writing process stages by the teacher (planning, formulating, conferencing, revision). Instruction in regulating the interaction during writing conferences with peers was given as well (e.g. 'Ask the writer questions about what is unclear in the text', 'Give suggestions for improvement'). Peer response was used at the stage

of discussing each other's texts. Pre- and post-test writing assignments were administered. Text quality was assessed based on the school district's writing rubric (clarity of subject of the text, support of details, text structure, conventions). Analyses indicated improvement in students' writing skills and fluency. The students wrote more and improved on the criteria for text quality.

The studies of Corden (2002) and Corden (2007) were undertaken as a part of a partnership program between teachers and university tutors. In the study of Corden (2002) teachers of nine schools (teaching the age range 7-11) participated in the program. It was directed to encourage students to pay attention to structural and stylistic, rather than to superficial aspects (spelling, punctuation) when writing narratives during Writers' Workshops. Genre-instruction was given by providing and analysing text models of expert writers, demonstrating and drawing attention to features of structure and style, and through writing conferences focused on genre-based criteria (both peer-peer conferences and teacher-student conferences). In addition, interaction-instruction was given (e.g. 'Read the text aloud', 'Ask the writer if anything is unclear'). Students' narratives before and after the treatment were compared. Peer group discussions were audio-recorded and transcribed. Students completed questionnaires at the beginning and end of the intervention to elicit information about how they felt about themselves as writers, and to determine levels of self-esteem. Writing was assessed with a framework for analysing narrative writing (text structure, style). Results revealed significant progress in writing performance. At the end of the intervention students produced texts on higher levels for both structure and style. Analysis of the peer discussions showed that the students developed their own meta-language; they used specific literary terms when discussing their texts. The results of the questionnaires revealed that students reported enhanced self-esteem.

The study of Corden (2007) was conducted in line with the preceding study. This time 18 teachers of nine elementary schools participated with their classes (age 7-11). The genre- and interaction-instruction was the same as in the preceding study. Data collection occurred through audio- recording of teacher-students' conferences and video recording of peer-peer and teacher-led small group discussions. Transcriptions of these recordings were analysed to see whether the students showed audience awareness in their texts (structure and style), and made deliberate choices during composition. Samples of students' independent writing (narratives) were collected at the beginning and end of the research period. Writing quality was measured with the instrument described

above. The results showed that children developed awareness of text structure, developed meta-language and were able to use it effectively when discussing their own texts. Results of the assessment of writing performance showed that children made significant progress on both structure and style.

In the studies described above the main focus of instruction is on genre knowledge. However, all studies also devote attention to other foci, such as strategy- and interaction-instruction. In the studies of Kos and Maslowski (2001) and Sims (2001) genre- instruction is combined with strategy- and interaction-instruction. In the studies of Peterson (2003), and Corden (2003, 2007) genre-instruction is accompanied with interaction-instruction. All studies report positive effects of peer response on text quality when writing narratives (measured with diverse criteria as structure, style, conventions, audience orientation), process factors (task orientation, the connection between students' talk and revisions, and attitudes (conceptions of good writing, self-esteem). In all studies, however, there are no control groups to compare with, making the research evidence for peer response with genre-instruction quite weak. These studies do not allow conclusions about the effect of the interventions. In addition, due to the integration of genre-instruction with strategy- and/or interaction- instruction, it is impossible to determine to which instructional component(s) the positive effects can be ascribed.

2.4 DISCUSSION

This study aimed to provide a systematic review of intervention studies on writing with peer response to find out what instructional factors were involved and which of these factors lead to greater writing proficiency of the students. Previous meta-studies on writing instruction (Andrews et al., 2009; Graham & Perin, 2007a; Hillocks, 1984, 1986) indicated that writing with peer response was effective in improving writing. However, these studies did not analyse in detail which instructional factors of writing with peer response were responsible for the positive effects. Is it sufficient to enable students to collaborate during different stages of the writing process without additional instruction? Or are additional instructional components necessary (strategy-instruction, interaction- instruction, instruction in genre knowledge), and which of these seem to be helpful?

The results of the intervention studies generally show that writing with peer response is effective for improving writing proficiency. This corresponds with the meta-studies on writing instruction (Andrews et al., 2009; Graham & Perin, 2007a; Hilllocks, 1984, 1986). Our first research question is directed to the question whether peer response without additional instruction is effective. Only two studies were found in which peer response was enacted without additional instruction. In both studies (Olson, 1990; Zammuner, 1995) positive effects of peer response were demonstrated. In the study of Olson (1990) the students receiving additional revision instruction, performed better than the students who did not receive additional instruction. The study of Zammuner (1995) was directed to the comparison of three peer response conditions without instruction. Revision appeared to be most effective when revising with a peer who did not contribute to text production. Both studies suggest that peer response without additional instruction has a positive effect on writing proficiency, but in view of the small number of studies directed to this question, we believe that more studies are needed for a definite answer.

We found several indications pointing at problems with 'plain' peer response. Several studies report problems of peer response in classroom practice. Students and peers consider revision as an end in itself, rather than as a means to improve their texts (Olson, 1990). Students and peers are overly occupied with conventional matters (spelling, punctuation) (MacArthur et al., 1991). Students stay more focused on their own needs as writers than on the needs of their readers (Kos & Maslowski, 2001). Zammuner (1995) notices that students adhere to 'wrong' criteria for the production of narratives (e.g. 'A good story is a story that has many characters and a lot of events'). Goldberg et al. (1996) discuss the superficiality of peer comments ('Well written, it is a good text', 'Nothing was hard to understand', 'Make it longer') and notes that students are too much occupied with assessing the texts, instead of giving suggestions for improvement. Rouiller (2004) notes that positive effects of peer interaction on narrative text revision did not occur under all circumstances. Having children work together is not sufficient to ensure productive interactions. Yarrow and Topping (2001) observed that students showed resistance against rewriting their texts. This abundance of warnings should be taken as a serious indication that additional instruction for writing with peer response is desirable, even while peer response without additional instruction has a positive effect on writing performance. A central problem might be that it is difficult for peers to focus on aspects that are both useful for improvement of the text and feasible for the writers, given their

limited mastery of writing. Therefore, additional instruction seems necessary to help students to solve these problems.

Regarding our second research question, the results of our reviewed studies underline the importance of additional instruction in writing with peer response. In 25 of the 26 studies peer response was accompanied by instruction in strategies, rules for interaction, genre knowledge or a combination of these instructional components. The results show in a very general sense that peer response accompanied by such instruction is effective when compared to individual writing with or without instruction. In nine studies, peer response was accompanied by strategy-instruction. Additional instruction in revision strategies (Mac Arthur et al., 1991; Mullen, 2003; Olson, 1990; Stoddard & MacArthur, 1993) and planning strategies (Englert et al., 1991, 1992; Graham et al., 2005) had a positive influence on global text quality. Effect of peer response with strategy-instruction on transfer tasks was found as well (Chinn, 2000; Graham et al., 2005).

From 12 studies providing additional interaction-instruction, it can be concluded that regulating the interaction process between peer partners has positive effects on writing: peer response students receiving interaction-instruction, performed better than students who wrote and revised their texts individually (Boscolo & Ascorti, 2004; Daiute & Dalton 1993; Duran & Monerero, 2008; Ferguson-Patrick, 2007; Medcalf et al., 2004; Nixon & Topping, 2001; Prater & Bermudez, 1992; Rouiller, 2004; Sutherland & Topping, 1999; Toth, 1997; Yarrow & Topping, 2001; Zammuner, 1995). Concerning the formation of response pairs, results show that mixed ability pairing (Ferguson-Patrick, 2007; Sutherland & Topping, 1991) and cross aged pairing (Medcalf et al., 2004) are effective approaches.

Five studies were conducted from a genre perspective (Corden 2003, 2007; Kos & Maslowski, 2001; Peterson, 2003; Sims, 2001). All five studies show positive effects on aspects of writing proficiency, such as improved text quality, revision skills, planning processes, criteria for good writing, use of meta-language and self-confidence. For that reason we can consider genre knowledge (with additional strategy and/or interaction-instruction, which is also applied in these studies) as a promising candidate for additional instruction to writing with peer response. Although the designs of these five studies do not allow for strong causal attributions to instruction in genre knowledge, they point to several important issues that may improve the quality of peer response and students' writing. Kos and Maslowski (2001) for example, showed that

students' perceptions of good writing became extended and more detailed. Peterson (2003) demonstrated that students developed a meta-language during response sessions and his participants reported enhanced self-esteem as writers. In Cordon's (2007) study students expanded their understanding of writing from mere attention for conventional issues to a focus on meaning. All these issues seem to be important for future interventions aiming to improve the effectiveness of writing with peer response.

Although the positive effects of writing with peer response with additional instruction seem evident from most of the studies analysed, some cautionary remarks are in order. First, we have to point towards the weak (quasi) experimental designs - or non-experimental designs without a control group - employed in quite a large number of studies. Many studies did not employ randomized assignment to experimental groups and many studies used very limited outcome measures for writing (often not more than one post-test prompt). It is certain, that such designs leave a lot to wish for in terms of generalizability over students and tasks (different genres!) and causal attribution of effects.

Second, the effectiveness of peer response accompanied by instruction is not investigated very systematically. A large number of studies uses multiple-components for instruction. They focus on several instructional components at the same time: the use of strategies, the regulation of the interaction process and the development of genre knowledge. From the studies focusing mainly on cognitive strategies, only one study (Olson, 1990) is *exclusively* directed to strategy-instruction. All other studies combine strategy-instruction with interaction- and/or genre-instruction. In two studies mainly directed at interaction-instruction, this is combined with strategy-instruction (Boscolo & Ascorti, 2004; Toth, 1997). All studies from a genre- perspective combine genre-instruction with strategy- and/or interaction- instruction. For this reason, we cannot determine which of the three main instructional components is more important for writing with peer response. Most studies do not reveal the contribution of each of the instructional components, and make it impossible to disentangle the contribution that can be attributed to peer response alone, from any combination of additional components. In addition, all studies except the study of Olson (1990) compare peer response conditions with individual writing. There is hardly any research comparing peer response with strategy-, interaction-, or genre-instruction with each other. As a result, the question 'what works in writing with peer response'? cannot be answered fully on the basis of

the existing research. Answering our second research question, we can conclude that peer response with additional instruction in one or any combination of the three instructional components is effective. However, future studies will have to be directed to the question which combinations of peer response and additional instruction are most effective for achieving these positive effects.

Therefore, we recommend follow-up studies that unravel the complex interactions between the main instructional components (strategy-, interaction- and genre-instruction). To make sure that effects can be attributed to peer response without instruction, to one of the additional instructional components or to a combination of them, it is necessary that studies compare peer response with different components of instruction with each other. Such studies - especially when using randomized assignment to groups - can reveal whether additional instruction is necessary to realize functions of peer response (such as the development of meta-cognitive awareness, writing motivation, self-regulation and the use of meta-language) and its ultimate goal: increased writing proficiency. Given the promising results of intervention studies directed to genre knowledge, we strongly suggest that in the future effects of genre knowledge are investigated with stronger experimental designs. In addition, although genre knowledge is used in quite a number of studies, the focus of such knowledge seems to be on rather global text characteristics (such as text structure, story grammar, goal- and audience orientation, idea generation). Studies focusing on more specific genre characteristics, such as the use of certain linguistic features in stories or essays are lacking, while such an approach may provide students with more concrete support for their composing in such genres.

Looking at the different phases in which additional writing instruction can be given (Appendix 2), it is remarkable that studies vary widely in this respect. Almost all studies provide initial general instruction in strategies, interaction or genre knowledge and in the discussion of the first draft, but relatively few continue to provide such instruction in the phases of planning, formulating and revision. In addition, only one study (Stoddard & MacArthur, 1993) pays attention to discussion of the revised texts for evaluating the effects of the revisions carried out. It certainly seems worthwhile to investigate in the future whether more systematic attention to all the phases of the writing lesson (including planning, formulating, revision and evaluation) has more profound (and more lasting) effects on the students' writing proficiency.

In considering other possibilities for future research we suggest studies into the content of students' peer interactions during planning, writing, and revision, and how these interactions influence their texts. In view of the present review, relationships between instruction, students' collaboration processes and their texts have received little attention, with a few exceptions (Daiute & Dalton, 1993; Rouiller, 2004, Vass, 2007, 2008). Additional research can throw more light on students' collaboration processes in writing with peer response. For example, McCormick, Busching and Potter (1992) looked at students' knowledge about writing and the transformation of this knowledge into criteria for evaluating each other's texts. Fisher (1994) and Kumpulainen (1994) studied the role of the word processor as a helpful instrument during joint composition. Erkens et al. (2005) studied coordination processes in computer supported collaborative writing.

The results of this review indicate that peer response with additional instruction in any combination of different instructional components (writing strategies, rules for interaction, genre knowledge) leads to greater writing proficiency. Insight in the role of each of these instructional components individually requires more research. We expect that classroom practice using writing with peer response can be significantly improved with such enhanced insight into the precise instructional needs for strategic, interactional or genre specific support.

CHAPTER 3

Effects of peer response using genre knowledge on writing quality; a classroom experiment

This study examined whether instruction in genre knowledge enriches students' feedback on each other's writing, resulting in better writing quality. Two approaches of peer response with additional instruction were compared. In one condition students were taught specific genre knowledge (SGK; functions of linguistic indicators of time and place in narratives and instructions). In another condition students were taught in general aspects of communicative writing (GACW; general purpose of genres, such as the function of texts (narratives and instructions) and goal- and audience oriented writing). Both groups were compared with a baseline control group. Students were randomly assigned to each of the three conditions. Results showed strong effects of the condition SGK, outperforming the two other conditions on text quality of four post-test writing tasks. No differences were found between the condition GACW and the baseline control group. Video recordings during the lessons of students commenting on each other's first drafts, showed that the students who received specific genre knowledge spent significantly more attention to the functions taught than students who received instruction in general aspects of communicative writing. This finding supports the interpretation that knowledge about the genre specific functions was actually used to improve texts, not only during the lessons but also in post-test writing and revision.

3.1 INTRODUCTION

Studies have demonstrated that young writers (in primary school) need support during the complex writing process. Without such support, they hardly show evidence of planning and revising activities, pay little attention to the rhetorical situation and the needs of their readers, and often fail to monitor their writing process (Bereiter & Scardamalia, 1987; Fitzgerald, 1987; Glaser & Brunstein

2007; Graham & Harris, 2003; McCutchen, 1995; Van Gelderen, 1997). Peer response appears to be an effective ingredient of writing instruction for children and adolescents which may resolve some of the problems these young writers face, according to the results of meta-analytic studies. It is not only an efficient way of providing students with direct feedback on their drafts, it also results in texts of better quality in comparison to other conditions (Graham & Perin, 2007a; Hillocks, 1986). A review (see chapter 2) demonstrates that in the majority of cases studies into writing with peer response also include additional instructional components. These components can be divided into three categories. The first consists of instruction directed to writing strategies involved in planning, formulating or revising text. The second consists of instruction directed to the way peers should interact in giving feedback on each other's texts. The third consists of knowledge of genre characteristics to guide both the writing of the individual students and the contents of peer feedback. Whereas for the first two categories experimental results suggest that they can be quite successful in fostering the quality of students' writing (Englert, Raphael, Anderson et. al. 1991; MacArthur, Schwartz & Graham, 1991; Olson, 1990; Prater & Bermudez, 1992; Sutherland & Topping, 1999), for the third category - genre knowledge - surprisingly little experimental studies have been carried out to support such conclusion. This study set out to find more conclusive evidence, not only for the beneficial effects of genre knowledge per se, but also for the specific type of genre knowledge that can be effectively used for writing with peer response in classroom contexts.

Already during the sixties, the early years of the development of writing instruction with peer response, discussion arose about the question whether peer response has to be supported by specific instruction (Dipardo & Freedman, 1988). Some researchers assumed that it was sufficient for students to discuss each other's texts, giving reader-based evaluations of the content or meaning of the text (Bruffee, 1984; Elbow & Belanoff, 1989; Harris, 1986; Healy, 1983; Matsuhashi, Gillam, Conley & Moss, 1989). Others however, insisted that without specific instruction focusing on criteria for task completion (e.g. forms or checklists for evaluating organization or style) peers would not be able to give more than superficial feedback, which was not regarded as supportive in improving their partners' texts (Beach 1989; Bishop, 1990; Gere & Abbott, 1985; Neubert & McNelis, 1990). Freedman (1985) concluded from a National survey on writing instruction with peer response that many teachers experience difficulties getting students to respond effectively to each other's writing.

Rouiller (2004) suggests that it is not sufficient to let children collaborate in writing for ensuring productive interaction. The main question for the practice of writing with peer response therefore is: what type of instruction is necessary/effective to enrich students' feedback on each other's writing?

For several reasons it is of interest to investigate the role of instruction in genre knowledge as a supplement to writing with peer response. First, although a number of studies was carried out (since 1990) into the role of genre knowledge (Corden, 2002, 2007; Englert, Raphael & Anderson et al., 2001; Englert, Raphael & Anderson, 1992; Graham, Harris & Mason, 2005; Kos & Maslowski, 2001; Sims, 2001), results do not allow for an appraisal of its beneficial effects on writing quality. Most of the studies are so-called multi-componential studies, which means that they combine several instructional components in addition to genre knowledge (e.g. writing strategies or directions for peer interaction). For that reason the contribution of genre knowledge cannot be distinguished from other components. In addition, in many cases research designs – e.g. case studies and interventions without control groups – do not allow for general conclusions about the contribution of genre knowledge to peer response and its effects on writing quality.

Second, genre knowledge is quite complex. Therefore it is not easy to decide what specific type of genre knowledge should be focused upon for the benefit of novice writers. At least two approaches can be distinguished.

The first and most usually applied approach for genre knowledge can be characterised as global. In this approach, students learn to use general structural characteristics for specific text genres, such as story grammar for narratives (Corden, 2002, 2007; Kos & Maslowski, 2001) or argumentative structure for persuasive texts (Englert et al., 1991; Englert, Raphael & Anderson, 1992; Graham, Harris & Mason, 2005). In some instances, students observe texts as good examples of a certain genre (e.g. a narrative) and use these examples for their own writing (Corden 2002, 2007; Sims, 2001) and apply rather generic criteria to evaluate texts, such as whether a story is fun to read and whether events are described clearly.

The second approach for genre knowledge can be characterised as specific genre knowledge (SGK), because it focuses on specific linguistic features present in texts of different genres. This approach, inspired by the functional grammar approach of Halliday and Matthiessen (2004), has been implemented in several pedagogical studies (Beck, 2009; Christie & Derewianka, 2008; Cope et al., 1993; Schleppegrell, 2007), but has never been

tested in carefully controlled experiments. Nevertheless, this approach has much intuitive appeal because it provides students with rather concrete linguistic tools for writing, as opposed to the more abstract approach that focuses on global genre characteristics. Instruction in specific genre knowledge may support planning, formulating and revision of texts because it provides specific examples of linguistic features and their functions in texts of a certain genre (narrative, persuasive, instructive, expository, etcetera) (Beach and Friedrich, 2006). Peer response based on such knowledge might help young writers to become more aware of the demands of the writing process (especially formulation of sentences) and adapting their writing behaviour to the specific demands of different genres. At the same time, this type of peer response may help students to pay attention to specific textual aspects both in planning and in revising their texts.

Several theorists have described the advantages of the so-called *genre-perspective* for writing pedagogy (Donovan & Smolkin, 2008; Halliday & Matthiessen, 2004; Hayes, 1996; Martin, Christie & Rothery, 1987; Rose, 2009; Wyatt-Smith, 1997). In this perspective the emphasis is on functions of texts in their communicative context, defined by their social and rhetorical purpose. Texts are structured according to their purpose, and texts with the same purpose will have the same structure (Lewis & Wray, 1995). Writers use genre knowledge to realize the rhetorical functions of different types of texts (Bereiter & Scardamalia, 1987). They therefore must have insight in these functions and in how they are shaped by certain global and specific characteristics of text genres. Above all, writing is thus seen as the learning of different forms, demands and possibilities of different genres (Kress, 1994). For example, writing a comprehensible instruction means the writer has to give a clear and precise explanation of everything the reader has to do. Writers must have linguistic knowledge at their disposal for expressing such genre specific functions and for evaluating whether the text is adequate communicatively and accurate linguistically (Carter, 2003). In addition, writers develop metalanguage needed for planning, evaluating and discussing texts (Cope et al., 1993).

Several intervention studies have used a genre perspective for peer response. In the study of Toth (1997) students writing in pairs (experimental group) and individually (control group) received instruction in global genre knowledge by means of the use of story starters. In addition, all students received strategy instruction in writing process steps. The experimental students received interaction-instruction as well (e.g. asking questions for

brainstorming). Results showed that paired writers had greater gains from pre- to post-test than students of the control group.

Englert et al. (1991) and Englert, Raphael & Anderson (1992) investigated the effects of instruction in global genre knowledge with regard to text structure, goal and audience orientation and the use of writing strategies to regulate the writing process. The first study investigated the effects of the instructional program on text quality, the second studied the effects on knowledge about text structure and writing processes. Results showed that the experimental students produced significantly better organized compositions and significantly improved in knowledge about text structure compared to the control students.

In the study of Graham, Harris & Mason (2005) effects of genre specific planning strategies for writing narratives and essays were examined, in addition to regulation of interaction between peers. The planning strategies taught for the different genres were represented by mnemonics containing directions for the use of global genre knowledge regarding text structure (e.g. for persuasive essays the mnemonic TREE: *tell what you believe, give three or more reasons to support why you believe this, examine each reason and end it with a conclusion*). As predicted, the experimental students outperformed the control students in writing performance (global text quality, time spent on writing, text length) and knowledge about writing processes, measured with questionnaires.

In the study of Kos & Maslowski (2001) instruction was directed to global genre knowledge (story grammar), strategy use (idea generation) and regulation of interaction (e.g.: 'Read your draft aloud', 'Praise the text'). It was found that students' perceptions of 'good writing' expanded from formal issues such as correct spelling, capitalization and punctuation, to more meaningful aspects of writing, such as story grammar, idea generation, and planning.

In the studies of Sims (2001) and Corden (2002, 2007) integration of reading and writing instruction aimed at the development of global genre knowledge was the main feature (writing responses to stories that model text structures). In addition, students received instruction in dealing with the different stages of the writing process (by modelling writers' thought and behaviour). Both studies found that students performed better on writing post-tests than on pre-tests.

The present study compares two approaches of peer response with additional instruction: peer response with instruction in specific genre knowledge and peer response with instruction in general aspects of

communicative writing. Specific genre knowledge regards the knowledge of specific linguistic features by which functions of different genres are realised (e.g. sentence construction, use of connectives, use of specific words to give a more detailed description). Instruction in general aspects of communicative writing concerns knowledge of the general purpose of genres, such as the function of texts and goal- and audience orientated writing. We expect that instruction in specific genre knowledge is superior to instruction in general aspects of communicative writing by providing more specific criteria for students to focus on while formulating and revising and for suggesting improvements in each other's texts. By improving the quality of writing conferences such instruction in genre specific linguistic knowledge might also increase the global quality of the written texts produced by students. This focus on specific criteria for text quality may help students to simplify the complex writing task. Thereby, it may present an alternative method for preventing working memory to become overloaded (Flower & Hayes, 1980), instead of the use of the well-known 'knowledge telling' strategy used by most young writers (Bereiter & Scardamalia, 1987). Genre specific knowledge may therefore encourage young writers and set their minds free for the use of linguistic tools directed at the needs of their readers.

The following research questions will be answered:

1. Does peer response focusing on specific genre knowledge result in better writing quality than peer response focusing on general aspects of communicative writing?

The approach taken is to compare writing lessons with peer response focusing on specific genre knowledge with the same writing lessons focusing on general aspects of communicative writing, and to compare both of these groups with a baseline control group (normal curriculum without peer response) in post-test writing. We expect that students in the first condition (SGK) will outperform students in the second condition (GACW), who in their turn will outperform students in the baseline control group.

2. How do students in the experimental conditions divide their attention among the relevant aspects of peer collaboration: specific linguistic features, text content, formal aspects (spelling, punctuation, grammar), interaction process?

As explained before, we expect that peer response using specific genre knowledge is more helpful in improving text quality, than peer response using

instruction in general aspects of communicative writing. For that reason we investigate – as an intermediate process factor – whether students in the condition SGK pay more attention to specific linguistic features of each other’s texts than students in the condition GACW.

3.2 METHOD

3.2.1 Participants

In total 140 6th grade students (78 girls and 62 boys) divided over five classrooms from four elementary schools in the Netherlands (three urban schools and one school in the country side) participated in the study. All students were in the age range of 11-13. In the Netherlands 6th grade is the final grade for primary education, in which students of heterogeneous academic proficiency are still untracked (unlike secondary education). Most students (123) were native speakers of Dutch. The remainder of the participants were from immigrant backgrounds, but only 4 of them were born in another country. All immigrant students had followed Dutch primary education for many years and can be regarded as fluent speakers of Dutch as a second language.

3.2.2 Experimental design

A post-test only (between-subjects) experimental design was used. Students were randomly assigned within classrooms to one of three experimental conditions. In condition 1 the (47) students received instruction in peer response using SGK. In condition 2 the (44) students received instruction in peer response using GACW. In condition 3, the baseline control condition, the (49) students received regular language instruction from their own teacher.

The post-test consisted of four writing assignments (2 narrative and 2 instructive texts) as measures of global writing proficiency, the dependent variable of this study. In addition, by way of an intermediate process factor, the attention paid to the focus during the writing conferences was measured. In advance, two covariates were measured to control for differences between conditions: receptive knowledge of Dutch vocabulary and metacognitive knowledge of writing and reading.

3.2.3 Treatments

The experimental lessons for the peer response conditions (1 and 2) contained a general part, identical for both conditions, and a condition specific part. The general part of the lessons is described first.

The students in the two peer response conditions received a series of 12 writing lessons of 60 minutes each. The lessons were especially developed for the experiment². The writing lessons were divided in two parts. The first part consisted of 6 lessons dedicated to the writing of 3 narratives. Each two lessons (120 minutes) were dedicated to one writing assignment. The second part of the lessons dealt with the writing of 3 instructive texts and also contained 6 lessons, with each two lessons dedicated to one writing assignment. Each pair of lessons incorporated prewriting-, formulating a first draft, conferencing-, and revision-components (Graves, 1984). In studies of writing with peer response, writing conferences normally take place only before revision of the first draft (see chapter 2). Studies show, however, that children write texts of higher quality when they converse with a peer in several stages of a writing task (Boscolo & Ascorti 2004, Daiute, 1986; Daiute & Dalton, 1993). Therefore, we organized writing conferences during the stage of planning (prewriting) as well for the first two writing assignments in each part of the lesson series. In addition, for the third assignment of each part of the lesson series, students also formulated their first draft in dyads.

The students used booklets containing all instructions and exercises. The lesson materials consisted of an instruction book, a workbook, and an answer book. The instruction book contained example texts, explanations, instructions for exercises, and prewriting-, writing- conferencing- and revision-assignments. In the workbook the students wrote down answers to questions (e.g. words in sentences, content elements, underlining's of parts of texts, evaluations of their texts, ideas for revising texts). The answer books were used by the students to check answers after finishing the workbook.

In each first lesson of a lesson pair students analysed an example text (15 minutes), received instruction in genre knowledge (10 minutes), planned their texts (10 minutes) and wrote their first drafts on a computer (25 minutes). In each second lesson they evaluated their drafts and wrote down what they would like to change (10 minutes). These evaluations were the starting point of the writing conferences (20 minutes) followed by the revision of the first draft (30 minutes).

² The lesson materials can be consulted on <http://www.slo.nl/primair/leergebieden/ned/peerresponse>.

To make students familiar with writing conferences, principles for interaction during the writing conferences were modelled by the teachers with the help of a few students. At the beginning of each second lesson, preceding the writing conferences of the first drafts, a writing conference was demonstrated for the whole group. In addition, the instruction books contained the following principles for interaction in the writing conferences: 1) read the text of your peer, 2) tell the writer what you appreciate in the text, 3) read the evaluations of the writer, 4) tell if you agree with them or not, 5) give the writer suggestions for improving the text, and 6) check whether other parts can be improved.

In each conference the draft of each student was discussed (10 minutes). After discussing the first draft the peers changed their roles of writer and peer evaluator for discussing the second draft. The writing conferences resulted in concrete tips for revision that were written down in the workbooks. The revision took place immediately after the writing conferences. The students revised their drafts, again using the computer.

3.2.3.1 Specific genre knowledge

We selected two text characteristics for condition 1 focusing on specific genre knowledge: the use of indicators of time and place. These indicators seem particularly suited for providing students concrete examples of genre specific linguistic features (Buss & Karnowski, 2002; Halliday & Matthiessen, 2004; Kress, 1994; Stein & Glenn, 1979). Indicators of time and place serve different functions in narrative and instructive texts, allowing us to focus students on these genre specific differences of spatio-temporal indicators. Accordingly, students were instructed which words and clauses can be used as indicators of time and place and what different functions these indicators serve. In narratives indicators of time and place give the writer the opportunity to provide detail and make texts more interesting to read, while in instructive texts these indicators make them more precise and serve the purpose of clarifying the instructions.

The first pairs of lessons (of both narratives and instructions) were devoted to the use of indicators of time. For narratives the students learned the use of single words that express time ('first', 'suddenly', 'when'), descriptions with more words ('in the beginning') and the use of verbs as indicators of time (present tense, past tense) (see Appendix 3). In addition, for narratives an explanation was provided about the difference between the role of time in a narrative and its use in the real world. The students learned that time related words help the reader visualize the progression of events over time. In this

context, the use of flash-back to make the text more exciting or to get displaced in the feelings of a main character of the story was demonstrated. For instructions, students were made aware that indicating a fixed chronological order by the use of such words as 'first', 'thereafter' and 'finally' is a very efficient way of telling the reader how to proceed.

In the second pairs of lessons the focus was on the use of indicators of place. Students were made aware that they can use single words to indicate place ('there', 'above'), or descriptions with more words ('on the corner of the street'). In addition, for narratives an explanation was given of changing places within a relatively small area ('small place-changes') or between remote places ('big place-changes'). For instructions, students learned that place related words help to give a more precise description of what the reader has to do. For instance an itinerary can be clarified by a detailed description of specific landmarks ('on the other side of the white hotel, called 'Parkview').

In each third lesson-pair the focus was on the use of indicators of time and place in combination, making use of the knowledge about the functions of indicators of time and place provided in the previous lessons. The use of time and place in this condition was highlighted in all lessons. For the writing assignments and the writing conferences in this condition, instruction- and workbooks contained points of interest drawing students' attention to the specific use of indicators of time and place.

3.2.3.2 *General aspects of communicative writing*

In condition 2 (GACW), students were instructed to pay attention to the general purpose of different genres (narratives and instructions) such as the function of texts and goal- and audience oriented writing. Regarding the writing of narratives they learned that the purpose of narratives is to amuse the reader and that it is possible to realize this purpose by choosing topics that are exciting for the reader, by providing vivid descriptions of thrilling events, by choosing recognizable persons, or by indicating when or where events take place. In the case of instructions they learned that the purpose of these texts is to clarify what exactly has to be done. They were instructed to take care that their description of what has to be done is comprehensible for the reader. In addition, they learned that comprehensibility can be attained by providing complete information without being redundant, by indicating when or where something must be done. However, for both the narratives and instructions they did not receive concrete examples of linguistic features (indicators of time and place) to

be used in their texts. Apart from this difference in instructional focus, the conditions 1 and 2 were the same, however. Example texts, instructions for writing conferences and writing assignments were identical. In the writing conferences for condition 2 students were instructed to give the writer tips on how the story can be made more exiting, vivid or intelligible. In the case of instructions, students commented on each other's drafts by using criteria such as completeness, clarity and preciseness.

3.2.3.3 Baseline control group

The students in the baseline control group received no experimental instruction, but followed the regular language curriculum at their school provided by their usual classroom teacher. In these classes writing with peer response did not occur.

Table 3.1 *Instructional components in the three conditions*

Condition	Analysing Model texts	Peer response in all stages of writing process	Principles for interaction	GACW	SGK
Peer response with SGK	+	+	+	-	+
Peer response with GACW	+	+	+	+	-
Control	-	-	-	-	-

3.2.4 Procedure

First, the students were randomly assigned within classrooms to each of the three conditions.

A week before the lessons started students in the two peer response conditions received an introduction. They were informed about the objective (learn to write different kinds of texts). In addition, a central theme was given to the lessons: farewell to primary school. The theme therefore was linked to the students' personal interest and experience, which is an important ingredient for good writing (DeGross, 1987; Graves, 1983; McCormick Calkins, 1986; McCutchen, 1986). Students also watched a brief video of an interview with a popular author of youth literature, who wrote a book about the central theme. Students were also told that homemade books would be compiled from their texts at the end of the lessons. After finishing the lesson-series, students would enter a competition in reading their texts to the class. A jury of students would evaluate their presentation and would award several prizes in a special

ceremony. All these measures were taken to provide optimal motivation for students to attend the lessons and to spend effort to write and revise their texts.

In the week before the lessons started all students took the tests for Dutch vocabulary and metacognitive knowledge. All students in the peer response conditions received the 12 lessons in an uninterrupted period of 6 weeks. Each week one pair of lesson was given on the same day. During the first lesson in the morning, the students received instruction and wrote the first drafts. In the second lesson, after lunch break, the writing conferences and revision sessions took place. For the two peer response conditions, the student's regular teachers were replaced by teachers who had received extensive instruction in carrying out the lessons. The first author supported by four trained teachers formed the teaching team, each member taking care of all lessons in one of the five classrooms. The students of the two peer response conditions received the lessons in separate classrooms provided with computers. Students in the control group remained in their classroom with their own teachers and received language arts lessons according to the normal school curriculum during the time that the students in the peer response conditions were away. The lessons in the experimental conditions were given successively (first condition 1, then condition 2). Each member of the teaching team thus taught students from both conditions avoiding systematic teacher effects interfering with condition effects. Students in the two peer response conditions wrote all texts on computers. The total duration of the lessons (required time on task) were the same in these conditions.

The trained teachers had an important role. They made sure that students spent the intended time on each exercise or assignment, supervised the students while working in pairs, answered questions for clarification, kept order, circulated materials, collected workbooks to evaluate student's participation and encouraged students to complete all exercises and assignments. To support the trained teachers, a protocol with detailed general as well as specific instructions for each lesson pair was made available. This protocol was used for training and the trained teachers used it for preparing each lesson. For treatment fidelity, the two first lessons of all the five trained teachers were observed by the researchers in order to help them optimize their performance. All teachers kept logbooks of the execution of the lessons and if necessary, the researchers commented on these logs. All student workbooks were collected by the researchers to evaluate students' participation. Generally speaking, the supervision by the teachers was in conformity with the principles

of the two peer response interventions and students' engagement was more than sufficient. In order to evaluate their appreciation of the lessons, students filled in questionnaires about the usefulness of the lessons after each lesson pair (6 in total). The percentage of students that considered the lessons useful ranged from 72,5 to 85,7 %. When asked about the specific objectives of the 6 lesson pairs (in all 24 goals), the percentage that regarded these objectives as useful ranged from 85% to 94,3 %.

The four post-test writing assignments were scheduled on two days in the week after the last lesson. All students were informed that the texts for these assignments would be published in books for the school library. The students made two assignments in one day. The assignments were timed. During the morning sessions students wrote the first drafts of two assignments (15 minutes for each assignment), during the afternoon sessions they revised both texts (10 minutes for each assignment). For students who had missed post-test sessions, extra occasions were offered. All students completed the post-test assignments within three weeks after the last lesson.

3.2.5 Instruments

3.2.5.1 Post-test writing assignments

In this study students' writing is assessed by four post-test writing assignments. Four assignments were used because measurements of writing preferably are based on diverse writing tasks (Schoonen, 2005; Van Gelderen, Oostdam & Van Schooten, 2011). In addition, we needed to assess writing in the two genres involved. Two assignments involved the writing of a narrative; the other two involved the writing of an instruction. The topics of the four assignments (task 1: a story about someone who made a big impression, task 2: how to make candy, task 3: an event involving mischief, task 4: how to trick someone) were related to the central theme in the lessons (farewell to primary school). For each assignment there was a title, a model text, and a writing prompt. Required text length was about 150 words. Two assignments specifically asked for a careful description of places (and changes of place), while the other two assignments asked specifically for careful description of time. In each assignment students wrote a draft and –after some time- a revision (see appendix 4).

3.2.5.2 Vocabulary and met cognitive knowledge tests

Dutch receptive vocabulary and metacognitive knowledge of reading and writing were used as covariates. Both tests were based on tests developed in the

Nelson project for Dutch students in grades 8-10 (Van Gelderen et al., 2003, 2004 and 2007). We used adaptations of these tests in the Salsa project, which targets younger students (grades 7-9) in the lowest tracks of Dutch secondary education (Trapman et al., in press, see also <http://www.salsa.socsci.uva.nl/>). The difficulty of these adaptations was more in line with the proficiency range of our target group. The vocabulary test consisted of 73 items. Each item contained a neutral carrier sentence with a stimulus word in bold print. Students had to choose among Dutch synonyms of the stimulus words (nouns, verbs, adjectives, and adverbs). The test was of average difficulty (mean = 54,77, Sd. = 8,77, maximum = 73). Reliability measured by Cronbach's alpha was .88, which is sufficiently high for our purposes.

The metacognitive knowledge test contained 45 items and consisted of three parts: knowledge of texts, knowledge of writing strategies and knowledge of reading strategies. All questions consisted of statements that were either correct or incorrect. Students decided whether they agreed with a statement (yes-no). The test was rather difficult for the students (mean= 31.09, Sd.= .5,10, maximum= 45). Reliability measured by Cronbach's alpha was .70, which is sufficiently high for our purposes.

3.2.5.3 Observation and scoring of peer collaboration

In order to study the attention spent in peer collaboration to different aspects of the texts, we videotaped writing conferences during a selection of lessons. On each of the four schools one session of each experimental group was videotaped in each second lesson. All together sixty recordings were made (30 in condition 1 and 30 in condition 2). Each of the students in the two experimental conditions was observed once. The students discussed each other's texts in pairs or groups of four students.

Students' verbal interaction during the writing conferences was scored by two different observers. One trained observer scored at the spot while making the video recording, the second on the basis of video registration. The duration in minutes spent on different categories was scored on observation forms. The forms included the following categories: indicators of time and place, global text content (subject, title, structure, goal- and audience orientation, meeting the assignment, comprehensibility), formal aspects (spelling, grammar, punctuation, lay-out), coordination of actions (utterances about the task, allocation of tasks, the time available etcetera), and actions diverting from the task. Students' perceived attitudes towards the task were

scored separately (positive, neutral, negative). Inter observer agreement for each of these categories was high for most categories, ranging from .95 (diversion from task) to .67 (formal aspects). It was decided to use the video observations only for the analysis, seeing that such observations were made in a quite and undisturbed context, whereas the observer on the spot also had to deal with noise and other issues going on in the classroom.

3.2.6 Scoring

Writing quality was assessed using a procedure based on Lloyd Jones (1977). This procedure, called 'primary trait scoring', defines criteria for text quality based on the requirements of each specific writing assignment. In order to enable interval-level interpretation of the scores a procedure based on Blok (1986) and adopted in Schoonen et al. (2003) and Van Gelderen et al. (2011) was used. On the basis of samples of 40 texts of each assignment scales were construed for each of the four assignments consisting of five examples, indicating five points of the scale (numerical values: 10, 25, 50, 75 and 90). Two trained raters (working independently) scored the sample texts based on the criteria defined for each assessment (roughly in the four categories of: 1) genre characteristics - narrative or instructive- 2) content, 3) structure and 4) language use). Example texts were selected as belonging to approximately the 10th , the 25th , the 50th , etcetera percentiles of the distribution in the sample. For each example text a description was given of positive and negative qualities in terms of each of the relevant criteria for text quality for the specific assignment. The same two raters working independently (and blind for the condition from which each text originated) used these scales for the assessment of all texts. An example of a text written by one of the students with a 50th-percentile score is presented in appendix 5. Correlations between the scores of the two raters ranged from .80 (tasks 2 and 4) and .88 (task 3). Relatively large discrepancies between the two raters were identified and resolved in a discussion. After solving the discrepancies writing quality was calculated as the mean score of the two raters.

3.2.7 Analyses

For the first research question, MANCOVA analysis was used with experimental condition as factor (1-3), writing quality on each of the four assignments as dependent variables and vocabulary knowledge, metacognitive knowledge and gender as covariates. First we tested whether each of the

covariates had a significant effect on the dependent variables. Covariates that did not contribute significantly, were removed from the analysis. For the second research question, in addition we checked for the main assumptions of MANCOVA (equality of covariance matrices with Box's test and equality of error variances with Levene's test). Both assumptions appeared to hold. ANCOVA analyses were carried out for each of the separately coded activities during peer collaboration with the two experimental conditions as factor (the control condition did not involve peer response). As covariate the total duration of peer collaboration was used, to control for differences in the duration of the writing conferences.

3.3 RESULTS

3.3.1 Post-test writing quality

Table 3.2 presents the means and standard deviations for the 4 post-test writing tasks in each of the three conditions. It appears that for all four assignments, the mean writing quality in condition 1 (SGK) was the highest, while the means in conditions 2 (GACW) and 3 (control) did not seem to deviate very much from each other.

Table 3.2 *Means, and standard deviations of writing quality per assignment for each of the three conditions (N=140)*

	Condition	Mean	Std. Deviation
Assignment 1	1 SGK	59,95	24,76
	2 GACW	39,32	21,26
	3 control	32,60	23,99
Assignment 2	1 SGK	59,26	20,58
	2 GACW	47,05	23,14
	3 control	40,56	22,18
Assignment 3	1 SGK	62,71	20,47
	2 GACW	46,31	21,35
	3 control	41,84	23,40
Assignment 4	1 SGK	64,15	24,03
	2 GACW	43,35	25,53
	3 control	42,81	24,07

To test the differences in writing quality between the three conditions, MANCOVA analysis was used. Of the covariates, only vocabulary knowledge and gender had significant effects. Therefore, metacognitive knowledge was not included in the final analysis. The results of the MANCOVA showed a significant multivariate effect of the factor condition Wilk's lambda $F_{(8, 264)} = 7,66$, $p=.000$, partial $\eta^2 = .188$. This value of partial η^2 indicates a strong effect of the factor condition. As mentioned, there were also significant effects of vocabulary (Wilk's lambda $F_{(4,132)} = 16,72$, $p=.000$, partial $\eta^2 = .336$) and for gender (Wilk's lambda $F_{(4,132)} = 16,72$, $p=.02$, partial $\eta^2 = .084$). For each of the four writing tasks there were significant effects of condition (task 1: $F_{(2, 135)} = 20,91$, $p=.000$, partial $\eta^2 = .237$; task 2: $F_{(2, 135)} = 11,67$, $p=.000$, partial $\eta^2 = .147$; task 3: $F_{(2, 135)} = 15,17$, $p=.000$, partial $\eta^2 = .183$; task 4: $F_{(2, 135)} = 17,07$, $p=.000$, partial $\eta^2 = .202$). The partial η^2 values indicate that for each of the 4 tasks condition has a large to very large (tasks 1 and 4) effect. Post hoc tests show that in all cases the differences in writing quality between condition 1 (SGK) and the two other conditions are significant, while the differences between condition 2 (GACW) and 3 (control) are not.

3.3.2 Coded activities in writing conferences

Table 3.3 presents the means and standard deviations of the coded activities on the basis of video recordings of the writing conferences. In total a selection of 60 conferences was observed, 30 from condition 1 (SGK) and 30 from condition 2 (GACW). In each of the writing conferences peers were commenting on the first drafts of each other's text during one of the lessons (see appendix 6 for an example). Table 3.3 shows the mean durations spent on the whole conference (total minutes writing conference), on the SGK on which the students in condition 1 were focused (indicators of time and place), on relevant issues for peer response, calculated as all activities minus activities coded as diversion (task related issues), on global text contents, on formal aspects (such as spelling, punctuation and grammar) and finally on the interaction process itself.

Table 3.3 Means and standard deviations of coded activities in writing conferences (N=60)^a

Condition	Activities coded	Mean	Std. Deviation
1. SGK	Total minutes in writing conference ^b	8,63	3,25
2. GACW		7,08	3,10
1. SGK	Minutes spent on indicators of time and place	3,70	2,48
2. GACW		0,27	0,57
1. SGK	Minutes spent on task related issues	8,03	3,15
2. GACW		6,78	3,20
1. SGK	Minutes spent on global text contents	3,43	2,38
2. GACW		5,40	2,77
1. SGK	Minutes spent on formal aspects	0,45	0,68
2. GACW		0,73	0,74
1. SGK	Minutes spent on interaction process	0,45	0,76
2. GACW		0,38	0,63

Note: a) The duration in minutes is summed over the two discussions about the texts of participating students; b) This is the actual time the students were on task, excluding non-task related issues, such as getting together, social talk or getting materials in place.

The differences between the time spent on each of the coded activities in the two conditions were tested using ANCOVA analysis. In total 5 ANCOVA analyses were carried out using the total time in writing conference as a covariate. By doing this, we controlled the effects of condition for differences in duration of the writing conferences. Not surprisingly, total time in writing conference had a strong significant effect on the time used for most of the activities (except for time spent on formal aspects). Nevertheless, the difference between total time in writing conference between the two conditions was not significant, indicating that students in both conditions did not differ much in the time they took for responding to each other's texts ($F_{(1,58)} = 3.58, p=.064$). Results of the ANCOVA analyses showed a significant effect on the time spent on indicators of time and place in the two conditions ($F_{(1,58)} = 49,71, p=.000$ partial $\eta^2=.466$). The value of partial η^2 indicates that the difference between the use of indicators of time and place between the two conditions is very large. While students in condition 1 on average spend almost 4 minutes (3.7) in their writing conferences on discussing the use of these indicators (almost half of the total time of the observed conferences), students in condition 2 on average did not spend more than 16 seconds on these indicators (0,27 minute= 16,2 seconds). In addition, a significant effect of condition was found for the time spent on global text contents (subject, title, structure, goal- and audience orientation, meeting the assignment, comprehensibility), ($F_{(1,58)} = 44,40, p=.000$ partial $\eta^2=.438$), again a very large effect. This time, the students in condition 2

(GACW) spent much more time on discussing global text contents on average (5.4 minutes) than students in condition 1 (3.43 minutes) (see Table 3.2). Although the amount of time spent on global text contents by students in our condition SGK is certainly not negligible, it is clear that the attention of students in the condition GACW is much more focused on discussing issues such as the subject, the title, the text structure. For this reason we may conclude that the focus on specific genre knowledge versus instruction in general aspects of communicative writing in the two experimental conditions has led to a substantial difference in focus in the writing conferences for peer response, as intended. For none of the other coded activities in the writing conferences significant differences were found for the two conditions (total task related issues: $F_{(1,58)}=1,01$, formal aspects: $F_{(1,58)}= 2,41$, collaboration: $F_{(1,58)}= ,07$). These results indicate that differences in time on task or in attention to formal aspects and interaction process between the two groups were quite small.

3.2.3 Student's attitudes towards writing conferences

Finally, to get more insight into the degree of engagement between students in the two conditions in their writing conferences, we analyzed the scores given by the observers on student's attitudes towards the task of peer response. Table 3.4 presents the mean attitude scores and their standard deviations in the two experimental conditions. The means for task attitude in both conditions indicate that in almost all cases attitudes were perceived as positive (see explanatory note below Table 3.4). In addition, no significant difference was found for task attitudes in an ANOVA analysis with experimental condition as factor ($F_{(1,58)}= ,08$).

Table 3.4 *Perceived attitudes of students towards writing conferences (N=60)^a*

Condition	Mean	Std. Deviation
1. SGK	2,53	,90
2. GACW	2,60	,93

Note: a) The attitudes were rated by observers separately for the discussion of each text on a 3 point scale (1=positive, 2=neutral, 3=negative). Since for each pair of students there were two texts to discuss, two attitude scores were given. These two attitude scores were summed for each pair, resulting in a scale of 2 (both positive)- 6(both negative). Therefore the mean of 2,6 indicates that in almost all cases attitudes were perceived as positive towards the task of peer response.

3.4 DISCUSSION

This study probed the effects of instruction in specific genre knowledge and in general aspects of communicative writing for peer response on the quality of writing of 6th grade students. On theoretical grounds we predicted that instruction in specific genre knowledge results in superior writing than instruction in general aspects of communicative writing, because it gives students a more concrete focus to concentrate on while writing and while commenting on each other's drafts. In addition, we compared the two experimental conditions to a baseline control group receiving language instruction according to the normal curriculum, not involving peer response. We expected that students in the condition GACW would produce texts of superior quality than these control students. Results revealed that the first prediction is confirmed, but the second is not. The group SGK produced better texts than both the group GACW and the control group on each of the four (narrative and instructive) post-tests writing tasks. However, no differences were found in text quality between the group GACW and the control group on any of the post-test writing tasks.

Given that results were systematically the same for each of the writing tasks and for the two genres involved (narrative and instructive) and that effect sizes found are very large, we may conclude that the evidence favouring instruction in specific genre knowledge is quite impressive. It leaves very little room for doubt that for these 6th grade students the instruction in the usage of indicators of time and place was much more helpful in producing good narrative and instructive texts than instruction focusing on general aspects of communicative writing (general purpose of different genres such as the function of texts and goal and audience oriented writing). In addition, findings relevant for our second research question, about the attention students paid to different aspects of peer collaboration in the two experimental conditions, clearly showed that specific genre knowledge was a main issue if students were instructed that way. Of the total average time spent in observed writing conferences during the lessons in the condition SGK, 43% of the time was spend on talking about the use of indicators of time and place. In comparison, the time spent on these indicators in writing conferences of the competing experimental condition of instruction in GACW was negligible (not even 4%). These findings strongly support the assumption that specific genre knowledge is not only useful for students' writing but is also used in peer interaction for commenting

on each other's text and (presumably) also for improving first drafts on the basis of these comments. In the post-test writing peer response did not occur. Students in the condition SGK were supposed to have internalized that knowledge and use it in writing and revision. The above results give support to the assumption that this actually is what happened as a result of the lessons.

Our finding that instruction in general aspects of communicative writing did not result in better text quality in comparison to the control group, is quite surprising in view of previous research which points to positive effects of peer response in combination with global genre knowledge (Corden, 2002, 2007; Kos & Maslowski, 2001; Sims, 2001). However, as mentioned in the introduction, almost all of these studies combined several instructional aspects in addition to global genre knowledge, such as instruction in writing strategies, modelling and discussing of strategies and/or instruction in meta-linguistic knowledge (Englert et al., 1991; Englert, Raphael & Anderson, 1992; Graham, Harris & Mason, 2005). The present study suggests that peer response with instruction in general aspects of communicative writing is not sufficient for achieving positive effects on writing quality. First, we can exclude explanations such as differences in time on task, engagement of students in the two experimental conditions during the peer response sessions, or the involvement of the students with the lessons in general. Time on task (for the two experimental conditions) was experimentally controlled, while differences in engagement during the response sessions are highly unlikely, seeing the results of the observations of these sessions (Tables 3.2 and 3.3). The observations of peer collaboration additionally showed that writing conferences in the condition GACW were also mainly oriented towards the global text contents of the first drafts. On average 76% of the time spent in these conferences, students in this experimental condition were discussing aspects of the text, such as the title, the structure, goal- and audience orientation. Although students in the condition SGK also spent substantial attention to such aspects (about 40%), the difference is significant and supports the assumption that the use of general aspects of communicative writing in peer response was not sufficient to improve text quality.

Students' evaluation of the lessons was probed with a questionnaire about their perceived usefulness. Students rated different aspects of the lessons (the role of text models, planning texts together, discussing texts together). After each lesson pair all students answered this questionnaire (e.g. 'Discussing my text with a peer partner was useful -a little bit useful -not very useful -not useful at all'). Generally, the results reveal that students were quite positive

about the usefulness of the lessons and no significant differences between the students of the two experimental conditions were found. Therefore, the better results of the students in the condition SGK are not likely the consequence of more favourable attitudes towards the lessons.

In addition, students in the condition GACW did not outperform students in the control condition, who did not receive any systematic instruction in genre knowledge and no peer response. Control students received language and writing instruction from their own teachers using regular textbooks that do not contain global or specific genre knowledge directed at narratives or instructions. The fact that our condition GACW did not result in superior writing suggests that the additional knowledge did not help students to produce better texts or to give valuable commentaries on their peer's texts.

From our theoretical vantage point, the results can be explained by pointing to the fact that instruction in general aspects of communicative writing does not provide concrete linguistic tools for formulation or revision. For that reason, students who want to apply genre appropriate formulations or revisions in their narratives or instructions are left to their own existing resources to do so. They do not learn how to focus on specific aspects of sentence construction, such as choice of words or making descriptions more specific or exciting by their framing in time and place. In addition, they do not learn to use a variety of linguistic phrases from which they can choose for realizing these functions. In view of this lack of focus that instruction in general aspects of communicative writing provides for young writers, it is plausible that it doesn't help them to simplify the complexity of the writing task and therefore encourage them to persist in their normal 'knowledge telling' routine for writing and revision (Bereiter & Scardamalia, 1987; Van Gelderen, 1997).

It is important to emphasize that in our lessons, the instruction in specific genre knowledge was systematically supplied in all parts. In all stages of the writing process (planning, formulating, discussion of first drafts, revision including all assignments and exercises) students were focused on specific uses of indicators of time and place in model texts and in their own writing. Such a systematic focus on specific functions for writing is seldom found in studies of writing with peer response (see Chapter 2), but may be responsible for the robustness of the effects found in our study. At least, it is important to emphasize that in our study specific genre knowledge was a major part of the whole lesson series and was not restricted to checklists for peer response or revision only. We assume that this systematic focus is an important condition for achieving the effects on writing quality observed.

Given the promising results of this study into instruction into specific genre knowledge (indicators of time and place in narratives and instructive texts), it is worthwhile to put effort in the future in researching effects of instruction in specific genre knowledge of other genres and other types of genre specific knowledge. For example for argumentative genres, instead of indicators of time and place, other linguistic features are relevant for focusing students' attention to, such as the use of repetitive phrases for emphasis, auxiliary verbs to add voice or mood to the main verb (must, can, do) or the use of indicators for the argumentation structure (first, second, in addition, moreover et cetera) (cf. Halliday & Matthiessen, 2004). For expository genres, such as reports, features such as clarity and brevity can be demonstrated by the use of unambiguous words, systematic terminology and transparent syntax. Finally, the genre specific features of narratives and instructive texts that might be usefully brought to the attention of young writers are not confined to the use of indicators of time and place. Instruction into other features, such as the use of direct speech or personal pronouns for shifting perspective in stories or the use of specific adjectives or adverbs to clarify attributes of objects in an instruction, may also prove useful to focus students' attention to specific functions in their writing process. It is quite difficult to decide in advance whether such specific genre knowledge can be usefully taught to young writers in the last years of elementary education and whether these students are able to apply this knowledge in their writing. For that reason, we recommend experimental research into all these different variables involved: the age of the students, the specific genres for writing and the accompanying linguistic features focused upon. If a research base of these different aspects of specific genre knowledge and writing instruction (with peer response to assure that revision is taken seriously) can be construed, an important contribution will be made to the practice of writing education to students in the late elementary and early secondary years.

CHAPTER 4

Writing with peer response using genre knowledge; effects on linguistic features and revisions of 6th grade students

This study investigated the effects of peer response using instruction in genre knowledge on writing of 6th grade students. Two types of instruction were compared. In one condition students were taught specific genre knowledge (SGK), directed to the functions of linguistic indicators of time and place in narratives and instructions. In another condition students were taught general aspects of communicative writing in these genres (GACW). This instruction aimed at the function of texts, and goal- and audience orientation. Both groups were compared with a base-line control group. Students were randomly assigned to each of the three conditions. Positive relationships were found between the use of functional indicators of time and place and writing quality on four post-test writing assignments. This finding supports the assumption that the use of these linguistic features contributes to text coherence. In addition, strong effects of the condition SGK on the functional use of these linguistic features in writing and revision were found. Furthermore, instruction in specific genre knowledge also had strong effects on the revision of other meaning related issues and on form aspects. No differences in writing and revision were observed between the condition GACW and the baseline control group. These findings indicate that 6th grade students can learn to use specific genre knowledge in a sensible way both for their writing and revising, even on other linguistic issues than those explicitly taught.

4.1 INTRODUCTION

There is considerable concern that writing education is of insufficient quality and that students do not adequately develop this complex skill in school to meet grade level demands (Cutler & Graham, 2008; Gilbert & Graham, 2010;

Rogers & Graham, 2008). Reports on the writing performance of students in primary and secondary grades demonstrate very limited mastery of writing abilities (Graham & Perin, 2007b; Persky, Daane, & Jin, 2003). It is suggested that schools spend too little time to writing instruction and use ineffective instructional approaches (National Commission on Writing, 2003). In addition, teachers report experiencing inadequate training in writing instruction and indicate that they find it difficult to teach writing (Gilbert & Graham, 2010).

A problem often observed in children's texts is that they are incoherent (Bereiter & Scardamalia, 1987; McCutchen & Perfetti, 1982). Students are often observed writing without a clear goal in mind (McCutchen, 1986). For that reason they write down what comes to their minds, without much consideration of how different ideas relate to each other. This 'knowledge telling strategy' (Bereiter & Scardamalia, 1987) thus leads to little attention to text coherence and the use of appropriate linguistic means for creating coherence (McCutchen & Perfetti, 1982). In addition, students experience problems in appreciating the rhetorical situation and the needs of their readers (Langer, 1986; Stein & Glenn, 1979).

Several instructional approaches have been developed to support students in the development of their writing abilities (see Graham & Perin, 2007a and Hillocks, 1986 for meta-analytic reviews). The present study is directed to the effects of writing with peer response using linguistic means specifically directed to certain genres. This approach aims to provide students with concrete linguistic instruments for accomplishing more coherence in writing narratives and instructions.

The problem of a lack of coherence in children's texts is documented in several studies into the development of students' writing. Bereiter and Scardamalia (1987) and McCutchen and Perfetti (1982) observed a lack of coherence in children's narratives: the topic was usually the only reference for giving information, resulting in sentences which were related with the topic but not with each other. Stein and Trabasso (1982) observed that children tend to stick to the real time occurrence of event sequences in their texts. They do not use linguistic devices as pronominal reference, time and contrastive markers that would permit alternative orders of event sequences. Christie & Derewianka (2008) found that children show a lack of explicitness in their texts. They often refer to objects in the external world without clarifying precisely what they are referring to in their written texts ('this', 'it', 'there') and do not show any awareness of the fact that written texts need to bridge a distance between reader and writer in time and place. They have to learn to estimate what

readers need to know and to use clear referential links. Wray (2001) observed that children have linguistic realisation problems when constantly using 'and then' for framing a time sequence. They seem to have no other linguistic means to indicate when things happen.

With regard to the writing of expository texts it is observed that children's texts frequently consist of sequences of separate episodes or lists and have little in common with the more complex properties of expository texts (Cox, Shanahan & Tinzmann, 1991; Kamberelis, 1999; Stein & Glenn, 1979; Langer, 1986). Donovan (2001) concludes from an analysis of the levels in organizational complexity in children's texts (K-5) that in informational writing the oldest children still relied on the lowest level of text organisation. They frequently used descriptive sequence existing of enumerations of events without temporal connections. More complex levels of organisation as for example reactive sequences in which temporally and causally connected events occur were absent.

These studies into the quality of children's texts indicate that there are several difficulties for children in writing coherent texts. According to Bereiter and Scardamalia (1987) there are two priorities for writers: to produce sufficient language to fill the social void and to maintain text coherence. Sufficient language is understood as writing texts of sufficient length to substantiate one's regard for the reader. Text coherence is regarded as the most important indicator for becoming a good writer. If writers fail to maintain text coherence it results in the failure of most other functions as well.

4.1.1 Using genre knowledge about cohesive ties

In the present study we investigate two solutions that might contribute to coherence of students' writing: instruction in genre specific knowledge and writing with peer response. First, we are using a genre perspective because it offers a promising (but under-investigated) perspective for the acquisition of coherence in writing. It is suggested that instruction in genre knowledge helps students to write coherent texts (Christie, 1992; Prior, 2006; Rose, 2009; Wyatt-Smith, 1997). This approach is inspired by the functional linguistic theory outlined by Halliday (1975) and further developed by Halliday and Matthiessen (2004). The emphasis is on functions of texts in their social contexts. Texts are seen as functional, taking on specific forms to serve specific meanings and functions in specific social situations. The central notion is 'genre', roughly defined as the way in which a text is organized to achieve its social purpose

(Martin, Christie & Rothery, 1987). The demands of a genre determine whether writers succeed in writing appropriate and coherent texts. Writing proficiency, therefore, cannot be separated from genre knowledge since writing consists of the use of linguistic means suited to the demands of specific genres (Kress, 1994). Writers use genre knowledge to realize the rhetorical functions of different genres. For example, writing a comprehensible instruction means the writer has to give a clear and precise explanation of everything the reader has to do. To be able to do that, writers must have linguistic knowledge at their disposal for expressing these functions, such as providing a clear sequence of activities to be carried out (e.g. 'first..., second..., third...'). Thus, writers have to focus on the use and function of linguistic features which are important to achieve text coherence (Halliday & Hasan, 1976; Halliday & Matthiessen, 2004).

Text coherence is defined as the overall discourse level property of unity, or how well texts are held together (Bamberg, 1984; Van Dijk, 1980; Hasan, 1984; Spiegel & Fitzgerald, 1990; Wright & Rosenberg, 1993). According to Halliday and Hasan (1976) texts derive unity from the use of linguistic cohesive ties. A cohesive tie is defined as an explicit linguistic element that creates a relation between an element and other elements in the text which are important to the interpretation of it. By means of explicit linguistic cohesive ties cohesion is created. Cohesion depends upon lexical and grammatical relationships that allow sequences to be understood as connected discourse rather than as autonomous sentences (Fitzgerald & Spiegel, 1986). Coherence is related to cohesion as both concepts refer to connections between text elements. However, coherence refers to the semantic connections of text elements, while cohesion refers to the linguistic elements by which connections are created (Van Dijk, 1980; Bamberg, 1984). There are several kinds of cohesive ties linking text elements and contributing to text coherence. To create coherence, lexical semantic cohesive ties (e.g. spatio-temporal reference), pronominal reference, contrastive markers, or reference by repetition of words can be used. The use of semantic cohesive ties is closely related with text coherence at a local level (between sentences) and a global level. Cohesive ties have different functions in different genres, however. A temporal reference in a narrative, for example, can be used to increase the tension in a story line, while its use in an instructive text may have the function of making clear on which moment something has to be done. Knowledge of linguistic features and their genre specific function is what we call *specific genre knowledge*. Given the important role of cohesive ties for creating text coherence, it can be assumed that such specific genre knowledge is important for students learning to write coherent texts.

The relationship between the use of cohesive ties and text coherence was investigated in several studies directed to essay writing by students at college level (Witte & Faigley, 1981; Tierney, & Mosenthal, 1983; McCulley, 1984). These studies showed mixed results. Witte & Faigley (1981) found evidence of a positive relationship. Higher rated essays were denser in cohesive ties. McCulley (1984) found a relationship with cohesion accounting for 53% of the variance in coherence. Tierney & Mosenthal (1983) however, did not find a positive relationship. Fitzgerald & Spiegel (1986) and Spiegel & Fitzgerald (1990) examined the relationship between cohesion and coherence in 98 stories written by children (3th and 6th grade). In both studies there was evidence of a positive relationship between cohesion and coherence. Bamberg (1984) compared the relationship between coherence and writing quality in a large sample of essays written by 13 and 17 year old students. Strong correlations between text coherence and writing quality were found for both age groups (.64 and .65 for 13- and 17 year-olds respectively).

Theoretically, a greater number of cohesive devices in itself is not necessarily beneficial for achieving coherence. As observed by Lybbert and Cummings (1969) coherence does not necessarily result from the use of more cohesive ties. Overuse can even negatively affect coherence and perceived text quality (for example when there is a monotonous usage of connectives such as 'and' or 'then', failing to specify the precise nature of the relation between ideas formulated). Therefore, the present study focuses on the *functional* use of cohesive ties in children's stories and instructions. A functional use of cohesive ties is defined as specifying the relation between ideas in sensible way. Given the uncertainty in the literature about the relation between the use of cohesive ties and coherence, this study also attempts to establish whether this basic assumption underlying our intervention holds: is coherence of students' texts influenced in a positive way by the presence of functional genre-specific cohesive ties?

4.1.2 Writing with peer response

The second approach adopted in this study is to support students with peer response as an integral aspect of writing instruction. Peer response has been demonstrated to be effective for students' writing (Graham & Perin, 2007a; Hillocks, 1986). Providing students with direct feedback on their drafts makes them aware of the needs of readers. Comments of peers can also help focusing on specific problems in texts, and solving these problems by suggesting concrete revisions. Such revisions can contribute to text coherence (McCutchen,

2008). A number of studies (Beal, 1996; Beason, 1993; Fitzgerald, 1987; MacArthur, Graham & Schwartz, 1991) documented that young writers find it difficult to make sensible revisions on their own. For example, students find it difficult to detect problems in their texts, if there is no one pointing at such problems from a readers' perspective. In addition, given the complexity of issues involved in coherent writing, and students' poor linguistic- and genre knowledge, their attention is directed to issues of spelling or punctuation rather than to meaning related issues (Butterfield, Hacker & Albertson, 1996; Faigley & Witte, 1981). Even, when they make meaning related changes, these often turn out to be of small consequence or make matters even worse (Bereiter & Scardamalia, 1987; Chapman, 2006; Fitzgerald, 1987; Sommers, 1980; Van Gelderen, 1997). As a result, revisions of inexperienced writers often do not improve their texts. Peer response using specific genre knowledge can support students' writing by focusing the readers' comments and the writers' attention on the use of appropriate linguistic means for achieving text coherence. By providing concrete criteria (the use of functional cohesive devices) to focus on, writers and their peers learn how to attune their texts to the needs of their readers, and in doing so achieve more coherence in their writing.

4.1.3 Previous research

Although the importance of genre knowledge for writing ability is stressed in genre theory (Christie & Derewianka, 2008; Donovan & Smolkin, 2008; Halliday & Matthiessen, 2004; Martin, Christie & Rothery, 1987; Rose, 2009) as well as in other approaches (e.g. Hayes, 1996; MacArthur et al. 1991) intervention studies focusing on the use of genre-specific linguistic features for writing are practically absent. Much research is directed to the description of children's development of genre knowledge and their use in texts (Donovan & Smolkin, 2008). In addition, a few experimental studies demonstrated the effects of writing with peer response and genre knowledge in primary school (Englert, 1991, 1992; Graham, Harris & Mason, 2005; Toth, 1997). However, these studies are directed to genre knowledge of a global nature. Such global genre knowledge is not directed to linguistic features present in text of specific genres and their functions, but to more global issues such as story grammar for narratives, perspectives for authorship in narratives, structures of expository texts, goals for writing in a certain genre and awareness of the needs of the readers. Experimental studies directed at such global genre knowledge (along with other instructional components) have shown positive effects on students'

writing. However, there are no experimental studies directed to the effects of instruction in writing with peer response using more specific genre knowledge (such as cohesive devices) on writing. Neither are there any studies comparing the effects of instruction in specific genre knowledge and global genre knowledge on children's writing.

The absence of intervention studies into effects of instruction in genre specific linguistic features for children's writing is surprising in comparison to research in reading. Intervention studies into reading comprehension of students (grade 5 en 7) and young adults showed the effectiveness of instruction with tutor feedback focusing on the knowledge and use of genre specific 'signaling' words for cause-effect relations (e.g. 'as a result', 'because', 'since', 'thus' 'if/then'). Readers receiving feedback pointing to this type of words (as part of a structure strategy) performed better on reading comprehension tests than students who received more general feedback (such as 'your answer is incorrect'). Knowledge of the functions of signaling words helped students to organize concepts based on relationships in texts conveying main points and coherence (Meyer & Poon, 2001; Meyer et al., 2010). If such results can be achieved for children's reading comprehension, then it is certainly worthwhile to probe the potential of instruction in genre specific linguistic features for children's writing.

4.1.4 Research questions

Intervention studies testing the effects of instruction in writing with peer response using specific genre knowledge are absent. Therefore, this study is primarily directed to the effectiveness of such instruction with young (6th grade) writers. We compare effects of a writing course in which peer response is combined with instruction in specific genre knowledge (spatio-temporal cohesive ties) with a course combining peer response with genre knowledge of a more global nature, named 'general aspects of communicative writing'. In addition, a baseline control condition is used in which students follow regular writing instruction of their own teachers. We expect that students in the first condition (SGK) succeed in using more functional cohesive ties in post-test writing than students in the second condition (GACW) and the control condition. Furthermore, we expect that students in the first condition make more functional revisions (both in the usage of cohesive ties as in other meaning directed issues) than the other students, given the advantages that specific genre knowledge provides for focused feedback on the students' writing.

In view of our assumption that the use of (functional) cohesive ties facilitates the writing of coherent texts for young writers, we also investigate the validity of this assumption, by exploring the relationship between the cohesive ties used in 6th grade students' post-test writing and writing quality. We expect a strong positive relationship between the use of functional cohesive ties and jury-ratings of the quality of students' writing. The following research questions are studied:

1. What relationship exists between the presence of functional spatio-temporal cohesive ties in 6th grade students' texts and writing quality?
2. Do students instructed in peer response with specific genre knowledge (spatio-temporal cohesive ties) use more of these linguistic features in post-test writing than students instructed in general aspects of communicative writing and students in a control condition?
3. Do students instructed in peer response with specific genre knowledge apply more functional revisions in post-test writing than students instructed in using general aspects of communicative writing and students in a control condition?

4.2 METHOD

4.2.1 Participants

In total 140 6th grade students (78 girls and 62 boys) divided over five classrooms from four elementary schools in the Netherlands (three urban schools and one school in the country side) participated in the study. All students were in the age range of 11-13. In the Netherlands, 6th grade is the final grade for primary education, in which students of heterogeneous academic proficiency are still untracked (unlike secondary education). Most students (123) were native speakers of Dutch. The remainder of the participants were from immigrant backgrounds, but only 4 of them were born in another country. All immigrant students had followed Dutch primary education for many years and can be regarded as fluent speakers of Dutch as a second language.

4.2.2 Experimental design

A post-test only (between-subjects) experimental design was used. Students were randomly assigned within classrooms to each of three experimental

conditions. In condition 1 the (47) students received instruction in peer response using specific genre knowledge. In condition 2 the (44) students received instruction in peer response using general aspects of communicative writing. In condition 3, the baseline control condition, the (49) students received regular language instruction from their own teacher.

The post-test consisted of four writing assignments (2 narrative and 2 instructive texts) in which the use of cohesive ties and functional revisions were analysed as well as measures of writing quality. In advance, two covariates were measured to control for differences between conditions: receptive knowledge of Dutch vocabulary and metacognitive knowledge of writing and reading.

4.2.3 Treatments

The experimental lessons for the peer response conditions (1 and 2) contained a general part, identical for both conditions, and a condition specific part. The general part of the lessons is described first.

The students in the two peer response conditions received a series of 12 writing lessons of 60 minutes each. The lessons were especially developed for the experiment³. The writing lessons were divided in two parts. The first part consisted of 6 lessons dedicated to the writing of 3 narratives. Each two lessons (120 minutes) were dedicated to one writing assignment. The second part of the lessons dealt with the writing of 3 instructive texts and also contained 6 lessons, with each two lessons dedicated to one writing assignment. Each pair of lessons incorporated prewriting-, formulating a first draft, conferencing-, and revision-components (Graves, 1984). In studies of writing with peer response, writing conferences normally take place only before revision of the first draft (see chapter 2). Studies show, however, that children write texts of higher quality when they converse with a peer in several stages of a writing task (Boscolo & Ascorti 2004, Daiute, 1986; Daiute & Dalton, 1993). Therefore, we organized writing conferences during the stage of planning (prewriting) as well for the first two writing assignments in each part of the lesson series. In addition, for the third assignment of each part of the lesson series, students also formulated their first draft in dyads.

The students used booklets containing all instructions and exercises. The lesson materials consisted of an instruction book, a workbook, and an answer book. The instruction book contained example texts, explanations, instructions

³ The lesson materials can be consulted on <http://www.slo.nl/primair/leergebieden/ned/peerresponse>.

for exercises, and prewriting-, writing- conferencing- and revision-assignments. In the workbook the students wrote down answers to questions (e.g. words in sentences, content elements, underlining's of parts of texts, evaluations of their texts, ideas for revising texts). The answer books were used by the students to check answers after finishing their workbook.

In each first lesson of a lesson pair, students analysed an example text (15 minutes), received instruction in genre knowledge (10 minutes), planned their texts (10 minutes) and wrote their drafts on a computer (25 minutes). In each second lesson they evaluated their drafts and wrote down what they would like to change (10 minutes). These evaluations were the starting point of writing conferences (20 minutes), followed by the revision of the first draft (30 minutes).

To make students familiar with writing conferences, principles for interaction during the writing conferences were modelled by the teachers with the help of a few students. At the beginning of each second lesson, preceding the writing conferences of the first drafts, a writing conference was demonstrated for the whole group. In addition, the instruction books contained the following principles for interaction in the writing conferences: 1) read the text of your peer, 2) tell the writer what you appreciate in the text, 3) read the evaluations of the writer, 4) tell if you agree with them or not, 5) give the writer suggestions for improving the text, and 6) check whether other parts can be improved.

In each conference the draft of each student was discussed (10 minutes). After discussing the first draft the peers changed their roles of writer and peer evaluator for discussing the second draft. The writing conference resulted in concrete tips for revision that were written down in the workbooks. The revision took place immediately after the writing conferences. The students revised their drafts, again using the computer.

4.2.3.1 *Specific genre knowledge (SGK)*

We selected two types of cohesive devices for condition 1 focusing on specific genre knowledge: the use of indicators of time and place. These indicators seem particularly suited for providing students concrete examples of genre specific linguistic features (Buss & Karnowski, 2002; Halliday & Matthiessen, 2004; Kress, 1994; Stein & Glenn, 1979). Indicators of time and place serve different functions in narrative and instructive texts, allowing us to focus students on these genre specific differences of spatio-temporal indicators. Accordingly, students were instructed which words and clauses can be used as indicators of time and place and what different functions these indicators serve. In narratives, indicators of time and place give the writer the opportunity to provide detail and make texts

more interesting to read, while in instructive texts these indicators make them more precise and serve the purpose of clarifying the instructions.

The first pairs of lessons (of both narratives and instructions) were devoted to the use of indicators of time. For narratives, the students learned the use of single words that express time ('first', 'suddenly', 'when'), descriptions with more words ('in the beginning') and the use of verbs as indicators of time (present tense, past tense) (see Appendix 3). In addition, for narratives an explanation was provided about the difference between the role of time in a narrative and its use in the real world. The students learned that time related words help the reader visualize the progression of events over time. In this context, the use of flash-back to make the text more exciting, or to get displaced in the feelings of a main character of the story, was demonstrated. For instructions, students were made aware that indicating a fixed chronological order by the use of such words as 'first', 'thereafter' and 'finally' is a very efficient way of telling the reader how to proceed. In the second pairs of lessons the focus was on the use of indicators of place. Students were made aware that they can use single words to indicate place ('there', 'above'), or descriptions with more words ('on the corner of the street'). In addition, for narratives an explanation was given of changing places within a relatively small area ('small place-changes') or between remote places ('big place-changes'). For instructions, students learned that place related words help to give a more precise description of what the reader has to do. For instance an itinerary can be clarified by a detailed description of specific landmarks ('on the other side of the white hotel, called 'Parkview)'). In each third lesson-pair the focus was on the use of indicators of time and place in combination, making use of the knowledge about the functions of indicators of time and place provided in the previous lessons. The use of time and place in this condition was highlighted in all lesson-pairs. For the writing assignments and the writing conferences in this condition, instruction- and workbooks contained points of interest drawing students' attention to the use of indicators of time and place (e.g. 'give the writer tips for improving the description of time in his text with the use of single words, the use of descriptions with more words, or the use of verbs).

4.2.3.2 *General aspects of communicative writing (GACW)*

In condition 2, students were instructed to pay attention to the functions of different genres (narratives and instructions), goal- and audience oriented writing. Regarding the writing of narratives, students learned that the purpose

of narratives is to amuse the reader and that it is possible to realize this purpose by selecting topics that are exciting for the reader, providing vivid descriptions of thrilling events, inventing recognizable persons, and by indicating precisely when or where events take place. In the case of instructive texts, students learned that the purpose of these texts is to clarify what exactly has to be done. They were instructed that their description must be comprehensible for the reader. In addition, they learned that comprehensibility can be attained by providing complete information without being redundant and by indicating when and where something must be done. For both narrative and instructive texts students did not receive concrete examples of indicators of time and place to be used in their texts. Apart from this difference in instructional focus, conditions 1 (SGK) and 2 (GACW) were the same. Example texts, instructions for writing conferences and writing assignments were identical. In the writing conferences for condition 2, students were instructed to give the writer tips on how the story can be made more exiting, vivid or intelligible. In the case of instructions, students commented on each other's drafts by using criteria such as completeness, clarity and preciseness.

4.2.3.3 Baseline control group

The students in the baseline control group received no experimental instruction, but followed the regular language curriculum provided by their own teacher. In these classes writing with peer response did not occur.

4.2.4 Procedure

First, students were randomly assigned within classrooms to each of the three conditions. A week before the lessons started students in the two peer response conditions received an introduction. They were informed about the objective (learn to write different kinds of texts). In addition, a central theme was given to the lessons: farewell to primary school. The theme therefore was linked to the students' personal interest and experience, which is an important ingredient for good writing (DeGroff, 1987; Graves, 1983; McCormick Calkins, 1986; McCutchen, 1986). Students also watched a brief video of an interview with a popular author of youth literature, who wrote a book about the central theme. Students were also told that homemade books would be compiled from their texts at the end of the lessons. After finishing the lesson-series, students would enter a competition in reading aloud their texts for the whole class. A jury of students would evaluate their texts and there would be prize-giving ceremonies.

In the week before the lessons started, all students took the tests for Dutch vocabulary and metacognitive knowledge. Students in the peer response conditions received the 12 lessons in an uninterrupted period of 6 weeks. Each week, one pair of lesson was given on the same day. During the first lesson in the morning, the students received instruction and wrote the first drafts. In the second lesson, after lunch break, the writing conferences and revision sessions took place.

For the two peer response conditions, the student's regular teachers were replaced by teachers who had received extensive instruction in carrying out the lessons. The first author supported by four trained teachers formed the teaching team, each member taking care of all lessons in one of the five classrooms. The students of the two peer response conditions received the lessons in separate classrooms provided with computers. Students in the control group remained in their classroom with their own teacher and received language arts lessons according to the normal school curriculum during the time that the students in the peer response conditions were away. Lessons in the peer response conditions were given successively (first condition 1, then condition 2). Each member of the teaching team thus taught students from both conditions, avoiding systematic teacher effects interfering with condition effects. Students in the two peer response conditions wrote all texts on computers. The total duration of the lessons (required time on task) were the same in these conditions. The trained teachers had an important role. They made sure that students spent the intended time on each exercise or assignment, supervised the students while working in pairs, answered questions for clarification, kept order, circulated materials, collected workbooks to evaluate student's participation and encouraged students to complete all exercises and assignments.

To support the trained teachers, a protocol with detailed general as well as specific instructions for each lesson pair was made available. This protocol was used for training and the trained teachers used it for preparing each lesson. For treatment fidelity, the two first lessons of all the five trained teachers were observed by the researchers in order to help them optimize their performance. All teachers kept logbooks of the execution of the lessons and if necessary, the researchers commented on these logs. All student workbooks were collected by the researchers to evaluate students' participation. Generally speaking, the supervision by the teachers was in conformity with the principles of the two peer response conditions. In addition, it was observed that students' engagement in both conditions was very good. In order to evaluate their appreciation of the lessons, students filled in questionnaires about the usefulness of the lessons after each lesson pair (6 in total). The percentage of

students that considered the lessons useful ranged from 72,5 to 85,7 %. When asked about the specific objectives of the six lesson pairs (in all 24 goals), the percentage that regarded these objectives as useful ranged from 85% to 94,3 %.

The four post-test writing assignments were scheduled on two days in the week after the last lesson. All students were informed that texts for these assignments would be published in books for the school library. The students made two assignments in one day. The assignments were timed. During the morning sessions students wrote the first drafts of two assignments (15 minutes for each assignment), during the afternoon sessions they revised both texts (10 minutes for each assignment). For students who had missed post-test sessions, extra occasions were offered. All students completed the post-test assignments within three weeks after the last lesson.

4.2.5 Instruments

4.2.5.1 Post-test writing assignments

In this study students' writing is assessed by four post-test writing assignments. Four assignments were used because measurements of writing preferably are based on diverse writing tasks (Schoonen, 2005; Van Gelderen, Oostdam & Van Schooten, 2011). In addition, we needed to assess writing in the two genres involved. Two assignments involved the writing of a narrative, the other two involved the writing of an instruction. The topics of the four assignments (task 1: a story about someone who made a big impression, task 2: how to make candy, task 3: an event involving mischief, task 4: how to trick someone) were related to the central theme (farewell to primary school). For each assignment there was a title, a model text, and a writing prompt. Required text length was about 150 words. Two assignments specifically asked for a careful description of places (and changes of place), while the other two assignments asked specifically for careful description of time. In each assignment students wrote a draft and - after some time - a revision (see appendix 4).

4.2.5.2 Vocabulary and metacognitive knowledge tests

Dutch receptive vocabulary and metacognitive knowledge of reading and writing were used as covariates. Both tests were based on tests developed in the Nelson project for Dutch students in grades 8-10 (Van Gelderen et al. 2003, 2004 and 2007). We used adaptations of these tests in the Salsa project, which targets younger students (grades 7-9) in the lowest tracks of Dutch secondary education (Trapman et al, in press; see also <http://www.salsa.socsci.uva.nl/>).

The difficulty of these adaptations was more in line with the proficiency range of our target group. The vocabulary test consisted of 73 items. Each item contained a neutral carrier sentence with a stimulus word in bold print. Students had to choose among Dutch synonyms of the stimulus words (nouns, verbs, adjectives, and adverbs). The test was of average difficulty (mean = 54,77, Sd. = 8,77, maximum = 73). Reliability measured by Cronbach's alpha was .88, which is sufficiently high for our purposes.

The metacognitive knowledge test contained 45 items and consisted of three parts: knowledge of texts, knowledge of writing strategies and knowledge of reading strategies. All questions consisted of statements that were either correct or incorrect. Students decided whether they agreed with a statement (yes-no). The test was rather difficult for the students (mean= 31.09, Sd.= .5,10, maximum= 45). Reliability measured by Cronbach's alpha was .70, which is sufficiently high for our purposes.

4.2.6 Scoring of post-test writing assignments

The scoring of writing quality and the use of indicators of time and place was based on the final drafts written. Clean prints of the texts were used for each analysis, to avoid influence of one analysis on the other. For the scoring of revisions, first drafts were compared with the final drafts. Again clean prints of the final texts were used. All analyses of students' writing were carried out without knowledge regarding the conditions from which the texts originated.

4.2.6.1 Writing quality

Writing quality was assessed using a procedure based on Lloyd Jones (1977). This procedure, called 'primary trait scoring', defines criteria for text quality based on the requirements of each specific writing assignment. In order to enable interval-level interpretation of the scores a procedure based on Blok (1986) and adopted in Schoonen et al. (2003) and Van Gelderen et al. (2011) was used. On the basis of samples of 40 texts of each assignment, scales were construed for each of the four assignments consisting of five examples, indicating five points of the scale (numerical values: 10, 25, 50, 75 and 90). Two trained raters (working independently) scored the sample texts based on the criteria defined for each assignment in the four categories of: 1) genre

characteristics 2) content, 3) structure and 4) language use⁴. Example texts were selected as belonging to approximately the 10th, the 25th, the 50th, etcetera percentiles of the distribution in the sample. For each example text a description was given of positive and negative qualities in terms of each of the criteria for text quality for the specific assignment. The same two raters working independently used these scales for the assessment of all texts. An example of a text written by one of the students with a 50th-percentile score is presented in appendix 5. Correlations between the scores of the two raters ranged from .80 (tasks 3 and 4) to .88 (task 2). Relatively large discrepancies between the two raters were identified and resolved in a discussion. After solving the discrepancies writing quality was calculated as the mean score of the two raters.

4.2.6.2 *Indicators of time and place*

For scoring indicators of time and place, categories that were instructed in the lessons were used (changes of big place, changes of small place, time lapse, indication of place or time with a single word or with more words). For each category the number of indicators was coded. In addition, the functionality of these indicators was rated. Three values for functionality were applied: functional, neutral, not-functional. A functional indicator was considered to have a positive contribution to the text, for example by giving a detailed description of time or place. A neutral indicator was considered to have no influence on the text (if deleting the indicator was just as informative as its inclusion). An indicator was considered as not functional when it had a negative influence on the text, for example indications of place without referent ('there'), or repeated use of 'and then'.

One expert rater (the first author) scored all texts. A second rater (one of the trained teachers) received training during one session in the use of the coding forms. A manual explaining coding categories, and the assessment of functionality was used by the two raters. The second rater independently scored 30 texts of each writing assignment to establish inter-rater agreement. The agreement on the number of indicators of time and place (single words and descriptions with more words) was 98%. The percentage of agreement about the functionality of these indicators was 95.3 %. The percentage of agreement of the amount of 'changes of

⁴ Given that quality of writing in this study is defined as text coherence, language use as a criterion for quality in this context refers to the supportiveness of language use to understanding the text contents. Texts consisting of many errors (such as typo's, idiomatic problems, neglect of punctuation or ungrammatical sentences) were therefore weighed negatively in writing quality (cf. Bamberg, 1984).

big place' and 'changes of small place' (in the narrative tasks only) was 100%. The agreement of the functionality of these changes of place was 95.3%.

4.2.6.3 *Text revisions*

The revisions the students made from drafts to final text versions were scored in the following way. We distinguished revisions of form (changes regarding spelling, punctuation, grammar) from revisions of meaning (changes regarding text contents) (cf. Beason, 1993; Faigley & Witte, 1981; Goldberg, Roswell & Michaels, 1996; Sommers, 1980). In addition, within the category of meaning related revisions we distinguished between revisions of indicators of time and place and other revisions. Finally, we assessed the functionality of the revisions by judging positive, neutral and negative effects of each revision on the final texts.

The scoring and coding of the number and functionality of the revisions was performed by the same raters as above. The second rater was trained during one session in identifying changes from draft to final text, assigning revisions to the discerned categories (form or meaning), and assessing functionality. Explanations of the difference between form revisions and meaning revisions and of how to assess functionality were given in a manual and illustrated with examples. After a trial, both raters coded and assessed revisions in 20 texts (5 per assignment), working independently.

The percentage agreement about the number of revisions coded in the same categories was 97, 2 %. The agreement about the functionality of revisions was 92.8%.

4.2.7 **Analyses**

For the first research question, Pearson correlations were calculated between the quality of each of the four writing assignments with the indicators of time and place that were coded as functional for text quality. For the second and third research question, directed to the use of indicators of time and place and to the different types of revision carried out respectively, MANCOVA analyses were carried out with experimental condition as factor (1-3) and vocabulary knowledge, metacognitive knowledge and text length (number of words written)⁵ as covariates. First we tested whether each of the covariates had a significant effect on the dependent variables. Covariates that did not contribute

⁵ Text length was added as covariate to control for the possibility that students who write longer texts also use more indicators of time and place and make more revisions. By controlling for text length results will not be confounded by differences in numbers of words written.

significantly were removed from the analysis. In addition, we checked for the main assumptions of MANCOVA (equality of covariance matrices with Box's test and equality of error variances with Levene's test). In case these assumptions didn't hold, ANCOVA analyses or non-parametric tests (Kruskal-Wallis) were carried out, dependent on the assumptions that were violated.

4.3 RESULTS

The total numbers of functional indicators of time were summed over each category (single words, multiple words, time lapse) for each of the four post-test writing tasks. Means and standard deviations were respectively 3,8 (2,0) for task1, 4,4 (3,0) for task2, 2,2 (1,4) for task 3 and 2,3 (1,2) for task 4. It appears that the use of functional indicators of time was larger on average for the two narratives (tasks 1 and 2) than for the two instructive tasks. It also appears that it does not matter much whether students were instructed in the assignment to focus on the use of time indicators (tasks 2 and 3) or not. Similarly, the total numbers of functional indicators of place were summed over each category (single words, multiple words, small place, big place) for each of the four writing tasks. Means and standard deviations were respectively 4,7 (4,3) for task 1, 9,2 (5,8) for task 2, 4,8 (1,9) for task 3 and 5,5 (2,2) for task 4. It appears that the average number of functional indicators of place differed much between the two narratives in an unexpected direction, given that in task 2 the assignment required a focus on time, not on place. Apparently, the focus on place in task 1 did not result in more frequent use of indicators of place. For the instructive texts only a slight difference exists between the frequencies of indicators of place, although in this case the difference is in the expected direction: more use of indicators of place when the assignment focuses on place.

4.3.1 Correlations of writing quality and indicators of time and place

Table 4.1 contains the correlations of each of the sums of functional indicators with the assessments of writing quality for each of the four post-test tasks. All of these correlations are significant at least at the .05 level, indicating that the use of functional indicators of time and place are reliably related to writing quality of all four texts.

Table 4.1 *Pearson correlations of writing quality and number of functional indicators of time and place in the four post-test writing tasks (N=140)*

	Number of functional indicators of time	Number of functional indicators of place
Task1 Narrative (story) Focus on place	.37**	.54**
Task2 Narrative (exiting event) Focus on time	.51**	.51**
Task3 Instruction (recipe) Focus on time	.19*	.34**
Task4 Instruction (trick) Focus on place	.29**	.63**

Note: *) significant at .05 level (two tailed); **) significant at .01 level (two tailed).

On the other hand, there is quite some variation in the strength of these relations. For example in task 1, task 2 and task 4 the relation between the use of indicators of place with text quality is quite strong (.54, .51 and .63 respectively), while in task 3 and 4 the relation with the use of indicators of time is much weaker (.19 and .29 respectively). Nevertheless, the results in Table 4.1 confirm the idea that the use of functional indicators of time and (especially) place is substantially related to text quality of the students' texts.

4.3.2 Use of functional indicators of time and place

Table 4.2 shows the means and standard deviations of the indicators of time and place coded as functional in all four post-test writing tasks for each of the three conditions. It appears that the student of the condition SGK on average produced much more functional indicators of place (32,98) than students in each of the two other conditions. The difference for the use of functional indicators of time points in the same direction. Students in the condition SGK produced much more of such indicators on average than students in the two other conditions.

Table 4.2 Means and standard deviations of experimental conditions of total use of functional indicators of time and place (N=140)

	Condition	Mean	Std. Deviation	N
Functional indicators of place	SGK	32,98	9,51	47
	GACW	20,82	6,85	44
	Control	18,84	8,04	49
Functional indicators of time	SGK	17,40	4,43	47
	GACW	11,32	3,02	44
	Control	9,31	4,17	49

To test these differences, MANCOVA analysis was carried out, with vocabulary knowledge, metacognitive knowledge and text length as covariates. However we found that the assumption of equality of covariance matrices across groups (Box's test) did not hold. For this reason we carried out two ANCOVA analyses, one for each dependent measure. In both analyses the only covariate that appeared to be significantly related to the dependent variables was text length. For that reason that was the only covariate that was retained. The results for the indicators of place showed a significant effect of condition ($F(2,136) = 56,04, p = .000$ partial eta squared = .45) and for text length ($F(1,136) = 54,61, p = .000$, partial eta squared = .29). The results for the indicators of time also showed significant effects of condition ($F(2,136) = 71,62, p = .000$, partial eta squared = .51) and text length ($F(1,136) = 50,40, p = .000$, partial eta squared = .27). In both analyses, pair-wise comparisons showed that only the differences between the condition SGK on one hand and the two other conditions were significant. The differences between the condition GACW and the control group were not significant in either comparison. Given that a partial eta squared value of .13 is regarded as a large effect (Cohen, 1988), the effects of condition on the functional use of indicators of time and place can be regarded as very large. Because text length is used as a covariate, differences in text length have no bearing on these large effects of the condition SGK.

4.3.3 Use of functional revisions

Table 4.3 shows the means and standard deviations for three types of functional revisions carried out by the students over all four posttest writing tasks: revisions of indicators of time and place, revisions of form and revisions of meaning, other than time and place. It appears that for all three types of revisions the largest means are observed in the condition SGK, while the means of the two other conditions do not deviate much from each other.

Table 4.3 Means and standard deviations of experimental conditions of total use of revisions directed to indicators of time and place, meaning and form

	Condition	Mean	Std. Deviation	N
Functional revisions of time and place	SGK	3,72	3,13	47
	GACW	,34	,57	44
	Control	,18	,44	49
Functional revisions of form	SGK	6,09	5,05	47
	GACW	1,93	1,50	44
	Control	2,57	3,58	49
Functional revisions of meaning (other than time and place)	SGK	11,36	6,28	47
	GACW	3,41	2,99	44
	Control	3,39	2,75	49

To test these differences MANCOVA analysis was carried out with vocabulary knowledge, metacognitive knowledge and text length as covariates. However we found that the assumption of equality of co-variance matrices across groups (Box's test) and the assumption of equality of error variances (Levene's test) did not hold. We first checked whether the covariates were significantly correlated with the dependent variables. None of the inter-correlations were significant, allowing us to discard all of the covariates from our analysis. Next, we tested differences with the non-parametric test of Kruskal-Wallis. The Kruskal-Wallis test revealed main effects for all three dependent variables (Chi-squares (2): 26,5-75,1, $p=.000$). Post hoc tests with Mann-Whitney revealed that only the differences between the condition SGK and the two other conditions were significant. All differences were significant at $p=.000$. The effect sizes (r) for the condition SGK and the condition GACW were respectively .71 (time/place), .71 (meaning) and .48 (form). For the comparison between the condition SGK and the control condition the effect sizes were .76 (time/place), .72 (meaning) and .48 (form). These effect sizes demonstrate that especially the effects on revisions of indicators of time and place and revisions of other meaning related issues of the condition SGK are very large (an effect of $r=.5$ is the threshold for a large effect), while the effect on revisions of form is moderately high (.3 is the threshold for a medium effect) (Field, 2009).

4.4 CONCLUSIONS AND DISCUSSION

This study aimed at establishing effects of writing with peer response and instruction in genre knowledge on the use of linguistic features and revisions. Our first research question concerned the relationship between the functional use of indicators of time and place and writing quality. The correlation analyses reveal positive relationships between the use of functional indicators of time and place and writing quality on all four post-tests.

Some variation in the strength of the correlations was observed. This may be explained by task-specific effects. Apparently, in a recipe for making apple turnovers the use of indicators of time is less important than the use of indicators of place. The order in which things need to be carried out may already be clear without the use of indicators of time: the sequence in which directions are given coincides with the time sequence. Using indicators such as 'then' to denote a time sequence is thus unnecessary. They can, for example, be replaced by full stops (e.g. 'Peel the apples with a knife. Cut them in pieces'). In an instruction for making apple turnovers, the presence of clear descriptions of place might be more important (e.g. put it *in the oven*) than descriptions of time, because there is no linguistic alternative for such indicators.

Our finding of positive relations between the use of indicators of time and place with writing quality of grade 6 students provides further evidence of the importance of such specific genre knowledge for writing instruction to these young writers. It also confirms previous studies showing positive relations between the use of cohesive ties and writing quality (Bamberg, 1984; Fitzgerald & Spiegel, 1986; McCully, 1984; Spiegel & Fitzgerald; 1990; Witte & Faighly, 1981).

Our second research question concerned effects of peer response with instruction in specific genre knowledge on the use of functional indicators of time and place in students' texts. Results strongly confirmed our expectation that instruction in the use of indicators of time and place contributes to the functional use of these features during writing. Strong effects were found of the condition in which peer response was combined with specific genre knowledge on the use of indicators of time and place in comparison to the other conditions. Students in the condition SGK used functional indicators of place and time much more frequently than students in either the condition in which peer response was combined with GACW and in the baseline control condition. On the other hand, no significant differences were found between the two last mentioned conditions.

The third research question was directed to the effectiveness of instruction in specific genre knowledge on functional revisions. Three types of revisions were coded: revisions of indicators of time and place, other revisions of meaning, and revisions of form. As expected, the condition in which peer response is combined with specific genre knowledge had strong effects on the amount of functional revisions of time and place. In addition, students in this condition made much more functional revisions of other meaning related issues and form than students of each of the other two conditions. These positive effects of instruction in specific genre knowledge on functional revisions of meaning and form were not expected. On the other hand, no significant differences were found for all types of revisions between the two other conditions. These results give rise to reflection on the following issues:

1. The effects of instruction in specific genre knowledge on the use of indicators of time and place.
2. The effects of instruction in specific genre knowledge on revisions of indicators of time and place.
3. The effects on other revisions of the condition SGK.
4. The absence of effects of instruction in general aspects of communicative writing.

Regarding the first issue, we may conclude that the students followed the instruction in the use of indicators of time and place as intended. That they actually used more indicators of time and place in their writing can be seen as the direct result of the instruction in specific genre knowledge. This demonstrates that students of this age (6th grade) are not only sensitive to the way such indicators function in narrative and instructive texts, but that they are also able to use knowledge of these functions in their own writing in a sensible way.

Referring to our second point, the positive impact of peer response with specific genre knowledge on revision of indicators of time and place, the students seem to have taken a further step. Apparently, the instruction in specific genre knowledge has provided them not only directions for the functional use of indicators of time and place in their writing, but has inspired them also in making functional revisions in the use of these indicators. In addition, the students wrote and revised their texts in post-test experimental writing without assistance from their peers. The positive effect of the instruction in specific genre knowledge on text revision suggests that it has led to internalization of the specific attention to linguistic features even in the absence of peer response. The students seem to be able to reflect on their texts

independently, and to make functional revisions in their use of indicators of time and place. The apparent independence of this revision behavior from peer response is important to note, because the ultimate goal of peer response is to help students to critically evaluate their writing without the help of their partners (Beach, 1989).

Our third point concerns the fact that the students in the condition SGK did not only make more functional revisions of indicators of time and place, but also of other meaning and form related issues than students in the other conditions. Positive effects of peer response with instruction in specific genre knowledge on the use of indicators of time and place in post-test writing were expected. However, transfer to other meaning related and form related issues was not expected. In addition, surprisingly, revision of meaning related issues and formal issues seem to go hand in hand, instead of one inhibiting the other because of working memory constraints (cf. McCutchen, 2008).

This transfer effect is surprising and not easy to explain. It suggests that the awareness of the importance of linguistic realisations is heightened in a general sense, including both meaning issues and issues of correct usage and spelling. Possibly the focus on indicators of time and place also provided the students a window to other sentence formulation and editing issues that deserve attention in revision. In studies into young students' revisions, it is observed that their attention is often restricted to formal issues (spelling or grammar) rather than to meaning related issues (Butterfield, Hacker & Albertson, 1996; Faigley & Witte, 1981). The results of this study suggest that instruction in the use of specific linguistic means helps students paying attention to the importance of linguistic features in a more general sense, including both meaning and form aspects of their texts at the same time. Future studies will have to be carried out to find more supportive evidence for this interpretation.

Our final point refers to the absence of effects of instruction in general aspects of communicative writing. It was expected that students in this condition would outperform the students in the baseline control condition, who did not receive any systematic instruction in genre knowledge and no peer response. In several studies, writing with peer response supported by instruction in different types of global genre knowledge appeared to be effective for writing quality (Kos & Maslowski, 2001; Sims, 2001; Peterson, 2003; Corden, 2002, 2007). In these studies, peer response is recommended for supporting students in text revision. Providing students with reader based feedback can make them aware of the needs of readers. In addition, peer

comments can guide them reflecting on meaning related problems in their texts. The condition GACW was based on the theoretical assumptions underlying instruction in different types of global genre knowledge and on their outcomes. The students in the condition GACW were instructed to pay attention to the general purpose of different genres (narratives and instructions) such as the function of texts and goal- and audience oriented writing. This was the only difference with the condition SGK. All other aspects of the lessons (topics to write about, writing assignments, example texts, instructions) were the same. It was assumed that this orientation on meaning related, communicative aspects of writing supports students' writing and revision. However, the students in the condition GACW do not perform better than the students in the control condition not only on the use and revision of indicators of time and place (which they were not explicitly instructed in) but also in the revision of other textual issues of meaning and form. Apparently, peer response with instruction in general aspects of communicative writing did not support students revising from a readers' perspective.

Maybe, these results can be explained by the fact that peer response with GACW did not provide *concrete* linguistic tools for formulation or revision. Students trying to apply appropriate formulations or revisions in their narratives or instructions are therefore left to their existing resources to do so, which are probably insufficient for meaningful revisions (cf. Bereiter & Scardamalia, 1987; Van Gelderen, 1997). They have not learned to focus on specific aspects of sentence construction, such as choice of words or how to make descriptions more specific or exciting by their framing in time and place. Possibly, peer response with such general communicative points of attention as given in the GACW condition is not very helpful for students, when they have to make concrete reformulations in their texts. An analysis of video registrations of writing conferences of the students in both experimental conditions during the lessons provides some more perspective on the issue (see chapter 3). The attention spent in students' writing conferences during the lessons to different aspects of the texts was measured. Students in the condition SGK spend most time talking about indicators of time and place, while students of the condition GACW spent most time talking about global text content (subject, title, meeting the assignment, structure, goal- and audience orientation). The degree of specificity of instruction in genre knowledge is thus quite precisely mirrored in the students' writing conferences for revision, leaving the students in the GACW condition with not much more than quite abstract textual issues, but linguistically empty-handed.

Two issues need to be addressed in future investigations. The first is the role of genre specific linguistic features in other genres. The second is the role that can be attributed to other features than indicators of time and place in achieving text coherence. Hasan (1984) states that coherence is arising of the use of several linguistic features (grammatical, lexical, semantic). It is of interest to investigate effects of instruction in the use of other linguistic features in narrative and instructive texts, but also in other genres. Regarding the observed problem of limited coherence in students' texts (Bereiter & Scardamalia, 1987; McCutchen & Perfetti, 1982; Stein & Trabasso, 1982; Christie & Derewianka, 2008), and the large effects found of instruction in indicators of time and place in the present study, we suggest further experimental research in other genres and their salient linguistic features.

Studies into the role of linguistic features for reading comprehension (Meyer & Poon, 2001; Meyer et al., 2010) have identified basic organizational structures of different genres and their related linguistic features (signaling words that function as cohesive ties). In a causation structure for example, the use of signals like 'as a result, because, since, for the purpose of, thus, in order to, if/then, so, therefore', prepare readers for arguments often made in opinion texts. In a comparison structure, for example used in an explanatory text, ideas can be related on the basis of differences and similarities. The understanding of text is facilitated by signals such as 'but, in contrast, instead, however, on the other hand, whereas, unlike, although, the same as, compared to, as'. They organize concepts by making connections between text elements that can help the reader interrelating ideas and building a coherent representation of the meaning of texts. Positive effects of peer tutoring with instruction in these types of genre specific linguistic features for reading comprehension were found. Therefore, writing with peer response combined with instruction in the use of such linguistic features is certainly a promising approach. We strongly recommend follow-up studies investigating the effects of this new approach on writing quality and proficiency of young writers.

CHAPTER 5

Discussion

5.1 OVERVIEW OF THE STUDY

In this study effects of writing with peer response using genre knowledge for grade 6 students were investigated. A series of lessons was developed that was meant as an improvement of an already existing approach for writing with peer response. This original curriculum, "Learning to write" (Hoogeveen, 1993), developed by the Netherlands institute for curriculum development (SLO), aimed at an innovative, process-oriented, communicative approach to writing instruction in the upper grades of primary school. This approach emphasizes that students learn to regulate their own writing processes (planning, formulating, revising), and to gain insight into the communicative situation in which texts are written (the readers, the meaning and the function of texts). The curriculum consisted of teacher support materials to improve teachers' competence in the planning and execution of writing lessons according to a 'Writers' Workshop approach'. In this approach, collaboration between students during the different stages of the writing process plays an important role. Students discuss each other's texts during writing conferences and improve their writing performance by reflecting on their texts using reader responses, and by revising in the light of the communicative function of their texts (see chapter 1).

The curriculum 'Learning to write' can be typified as 'open', providing a description of its main principles and suggestions for educational contents. In addition, no instructions were given to teachers or students for the way in which students' should discuss their texts. It was assumed that it was sufficient for students to collaborate on the basis of suggestions based on global indications of genre, function, and readership in the writing assignments. Furthermore, the curriculum was tested and implemented using a 'bottom up strategy'. Different sorts of professional partners concerned with the practice of writing instruction

were involved in the project (curriculum developers, teacher trainers, teachers, school counselors, researchers). They shaped and implemented the curriculum in different schools. The underlying principle of this strategy was that the adoption of innovative curricula is assumed to be more successful when teachers contribute as active participants. To ensure commitment and a sense of ownership with the innovation, teachers were involved as professionals, shaping their own curriculum adapted to their particular contexts. Concrete and prescriptive teacher support materials containing detailed lessons were supposed to hamper teachers' professional development and affect their professional autonomy: good teachers shape their own curriculum.

However, case studies carried out during the project revealed serious implementation problems: the teachers made undesirable adaptations to the process-oriented, communicative principles of the curriculum. Due to their routine in traditional writing instruction (with a strong emphasis on spelling and grammar), they did not instruct students in criteria to be used when reflecting on the communicative function of texts. In addition, comments of peers on each other's text appeared to be quite generic and directed to formal issues of language use only. The usefulness of peer response obviously depends on the quality of text comments. It had to be concluded that the approach in which no subject matter content was specified for students' comments on texts, offered insufficient support for both teachers and students to bring the principles of the innovation to practice.

To find ways in which writing with peer response could be usefully enriched with a more concrete focus for students' comments, it was decided to conduct a literature review (see chapter 2) of intervention studies carried out since 1990. The intervention studies in the review appeared to be based on three theoretical perspectives. From a cognitive perspective, writing is defined as a process of problem solving and peer response as a means to help the writer go through the complex writing process by using writing strategies. From a social-cognitive perspective, the social function of peer response is emphasized. The peer as prospective reader helps to regulate the writing process. The focus of instruction in this view is on both writing strategies and rules for regulating the interaction process between peer partners. From a genre perspective, knowledge of forms and functions of written language in specific genres is underlined. Through instruction in genre knowledge students learn to apply this knowledge in writing.

The review underlines the importance of additional instruction for students in writing with peer response. In all intervention studies except one, additional instruction was provided for peer response. Most studies combined several instructional components at the same time (strategy instruction, instruction in genre knowledge and rules for interaction). A great majority of studies showed that peer response with additional instruction had positive effects on the writing proficiency of collaborating students compared to students working individually. On the basis of the review, it was decided to focus our study on the added value of genre knowledge to the original approach of 'Learning to write'. The advantages of instruction in genre knowledge were described by several theorists. On the other hand, the available research did not allow for an appraisal of effects of different types of genre knowledge on writing quality. For that reason, it seemed worthwhile to add to the research literature with a true experimental study to demonstrate the effects of peer response using genre knowledge on the writing quality of students.

The review revealed as well that genre knowledge is quite complex and varied and that it is not easy to decide what type of genre knowledge should be focused upon for the benefit of students in the age group of 11-12. The approach to genre knowledge in most studies reviewed is of a quite global nature. Students learn to use structural characteristics for specific text genres, such as story grammar for narratives or argumentative structure for persuasive texts. In addition, attention is paid to idea generation by use of sheets with questions about who, why, what and how. In many cases, students are supposed to use generic criteria from a communicative perspective, such as whether a story is fun to read and whether events are described clearly (goal- and audience orientation). To provide students more support in planning, formulating and commenting on texts during writing conferences, and revising their texts, in this study a more specific type of genre knowledge is focused on.

This approach, inspired by the functional grammar of Halliday and Matthiessen (2004) is characterized as *specific genre knowledge*, because it focuses on specific linguistic features used in texts of different genres and their genre specific functions. For example in a manual, specific linguistic features (e.g. words that indicate an enumeration) are used to help the reader follow through the process of execution. In a report, 'telling what happened' can be realized by descriptive language (such as precise indicators of time and place and object descriptions). Instruction in the use and the function of genre specific linguistic features provides students with rather concrete linguistic tools for writing. Insight in the function of specific linguistic features may therefore provide

students more concrete criteria for text quality, allowing them to apply these criteria to their own texts and at the same time to use them for commenting on their peers' texts. This type of instruction in specific genre knowledge is demonstrated in several pedagogical studies (Beck & Jeffery, 2009; Cope et. al, 1983; Kamberelis, 1999; Schleppegrel, 2007), but is hitherto not tested in controlled experiments. For the reasons given above, instruction in specific genre knowledge seemed an excellent candidate for repairing the 'open' character of the 'Learning to write' approach by supplying concrete subject matter content for communicative writing lessons.

A series of 12 lessons directed at the writing of narratives and instructions was developed for an experimental intervention in 6th grade classrooms⁶. In contrast with the approach of 'Learning to write' materials primarily aimed at students, not at teachers (instruction books, workbooks, answer books). The lessons were given by trained teachers. They were trained with a protocol with detailed general as well as specific instructions for each lesson. For treatment fidelity, the two first lessons of all teachers were observed by the researcher in order to help them optimizing their performance. Additionally, they were coached by the researcher, and kept logs of the proceedings of the lessons.

Chapter 3 describes the design and results of the experiment, focusing on the effects of writing with peer response using genre knowledge on students' global writing quality. Students in each participating classroom were randomly assigned to three conditions. In one experimental condition students received instruction in specific genre knowledge (SGK) (functions of linguistic indicators of time and place in narratives and instructions). In the second condition students received instruction in general aspects of communicative writing (GACW) (goal- and audience oriented writing of narratives and instructions). The two first conditions were completely matched on other aspects (time on task, writing assignments, same teachers, peer response and instruction for interaction in writing conferences). Both groups were compared with a baseline control group, following regular lessons from their own teacher. The results of the experiment showed strong effects of the condition SGK, outperforming the two other conditions on global text quality. No differences were found between the GACW condition and the baseline control group. Video recordings of students commenting on each other's first drafts showed that the students who received specific genre knowledge spent significantly more attention to the

⁶ The lesson materials are available on <http://www.slo.nl/primair/leergebieden/ned/peerresponse>.

functions of linguistic features taught than the students who received instruction in general aspects of communicative writing. This finding supports the interpretation that knowledge about the use and function of linguistic features was used to improve texts during the lessons and may have transferred to post-test writing, even in the absence of writing conferences. Instruction in specific genre knowledge appeared to have supported students to enrich their comments on each other's writing during the lessons by providing concrete points of attention for reflection on their texts.

In chapter 4, a further analysis of the experiment is reported. This analysis was carried out to answer the following research questions:

1. What relationship exists between the use of indicators of time and place and writing quality?
2. Do students who are instructed in peer response with specific genre knowledge (indicators of time and place) use more of these indicators in their texts?
3. Do students who are instructed in peer response with specific genre knowledge apply more functional revisions in their texts?

The theoretical starting point of the analysis was the frequently observed problem that young students' texts show insufficient coherence. Due to their 'knowledge telling strategy' (immediately writing down what comes to mind), they fail to take the rhetorical situation and the needs of their readers into account. As a result, their texts show a lack of coherence. Young writers often do not explicitly name items and use pointing outward references ('this', 'it' 'there') in their written text as if it was a conversation. The topic usually is their only reference for giving information, making sentences related to the topic but not to each other. Furthermore, they often maintain real time occurrence of event sequences in their texts and do not use alternative sequences for a rhetorical effect (e.g. by using indicators of time). The continuous use of 'and then' in narratives for example, indicates that students do not know how to use the full potential of this type of text.

The indicators of time and place in the students' texts were analysed by coding these linguistic features. In addition, three types of revisions were coded, namely revisions of indicators of time and place, other meaning related revisions and revisions of form.

Regarding the first research question, positive relationships were found between global text quality and amounts of functional indicators of time and place. This result supports the assumption that 6th grade students' writing benefits from the knowledge and use of genre specific indicators of time and place.

To answer the second and third research question the students of the SGK condition were compared with the students of the GACW condition and the baseline control group. The results showed strong effects of instruction in specific genre knowledge on the functional use of indicators of time and place in student's texts. In addition, it was found that SGK students made much more functional revisions, not only in the instructed indicators of time and place, but also on other meaning related issues and even formal revisions. These results underpin the main conclusion that peer response with additional instruction in specific genre knowledge helped students focusing their attention during writing and revision on the role of indicators of time and place. Apparently, the 6th grade students are sensitive to the way such indicators function in narrative and instructive texts and are able to use knowledge of these functions in their own writing. That students were also able to use this focus on indicators of time and place in their comments on each other's texts, was already demonstrated in chapter 3. In addition, the fact that students in the SGK condition not only made more revisions in indicators of time and place, but also on other meaning related and form related issues than students in the other conditions, suggests that their awareness of the importance of linguistic realisations of their ideas was heightened in a more general sense, including both meaning issues and issues of correct usage and spelling. Possibly, the focus on indicators of time and place also provides a window to other sentence formulation issues that deserve attention in revision. Finally, the results of our experiment showed that the SGK students were able to use indicators of time and place in their writing and make multiple functional revisions in their post-experimental writing in which no assistance of their peers was given. These results suggest that instruction in specific genre knowledge lead to internalization of the specific attention to linguistic features even in the absence of peer response.

5.2 GENERALIZABILITY, REPLICABILITY, MAINTENANCE OF EFFECTS

5.2.1 Generalizability

This study provides considerable experimental evidence that peer response with additional instruction in the use of specific linguistic features has a positive influence on students' writing performance. Very large effect sizes on all measurements (post-experimental writing quality, indicators of time and

place in students' texts, revisions directed at indicators of time and place and other meaning related revisions, and time spent on talking about indicators of time and place during writing conferences) were found. In addition, the positive relationship between the functional use of linguistic features and global writing quality shows that the use of indicators of time and place is important for text coherence. The positive results of this study cast an optimistic light on the usefulness of writing with peer response using specific genre knowledge. However, no other experimental studies on the effects of instruction in specific genre knowledge have been conducted so far. Therefore, it is important to consider issues with respect to the generalizability of this study to different populations and genres.

5.2.1.1 Population

The study was carried out in the 6th grade (age 11-12) of primary education and we cannot be sure about the extent to which the findings from the experiment can be generalized to younger students in lower grades or to older students in the first grades of secondary education. In many studies on writing with peer response students of the upper primary grades are involved. If younger students are investigated, the focus of the studies is on the role of cross-age pairing (Ferguson-Patrick, 2007; Nixon & Topping, 2001; Medcalff, Glynn & Moore, 2004; Toth, 1997) and the younger students (first grade) function in the role of tutee's to be helped by older, more capable tutors (5th or 6th grade). Results of these studies indicate that both tutee's and tutors gain in writing performance: the younger children in amount of words written, word choice and/or accuracy of spelling, the older students in global writing quality (content, organization of ideas, language use). However, in these studies the focus of instruction was on regulating the interaction. Therefore, these studies provide no insight in the role of instruction in genre knowledge. It is advisable that follow-up studies are carried out to find out what type of specific genre knowledge fits with the needs of other age groups than were targeted in this study.

Several studies show that genre knowledge develops from very young on through primary school (Chapman, 1994; Donovan & Smolkin, 2002; Dyson, 1995; Zecker, 1996). The fact that even very young students appear to be sensitive to genre knowledge is a positive condition for instruction in specific genre knowledge for younger children. Results of studies on revision skills of elementary students show that it is difficult for young students to detect problematic formulations in their texts and to reformulate what they have

written. Revision draws on a critical distinction between the literal and intended meaning of texts. To revise effectively the writer must focus on what was actually written, rather than on what was meant. Beal (1996) concluded that until the mid-elementary school years (grades 3-4) students do not grasp this distinction between the literal and intended meaning of their texts. A clear conception of the literal meaning is necessary to be able to evaluate parts of the text, to give adequate diagnoses of problems detected, and to eliminate problems by reformulating unclear sentences or bigger parts of the text. A conscious and flexible use of linguistic means poses high demands on children's' linguistic resources and on their meta-linguistic awareness (Myhill, 2012). In several studies it was found that the basic components of revision skills appear to be within the reach of most students from 4th grade (Bartlett, 1982) and 5th and 6th grade (Van Gelderen, 1997) under facilitating conditions (e.g. the use of example texts, detecting problems in texts written by others, encouraging reflection on the text). Given the results in this study related to improved revision capabilities of students receiving specific genre knowledge, it is of interest to investigate whether this effect is generalizable to students in the mid-elementary grades.

Furthermore, this experiment was carried out with a heterogeneous student population from regular educational classrooms. In such classrooms in the Netherlands, students of mixed academic capabilities are represented, from the lowest to the highest achieving. We have no insight in the effectiveness of the treatment for students with special learning needs (learning disabilities, limited language proficiency, struggling writers). In one third of the studies on writing with peer response in the review, students with special needs were involved. These studies report positive findings of peer response with different types of additional instruction for students with special needs. In general, writing research emphasizes that learning disabled students and struggling writers profit from more structured approaches to writing instruction, as for example 'direct instruction' (Graham & Harris, 2003; Lihut & Hansen, 2002). Studies on writing with peer response with mixed ability pairs conclude that struggling writers in the role of tutees benefit more from writing with peer response with interaction instruction than better writers in the role of tutors (Sutherland & Topping, 1999; Yarrow & Topping, 2001). An interesting question for future research is whether peer response with instruction in genre knowledge, providing concrete directions for revision, as in the present study, is supportive for students with special learning needs. In addition, these students probably also need other facilitating measures for revising. Beal (1996)

and Butterfield, Hacker & Albertson (1996) point to the fact that familiarity with topic and genre are important factors for facilitating revision. Students' ability to notice comprehension problems caused by their texts depends to a large extent on background knowledge necessary to clarify comprehension problems. It appeared as well that students were more likely to report unclear passages in narratives than in expository texts. Halliday and Hasan (1976) noticed that young students find the linguistic features of non-fiction genres (vocabulary, connectives, register, cohesive ties) more difficult to comprehend and write than those of the more familiar narrative texts.

5.2.1.2 Genres

Learning to write in different genres is generally recognized as an important issue for education. Learning to write is seen as learning to master the specific functions and text characteristics of different genres (Christie & Derewianka, 2010; Expertgroep doorlopende leerlijnen, 2008; Kouwenberg & Hoogeveen, 2007; Kress, 1994; Van Gelderen, 2010). This study was directed to instruction in only two genres: narratives and instructive texts. In addition, the scope of this study was confined to instruction in two types of specific features (indicators of time and place). The results were systematically the same for the two genres involved, but these results cannot be generalized to other genres and other linguistic features. For other genres other linguistic features may be relevant for students' writing. For example, indicators for the structure of an argumentative text, such as *first*, *second*, *in addition*, *moreover* and logical connectives, such as *although*, *because*, *in order*, *therefore*, may be important for students learning how to use the rhetoric of argumentative writing. In addition, it is of interest to expand the scope of this study to other linguistic features in the instructed genres. In narratives for example, the use of indicators of time and place are important linguistic features for creating text coherence. However, there are other linguistic features to be used in narratives serving other rhetorical functions: the use of adjectives and adverbs to create variety and add interest, the use of figurative language to create impact, or the use of phrases providing descriptive detail for making the text more exciting to read. Instruction into other genres (such as expositions and reports) and linguistic features that fulfil important functions in these genres may also prove useful. Therefore, studies into other genres and related linguistic features and into their applicability for different age groups are recommended.

5.2.2 Replicability

Because no other studies have been carried out experimentally testing the effects of writing with peer response using specific genre knowledge, replication studies are desirable. The conclusions will certainly gain in strength when other researchers find similar effects of instruction in the use of indicators of time and place for the writing of narrative and instructive texts within a comparable population of students as was used in this study. In particular, two aspects of the study have to be considered: the validity of the writing tasks and the reliability of judgments of writing quality. Several studies documented that valid and reliable measurement of students' writing quality is quite complex (Cooper & Odell, 1977; De Glopper, 1988; Schoonen, 1991; Wesdorp, 1981).

The validity of measurements of writing proficiency can be distorted by 'task-effects'. These effects occur when the measurement of writing proficiency is influenced by specific demands of writing tasks that are not supposed to be related to writing proficiency. For example: knowledge about specific topics or affinity with specific formats for a writing assignment (Meuffels, 1989; Meuffels & Van den Bergh, 2005). To diminish the risk of task-effects it is recommended to use several writing tasks, instead of just a few. In this study, writing quality was measured on the basis of four writing tasks. The writing assignments were designed according to a specific format (e.g. the use of example texts). Although, we found the same effects on global writing quality for all four tasks, it is valuable to investigate whether this result can be generalized to writing about other topics and with other formats. Replication studies measuring writing proficiency using other writing assignments (topics, formats) are therefore useful.

The reliability of judgments of writing quality refers to the stability of the judgments within a single rater (giving the same judgments about one text) or between raters (the correspondence of the judgments of different raters). According to Schoonen (1991), there are multiple causes underlying raters' variability. So called sequence-effects (a high rated text influences the assessment of a successive text) and 'halo-effects' (a particular aspect influences the assessment of other aspects) can undermine raters' reliability. In addition, 'signific-effects' may play a part (different raters do not agree on aspects that are important).

In the present study, the assessment of global writing quality was executed by two raters, working independently and blind for the condition from which the texts originated. The inter-rater agreement was high. Global writing quality was evaluated using a procedure based on the so called 'primary trait

scoring' (Lloyd Jones, 1977). This procedure for scoring is based on the principle that students' writing should be evaluated using only requirements explicitly stated in their writing assignments. By doing so, the rater's attention is focused on the features of a text which are relevant to the kind of discourse asked for in the assignment (e.g. purpose of the text, audience, subject, specific text characteristics). In order to avoid the risk of significant effects and sequence effects, we additionally described the criteria for text quality for each writing task (genre, content, structure, language use) and used scales consisting of 5 selected example texts from all texts written by our students. These scales gave the raters anchor points for their scoring, so they could compare the relative strength and weaknesses of each text to examples of very poor, poor, mediocre, strong or very strong quality. In addition to the holistic assessments of text quality, texts were analysed using analytic coding of the use of the indicators of time and place. In order to perform a reliable and valid coding of the linguistic features, a coding system with different categories of indicators of time and place was developed (see chapter 4).

The assessments of the students' texts were carried out by raters who were involved in this study. For that reason and because of the complexity involved in the measurement of writing quality, replications with different jury's and different procedures for the evaluation of writing quality are useful.

5.2.3 Maintenance of effects

A final point of consideration regards the maintenance of the effects found in this study. The study showed that students become better providers of feedback and better writers when instructed in the use of indicators of time and place. However, we did not establish whether such instruction has lasting effects. Some other studies on writing with peer response have paid attention to the long term effects of interventions, most of them showing positive results. Stoddard and MacArthur (1993) studied the maintenance of gains in revision skills as a result of combined instruction in writing strategies, peer response and word processing at one and two-months maintenance testing. They found positive effects after one and two months. Graham, Harris and Mason (2005) examined whether effects of instruction in genre specific strategies for writing narratives persisted over time. Effects for story writing were demonstrated even after ten weeks. Medcalf, Glynn & Moore (2004) studied the maintenance of effects of peer response with interaction instruction with cross-aged paired students writing narratives. The students of the experimental group showed

gains four weeks after the conclusion of the treatment. Intervention studies directed to effects of instruction in specific genre knowledge (such as the linguistic features in our study) have not yet been conducted. For that reason, studying the maintenance of the effects found in this study of the use of linguistic features on writing, revision and writing conferences of young writers is certainly commendable.

5.3 CONSEQUENCES FOR CURRICULUM DEVELOPMENT

The purpose of this study was to find empirical evidence for the effects of a redesign of a curriculum for writing with peer response ('Learning to write') on students' writing performance. Problems with implementing this curriculum were the major inspiration for the changes made. Below, the significance of the results for future curriculum development for writing instruction will be discussed.

The formative evaluation of the curriculum 'Learning to write' had revealed that teachers made undesirable adaptations affecting the main principles of the innovation. Teachers and students were still strongly focused on what they were used to do in their normal writing lessons. There was little attention to the students' writing processes, the kind of texts students were writing, and the communicative functions of the texts. Writing conferences in which students discussed each other's texts were quite superficial or directed to formal issues (spelling and grammar), providing no support for revision of text contents.

The new series of lessons investigated intends to attain the same educational goals as the curriculum 'Learning to write': supporting students writing performance with process-oriented writing instruction with peer response. The redesign is based on the same didactic model and the same stages in writing lessons. In addition, writing conferences in which students discuss each other's texts play an important role in the lessons.

However, two major changes were made. First, to make sure that the lessons were carried out according to the intended principles, concrete and detailed instructions for students were developed. Because the lesson series consisted mainly of student materials (theory, assignments, workbooks and answer books) there was no room for teachers to change lesson contents and to affect the main principles of the approach. In addition, the students' own teachers were not involved in giving the lessons. Instead a team of trained teachers was formed, that followed a strict protocol for the proceedings of the lessons. These

teachers still provided some instruction, such as introducing the lessons, modelling writing conferences, making books with the students in which their texts were published and answering clarification questions from the students.

Second, to provide students with more support for their writing conferences, the global directions for teachers were replaced by student directed instruction aiming at specific genre knowledge (indicators of time and place in narrative and instructive texts). This focus on specific genre knowledge was provided in the planning, formulating and revising stages of the writing lessons. The present study demonstrates strong effects of instruction into writing with peer response and specific genre knowledge on the quality of students' writing. This demonstrates that the purpose of process oriented writing instruction with peer response can be obtained when students are provided with additional instruction in specific genre knowledge. Apparently, the instruction in the lessons has supported students during writing, discussing and revising their texts. Therefore, the lesson series can be regarded as promising for writing instruction with peer response. In addition, the study was conducted in five primary schools in connection with regular classroom practice and the lessons were given in small classes, fitting with the lesson schedule of the schools. Furthermore, they fitted within the normal language curriculum of the students. The results of the logs kept by the trained teachers and the observations of lessons showed that the lessons were carried out in conformity with the plans. Students' participation was evaluated by analysing all students' workbooks. Students' engagement was more than sufficient. From an evaluation of the lessons by the students, probed with a questionnaire about their perceived usefulness, it appears that a large majority of the students in both conditions was positive about the usefulness of the lessons.

However, one factor referring to the scope of this study has to be considered, namely that the lessons were given by external teachers and not by teachers working in their own classes. As a result, the feasibility and effects of the lessons given by teachers working in their own classes on their own schools was not covered in this study. The question whether teachers are able to implement these lessons in their own schools, has to be answered in follow-up studies. Such studies should focus on the knowledge and skills that teachers need to carry out the lessons (and eventually to design new lessons) according to the innovative principles of writing with peer response and specific genre knowledge. Such studies have to provide more insight in the characteristics of curriculum materials that teachers need for innovative writing lessons. In

addition, such studies have to clarify how teacher training can support this type of innovation on a larger scale.

5.3.1 Approaches to curriculum development

As observed before, the curriculum 'Learning to write' can be typified as 'open'. This means that it was a source of ideas for teachers, but did not prescribe specific lesson contents. The basic assumptions of process-oriented writing with peer response were described in the document: attention to the writing process, the use of writing strategies, goal- and audience orientation of the writer, and a focus on the meaning of texts instead of on the formal aspects of texts. Global descriptions of lessons were provided (illustrating the different stages of writing lessons) and suggestions for topics, genres and teaching materials were given. For example, in the instructions for writing conferences about narratives the following general points of attention for reflection were suggested:

Genre: does the text have typical characteristics of a story? Which are and which are not? Content: persons and characters, place and time of action, description of atmosphere, build-up of tension. Style: structure of sentences, narrator's perspective, choice of words, use of imagery. Structure: format of paragraphs, connection between paragraphs, anaphora, variation in length of sentences.

These suggestions obviously presuppose genre- and linguistic knowledge from the teachers to be able to answer the following types of questions. What is a good sentence structure? Which kind of narrative perspectives can be used? How to achieve a good connection between paragraphs?

The implementation problems observed with 'Learning to write' (see chapter 1) showed that this assumption might have been wrong: teachers still used the general notions of traditional writing instruction and did not apply the more communicatively defined criteria in their lessons. Instead, they hardly demonstrated concern for the students' writing processes, used example texts intended to illustrate genre characteristics as if they were exercises in reading comprehension, and focused on the importance of spelling, grammar and handwriting.

'Learning to write' was based on the assumption that global directions for writing with peer response are sufficient for teachers to understand the principles of the intended innovation and translate them into concrete instruction for

students. This assumption can be understood in the context of a more general discussion about characteristics of curriculum materials for educational innovation. This discussion is directed to the question whether innovative curriculum materials should have a more 'open' or a more 'structured' nature. According to McLaughlin (1990) the plea for more open curriculum materials in the 1980s was a reaction on the top-down approach with the so called 'teacher-proof programs' in the 1960s and 1970s. These older programs were seen as central to educational reform and existed of well-structured courses, which were so complete and detailed that they were immune for teachers' interpretation. The intent was to minimize the teacher's influence on curriculum reform by developing a tight relationship among educational objectives, curriculum content and assessment instruments. The curriculum materials were produced by specialized curriculum developers who stood at a large distance from the school (Kridel, 2010). In this context, the educational purposes of the school and the teachers played a minor role in the implementation process in order to achieve high levels of fidelity of curriculum reform.

Research into curriculum development during the 1970s and early 1980s revealed the difficulty in achieving the top-down, teacher proof curriculum packages. Curriculum innovations were invariably transformed between conception and implementation, and the teacher and the school environment appeared to play key roles in the gap between design and practice (Fullan, 2008). According to Kirk and MacDonald (2001), these innovations failed to account for the temporal, social, economic and cultural factors delimiting and steering the possibilities for change in specific contexts. Gravemeijer and Kirschner (2007) bring to the fore that the teacher-proof programs failed to take into account the teachers' role in making decisions and ignored the importance of a sense of ownership and commitment with the innovation for successful implementation. Ball and Cohen (1996) interpret the provision of detailed directions for instruction as in the structured approach as too prescriptive, showing too little respect for the professional knowledge and skills of teachers.

To improve the impact of innovations, curriculum theory began to advocate the central role of teachers in curriculum reform and the need for teachers to 'own' aspects of the changes that were sought. In the 'school-based' approach to curriculum reforms emerging during the 1980s, schools and teachers were located at the centre of curriculum reform efforts. For the advocates of this approach, it represented a democratization of curriculum development, giving the 'real experts', the teachers, control of curriculum

development (Kemmis & McTaggart, 1988). The role of the teacher as professional was emphasized and the focus was on what teachers do in practice, and on increasing the active participation of practitioners in curriculum development (Sawyer, 2004). Curriculum development was seen as a social process in which curriculum developers and teachers have their own vision on the problems to be resolved and on the desirable improvements. Attention to the contributions of all participants is central to the design process, characterized as a process of mutual adaptation (Walker, 1990).

Van den Akker (1988) interpreted the design and development strategy of SLO (the Dutch organization for curriculum development) in the 1980s which was directed to the development of exemplary curricula. He related the orientation of SLO projects in the 1980s to the task view of SLO, which was to develop exemplary materials and to respect legislation guaranteeing schools' freedom of education. According to this policy, curriculum proposals were not elaborated in detail. Materials allowed a flexible use in classroom practice aiming at successful implementation by means of promoting a sense of ownership by the users. Users were expected to be active in adaptations and to develop their own extensions. The curriculum 'Learning to write' in the late 1980s with its 'open' character, has to be understood against the background of these dominant ideas about educational innovation strategy in those years.

5.3.2 The importance of subject matter knowledge for teaching

Ball, Thames and Pelps (2008), following Shulman (1987), point to the importance of subject matter knowledge of teachers in curriculum reform. According to these authors, educational policy as well as educational research and teacher training frequently disregard the role of subject matter knowledge. Curriculum reform is predominantly based on general educational theory and focuses almost exclusively on general aspects of teaching. Teacher competency is merely viewed as mastery of generic teaching behaviours. In contrast, Ball, Thames and Pelps (2008) state that there may be nothing more fundamental to teacher competency than knowing the subject they teach: "Teachers who do not themselves know a subject well are not likely to have the knowledge they need to help students to learn this content" (p. 404). According to Ball, Thames and Pelps (idem) throughout the past 20 years attention in educational research to the role of content knowledge in teaching has increased. They investigated the nature of subject matter knowledge in math teaching. Although their study, in which they try to define the complex concept of subject matter knowledge, is

conducted in the context of mathematics, they assume that a clarification of this concept can contribute to its understanding in different school subjects. We will discuss this concept to illuminate our revision of the 'Learning to write' curriculum, in which specification of subject matter knowledge played an important role.

Shulman (1987) introduced the concept 'pedagogical content knowledge' proposing a special domain of teacher knowledge for bridging content knowledge and the practice of teaching, and for distinguishing content knowledge for teaching from disciplinary content for teaching. The different domains of the concept 'pedagogical content knowledge' as defined by Ball, Thames and Pelps (2008) illustrate that content knowledge for teaching comprises domains that are not defined by the disciplinary content. The following four domains of pedagogical content knowledge are being distinguished:

1. *Common content knowledge*: translated to the content of language teaching, this domain refers to the own language skills and knowledge about language of teachers, that they use not only in teaching but also in other settings. Just as all other language users, teachers have to know the meaning of words or correct spelling of words.
2. *Specialized content knowledge*: this domain refers to the way teachers make features of a particular content visible to and learnable by students. This specialized content knowledge concerns knowledge about language which is unique for teaching and not used in other contexts than teaching. For teaching reading for example, knowledge of the text and the reading process that goes beyond just being able to decode and comprehend the text proficiently is needed. Reading teachers have meta-knowledge about reading (for example how to teach word recognition to beginning readers) and texts (for example how to select texts suited for readers of a certain level); they are aware of the importance of reading strategies and which strategies exist (Hapgood et al., 2005).
3. *Knowledge of content and students*: this domain regards the knowledge that combines knowing about students with knowing about language. Teachers must anticipate what students are likely to think and what they will find confusing. When assigning a writing task in a specific genre for instance, teachers must know whether their students will find it easy or hard to write such texts.
4. *Knowledge of content and teaching*: this type of knowledge combines knowledge about teaching and knowledge about subject matter. It refers to

knowledge of the type of instruction related to a specific domain of the subject matter. For example, reading teachers know how to instruct reading strategies, while writing teachers know how to explain different stages of the writing process (planning, formulating and revision).

These domains of pedagogical content knowledge illustrate the complexity of the teacher's task when instructing students in specific subject matter. A reform aiming to replace traditional writing instruction with communicative writing with peer response, should therefore carefully consider the demands made on teachers' pedagogical content knowledge. In the redesign of the curriculum 'Learning to write' in this study, the pedagogical content knowledge needed for writing with peer response using genre knowledge was made explicit in the student materials. Much pedagogical content knowledge was required to clarify instructions, select good examples of the use of linguistic features and formulate writing assignments with clear goals.

A few examples will illustrate this. '*Common content knowledge*' implies personal knowledge about writing, such as knowledge about one self as a writer, different genres, correct spelling, vocabulary, et cetera. Writing teachers need this type of knowledge about writing when teaching writing. Regarding '*specialized content knowledge*', studies of functional grammar were analysed to select relevant linguistic features for narratives and instructions. In addition, precise definitions had to be given for the types of linguistic features selected. Indicators of time, for instance, is a generic term for several linguistic features: words that express time ('suddenly'), verbs that express time (present tense, past tense), descriptions with more words ('in the beginning') etcetera. The functions of these indicators in the different genres had to be described: in a narrative time related words help the reader to visualize the progression of events over time, in an instruction time related words make clear at what moment or in which sequence the user has to do something. Regarding '*knowledge of content and students*', it had to be estimated whether the concepts taught (e.g. 'time lapse' - flash-back, flash forward) were appropriate for students in the 6th grade. Do they recognize indicators of time when reading texts? Are they able to use time lapses in their own narratives? Regarding '*knowledge of content and teaching*', exemplary texts for the different writing assignments had to be chosen to demonstrate the functions of indicators of time and place in different genres. The texts were analysed to determine whether the text could function as an appropriate example of what had to be demonstrated. In addition, example texts had to be rewritten quite frequently to clarify the role

of the intended linguistic features. Furthermore, functions of indicators of time and place had to be explained in a for students comprehensible way. The development of the curriculum materials made clear how much specialized pedagogical content knowledge was required for this innovative instructional approach to writing instruction.

5.3.3 Empirical studies into the role of subject matter knowledge in curriculum innovation

Several empirical studies have been carried out to define characteristics of materials for successful curriculum implementation (Van den Akker, 1988; Keursten, 1994; Mafumiko, 2006; Ottevanger, 2001). In these studies prototypical curriculum materials were developed and investigated according to a 'design and development approach': a cyclic approach of design, formative evaluation, redesign and evaluation of effects (Van den Akker & Plomp, 1993). This approach assumes that curriculum materials serve as concrete examples and support for teachers in understanding the principles of an innovation, particularly in its initial phase.

Van den Akker (1988) undertook a field experiment investigating the effects of the design of two types of curriculum materials for science (an inquiry approach for upper level primary schools) on implementation by teachers. The use of experimental materials, containing a large amount of procedural specifications with a focus on subject matter and the teachers' role, was compared with the use of 'open' materials, offering no detailed directions for teachers and little specification of subject matter. The procedural specification in the experimental materials consisted of 'how-to-do advices', directed to lesson preparation, subject matter, teaching role, and learning effects. Regarding lesson preparation teachers were supported with time indications, suggestions for task-orientation, lists of instruments and materials, incentives for reflection on potential problems and questions of students, and suggestions for instructional formats. Subject matter was made concrete with factual information, a description of main and side issues, examples of adequate answers to questions of students, and directions for the use of the teaching materials. The teaching role was specified with task instruction, directions for activities during the different stages of the lessons, suggestions for classical discussions, the use of materials. Regarding learning effects, examples of expected effects were provided, as well as suggestions to make these effects visible (by formats and schemes for reporting). Teachers were supposed to

independently prepare and execute the lessons for their own classes. Results showed that lessons taught using the experimental materials were much more in accordance with the intentions of the developers, than the 'open' lesson materials. Teachers in the experimental group oriented themselves much more to the subject matter content and the didactic process of the lessons, and their students spent about 50% more time on task-oriented activities. It is concluded that for initial curriculum innovation efforts, a structured approach with procedural specifications of subject matter and the teachers' role is more effective than an open approach.

In line with this study several follow-up studies were conducted. Keursten (1994), Mafumiko (2006) and Ottevanger (2001) for example conducted field experiments on the influence of procedural specification of subject matter and the teachers' role on implementation fidelity as well. Keursten (1994) investigated the implementation of courseware packages in geography lessons (lower secondary education in The Netherlands), integrating teacher guides (including a video-tape with examples of the intended use of the materials) with students materials (instructional texts and exercises). Two versions of the same package were tested. The experimental version contained a teacher guide with procedural specification integrated with student materials. The control version existed of a teacher guide of a courseware publisher which did not contain this specification. Significant positive effects of the experimental treatment were found: the lessons were more in accordance with the intentions of the curriculum, the teachers were more satisfied with the teacher guide, and students attained better results on the test. However, Keursten remarks that not only teachers in the control group had difficulties in realizing an 'ideal' lesson. Some of the teachers in the experimental group paid insufficient attention to lesson preparation, experienced difficulties with the computer network, and underestimated their role. Keursten concludes that specified teaching materials including student materials can stimulate a successful implementation of courseware, but that materials alone cannot be the whole solution to the problems teachers face. Additional support (e.g. in-service training and coaching) is recommended.

Mafumiko (2006) studied the effects of characteristics of a micro-scale chemistry curriculum with a focus on active learning to promote student scientific reasoning abilities on its implementation in four secondary schools in Tanzania. The experimental curriculum existed of a syllabus with exemplary lessons on particular topics demonstrating micro scale experiments. As in Van

den Akker (1988) the lesson materials included procedural specifications for subject matter, lesson preparation, teaching strategies and visualizing learning effects. Students in the control group studied the same topic through regular teaching methods. Results showed that students of the experimental group performed significantly better in scientific reasoning. Conversely, students taught through regular teaching methods performed significantly better on factual knowledge items. Large differences in interaction between students of the two conditions were found. Students in the experimental condition participated actively in small group experiments, while in the control condition discussions were initiated by the teachers in whole class instruction. Teachers in the experimental group reported positive experiences with the specified coverage of subject matter and understood the essence of the innovative approach.

Ottevanger (2001) studied the effects of procedural specification of an innovative, learner centred curriculum for science education in Namibia. This study dealt with the teaching of 'scientific processes' in the 10th grade. Due to constraints caused by poorly qualified teachers and under-resourced and poorly organized schools after independence of Namibia in 1990, the teacher support materials were embedded in a programme of professional development. The lessons were introduced in in-service training activities with workshops and peer coaching. Results showed that the curriculum materials supported the teachers. They were well prepared for the lessons and their practice showed a large degree of fidelity to the lesson suggestions. Teachers were positive about the information provided on subject matter of the lessons.

The above studies were directed to effects of curricula with procedural specification of lesson preparation, subject matter, teaching strategies, and/or learning effects on implementation. The procedural specification in these studies was not formulated in terms of the three domains of pedagogical content knowledge previously specified. However, the procedural specification of the different components mentioned, appears to cover these domains. 'Specialized content knowledge' for example was provided by the explanation of key subject matter concepts, and by detailed descriptions of what students were expected to learn. 'Knowledge of content and students' was covered by descriptions of expected learning effects (making these effects visible and giving examples of students' questions and answers). Directions for 'knowledge of content and teaching' were supplied by suggestions for teaching strategies: descriptions of task instruction, sequencing of learning activities, organization and topics of small group discussions. The results suggest that supporting teachers with specifications of critical aspects of subject matter has a positive

influence on implementation fidelity and on the attitudes of teachers and students towards the innovation proposals. These studies into the optimization of curriculum innovation indicate that concrete specification of subject matter in curriculum materials leads to much better results than 'open' curriculum materials. Concerns that teacher support materials containing detailed lesson suggestions restrict teachers in their sense of ownership, and in their possibilities for improvising in attuning proposals to their specific situation, appear to be unfounded. Ottevanger (2001) for instance concludes that the curriculum materials offered enough flexibility for experienced teachers who required this, and provided enough support for novice and unqualified teachers to successfully carry out the lessons.

5.3.4 Empirical studies into in-service teacher training

Written curriculum materials cannot be sufficient to realize all the goals of curriculum innovation (Van den Akker, 1988). Ball and Forzani (2009) underlined the complexity of the teachers' work and the educational context in which it takes place. Instruction comprises many tasks and decisions: attending to subject matter and teaching strategies, time management, choosing materials, keeping an eye on students and learning goals, etcetera. Teachers have to do this in an educational context involving parents, administrators, governmental objectives, tests and community priorities. Curriculum innovation should be made less complex by supporting teachers by in-service training in the use of innovative curriculum materials (Ball & Cohen, 1998; Ball & Forzani, 1999; Davis & Krajcik, 2005; Sawyer, 2004). Ball and Cohen (idem) criticized the dominant practice of professional development in which the use and adoption of materials is rarely part of a systematic approach. They observed as well that little is known about the nature of professional development in the context of curriculum innovation.

Grossman and MacDonald (2008) observed that research of teaching has a considerable tradition, but that research of in-service teacher education is a relatively young field. Garet et al., (2001) observed that despite a considerable body of literature about professional development and teacher change (case studies, evaluations of specific approaches, descriptions of best practices), little systematic research has been conducted on the effects of professional development during in-service training on improvements of teaching. The study of Garet et al., (2001) is a large scale study in elementary, middle and high school investigating the effects of professional development in a national training program on teachers' knowledge, skills, and classroom teaching for

science and mathematics. The following high-quality features of professional development were identified in their literature review: knowledge of subject matter, active learning in own practice (e.g. observing and being observed with the help of video feedback), coherence (e.g. with other programs, with former in-service experiences), form (e.g. coaching in school), duration and collective participation (e.g. communication with other teachers). These features were related to teacher's self-reported change. Teacher outcomes were measured by the enhancement of knowledge and skills and changed practice in several areas as curriculum (e.g. texts), instructional methods, and approaches to assessment, use of technology, and strategies for teaching students with special needs. Results revealed that a focus on knowledge of subject matter had the most positive effect on teachers' knowledge and skills, and on teaching practice. Teachers reporting an increase of knowledge and skills reported more improvement in their classroom practice. In addition, results showed that duration and collective participation are important factors in professional development. Sustained and intensive collective participation in professional development is more likely to have a positive impact as reported by teachers than shorter, individual professional development. According to Garet et al. (idem) these results confirm the suggestion of much descriptive studies on professional development that knowledge of subject matter is an important element in changes of teaching practice (e.g. Corcoran, 1995).

The importance of knowledge of subject matter for professional development is underlined in other review studies as well (Resnick, 2005; Schwille, Dembele & Schubert, 2007; Timperley, 2007). A focus on knowledge of subject matter is recommended in designing high quality in-service teacher training. Schildwacht (2012) concludes from a review into professional development in the last decade that teacher's ownership of learning goals, and a focus on stimulating reflective practice, are effective features, next to the characteristics mentioned above.

Harris et al. (2012) investigated the effects of practice-based in-service training on an approach to writing instruction, called 'Self Regulated Strategy Development' (SRSD). This instruction contains specified subject matter knowledge, dealing with explicit interactive learning of strategies for genre specific writing. SRSD-instruction has positive effects on students' writing performance in several intervention studies (Graham, Harris & Mason, 2005). However, just as in the study reported in this thesis, effects of SRSD-instruction were not investigated with teachers carrying out the experimental lessons in their own classrooms.

The purpose of the study of Harris et al. (2012) was to establish whether SRSD-instruction supported by a brief (two days) in-service teacher training had positive effects on students' writing outcomes, implementation fidelity, and on teacher and student judgments of SRSD. Twenty participating teachers were randomly assigned to two conditions. In each condition, instruction was directed at writing in one genre (opinion essay or story) and each condition served as control for the other condition. The intervention with teachers divided in small teams, involved reflection on teachers' current practice, and on examples of students' writing before and after SRSD-instruction. In addition, attention was given to needs of teachers for subject matter knowledge (genre knowledge, characteristics of effective writing, and goals for writing) and to knowledge of SRSD-instruction (instructional notebooks, student materials, video recordings of class-wide instruction, modelling of stages of the lessons, examples of lesson plans). The teachers developed their own lesson plans and received feedback before using these plans in their classrooms. The teachers conducted 24 classroom sessions of SRSD instruction. All sessions were observed. Teachers' perception of the treatment was measured with Intervention Rating Profiles during pre- and post-intervention. Writing performance was measured with story- and essay writing assignments. Students' texts were assessed in terms of quality, length, and inclusion of basic genre elements. Results showed that teacher-implemented SRSD instruction had significant and meaningful effects on writing performance in both groups. Teachers implemented SRSD with fidelity and the treatment was evaluated as highly acceptable by teachers and students. Harris et al. (2012) indicate that teachers are more receptive using an innovative approach when teacher and student materials are intensively used as part of teacher training. They suggest that in-service teacher training, focusing on knowledge of subject matter, is promising for a faithful implementation of innovative, evidence based approaches to writing instruction. The researchers indicate that further studies are needed to establish sustaining positive effects of intensive, but relatively short practice based in-service teacher training.

5.3.5 Empirical studies into pre-service teacher training

The studies mentioned above indicate that in-service training focusing on knowledge of subject matter is supportive for curriculum reform. Below, the role of regular pre-service training is discussed. Pre-service training should play an important role in the development of pedagogical content knowledge.

However, it is observed that the regular practice of teacher training is a bad breeding ground for educational reform (Ball, Thames & Phelps, 2008). Pre-service training in the United States is described as conservative and remote from classroom teaching (Ball & Cohen, 1999; Cohen & Hill, 1997; Grossman & MacDonald, 2008). The same seems to be true for the Netherlands. Although studies of the practice of pre-service teacher training in the field of writing instruction for primary school are scarce, there are a few case studies that support a critical view.

Smits (2009) observes that, in accordance with national policy, school subjects are awarded a marginal status compared to the 1970s. The curriculum in 2005 focuses on the teaching of general pedagogical aspects. Writing instruction as a subject is subordinate to general skills and writing needs to be dealt with only in an exemplary fashion. For example, students write reflection reports of their learning processes, or an account of a teaching practice as tools for learning the profession of primary school teacher. Hardly any time is left for the development of pedagogical content knowledge about writing instruction.

Classroom observations of two teacher trainers in the study of Smits (2009) revealed that students' texts merely serve a reporting and checking purpose. Only fragmentary attention was paid to students' writing performance. Assessment of their texts was mostly directed to spelling and grammar. Writing instruction for the students' themselves was absent, no attention was given to writing instruction in primary school. Smits (2009) concludes that the pedagogical content knowledge for writing in teacher training failed to materialize important innovations in teacher training itself and in teaching practice in primary schools.

Van der Leeuw (2006) investigated whether colleges for teacher training succeeded in instructing their students in constructing their own professional knowledge by writing ('writing to learn'). It is concluded that potential learning functions of writing hardly came to their right due to poor writing assignments. In addition, the communicative function of texts received hardly any attention as teachers did not read and comment on the texts of their students.

Pauw (2007) investigated student skills in writing reflection reports. She analysed students' texts and established that students hardly knew how these kinds of texts need to be written and on what criteria they would be assessed. Pauw (2007) concludes that more attention should be paid to the function of language for learning and to the construction of pedagogical content knowledge in teacher training.

In the curricula of teacher training colleges little attention is given to the development of pedagogical content knowledge for writing instruction in primary school, according to these case studies. Students are supposed to adapt writing assignments to their pupils' level, without much practical knowledge about writing pedagogy. In addition, students own writing ability and knowledge of writing appear to be neglected. More attention in pre-service training to the development of pedagogical content knowledge for writing instruction in primary school seems necessary to contribute to successful implementation of innovative writing curricula. Meanwhile, large-scale survey studies are needed to establish to what degree the above conclusions are generalizable to all institutes for pre-service teacher training and whether there are exceptional cases from which lessons can be learned.

5.4 DIRECTIONS FOR FUTURE RESEARCH

The previous sections provided proposals for future research concerning the replicability and generalizability of the results found. This section will give suggestions for research directed at extending our findings to the enrichment of the writing curriculum in primary and secondary education.

Referring to the discussion about the desirability of an 'open' or a more structured character of curriculum materials, studies into curriculum innovation give support to the main assumption underlying this study: specification of pedagogical content knowledge is fundamental for curriculum development. However, this study did not address the question whether the writing lessons combined with in-service training for teachers leads to successful implementation. From the perspective of professional autonomy, training in the use of lesson materials for writing instruction is very important. Therefore, lesson materials should be accompanied by an in-depth training directed at pedagogical content knowledge to support teachers' professional development. Such training clarifies how pedagogical content knowledge for writing with peer response and specific genre knowledge works in practice. This includes knowledge about writing, linguistic features, type of example texts and genre knowledge appropriate for instruction to students of a certain age. Teachers have to learn to implement lesson series as examples of these main principles of a specific approach to writing instruction by in-service training. In this way teacher training becomes an essential part of curriculum

innovation. Therefore, a follow-up study is recommended into the implementation of lessons by teachers in their own classrooms combined with in-service training directed to the essential principles of this approach. This study can be set in primary school with students of upper primary grades, but also in secondary schools with students of the lower grades.

Harris et al. (2012) demonstrated that the use of lesson series developed by researchers does not necessarily indicate that teachers are exclusively following scripted lesson plans. In their training for practice-based professional development the researchers focused on the critical characteristics of pedagogical content knowledge of SRSD instruction. They left room to the teachers to develop their own lesson plans within this framework. The follow-up study recommended can be designed in line with this approach. This means that teachers participate in professional development in small teams within the same school, working together in learning and implementing the essential principles of writing with peer response and specific genre knowledge. The professional development will be directed to two characteristics of a practice based approach: opportunities for active learning and feedback on performance while learning. Main components of such professional development will be: a strong focus on students' activities in writing lessons demonstrated by example lessons, analyses of examples of student writing, reflection on current practices, and on the essential principles of the lesson series, modelling of writing conferences, making own lesson plans, and supported practice of lessons. During supported practice teachers will be working in small groups practicing the lessons together, taking turns acting as teacher or student(s). During initial use of the materials in the classroom, teachers will be observed and receive feedback on their lessons.

A second recommendation for further research concerns how the curriculum for writing with peer response developed in this study can be used as part of the pre-service teacher training program of teacher training institutes. Innovative approaches emphasizing subject matter knowledge for writing instruction can be used to instruct students during pre-service training, particularly when experimentally proven successful. Awareness of the importance of subject matter knowledge in pre-service training seems to be growing recently. In 2009, a so called 'Foundation of knowledge for language teaching' was published (Van der Leeuw et al., 2009). This document aimed to strengthen the quality of teacher training by providing a survey of subject matter and didactic approaches to language teaching in pre-service teaching

training and in primary schools. In addition, since 2010, schools must attune their language teaching to 'levels of reference' (Expertgroep doorlopende leerlijnen taal en rekenen, 2008). These levels of reference constitute an impulse for attention to subject matter in language education and in curriculum development (Thijs & Van den Akker, 2009). Policies of the government with regard to language teaching in primary and secondary school have moved away from general pedagogical aspects to an emphasis on subject matter knowledge and skills of students. The lessons in the present study are also aiming at these 'levels of reference' because the writing of narrative and instructive texts is part of the main objectives for writing in this document.

A third recommendation for further research regards the integration of writing with peer response with instruction in other domains of the language curriculum. In studies on writing with peer response the integration of various language skills (writing, reading, language awareness, speaking and listening) is often emphasized (Corden, 2007; Rijlaarsdam, 1986; Sims, 2001). Writing conferences positively influence reading ability, because students are supposed to read texts critically with specific purposes: evaluating the texts and giving suggestions for revision. In addition, commenting on texts may facilitate the development of language awareness (e.g. genre knowledge) and metalinguistic knowledge. Furthermore, discussion of texts may stimulate the development of oral language abilities and conversation skills. The results of the present study showed that peer response with additional instruction in genre knowledge is effective for writing proficiency. Follow-up studies may also provide insight in the effectiveness of writing with peer response for the development of these other language skills.

Finally, the integration of writing with peer response and genre knowledge with the curricula of other school subjects is a point of attention. The advantages of the so called 'content based language learning approach' are recognized by many theorists of language education (Christie & Derewianka, 2008; Martin & Rose, 2008; Tynjala, Mason & Lonka, 2001). In the context of other school subjects, writing with peer response and genre knowledge may not only work as a learning tool for acquiring subject matter knowledge about school subjects (history, geography, etcetera), but at the same time as a means for acquiring knowledge of specific genres that are genuinely used in these subjects. For example, when students write reports of a science experiment they acquire specific subject matter knowledge. When they discuss those reports focusing on the characteristics of a science report, they develop their writing

performance and genre knowledge. Further intervention studies into the integration of writing with peer response and genre knowledge in other school subjects are therefore recommended.

5.5 IMPLICATIONS FOR EDUCATIONAL PRACTICE

Writing with peer response and genre knowledge combines several aspects of process-oriented writing instruction providing solutions for problems observed in traditional writing instruction (see chapter 1): writing is no longer seen as a solitary activity, instruction in genre knowledge is integrated in the different stages of the writing process, writing takes place within a communicative context with attention to goal- and audience orientation, texts are read and evaluated by others than the teacher.

Organizing writing conferences in itself is not enough to evoke fruitful discussions of texts. Letting children work together is not sufficient to ensure productive interactions. Peer response has to be accompanied with additional instructional principles. First of all it is advised to organize writing conferences during different stages of the writing process (planning, formulating and revising) and not only during discussion of the first drafts. Students can help each other with content generation, planning the text structure, reflecting on the genre, and on the audience and purpose of the text. During the stage of formulating, they can support each other by posing and answering questions and by discussing alternative formulations (choice of words, sentence construction, rhetorical issues).

Second, it is important that a clear focus of instruction is provided during all stages of the writing process. This study demonstrated that a focus of instruction on specific genre knowledge (indicators of time and place) resulted in students focusing attention on these features during writing conferences, in enriched comments on each other's writing, in substantial revisions – even on other meaning and form related issues- and finally also in much better writing quality. Instruction focusing on specific genre knowledge can be provided during the planning stage by reflecting on its use in example texts, by explaining their functions in different kinds of texts, by demonstrating several linguistic realizations of the target features, and by showing the usage of such features in sentences and paragraphs. Writing assignments should focus on the genre and its function, the genre characteristics and specific linguistic features

to be used. In addition, attention should be paid to the audience and to publication of the texts. Before discussing their texts with peers, students can be asked to evaluate their texts 'from the eyes' of the reader focusing on the linguistic features instructed. Again the focus of instruction provides students concrete points of attention for reflecting on their texts. Evaluations of the students of their own texts can be used as starting points for writing conferences with peers.

Third, it is recommended to support writing conferences with several measures. Students are given rules regulating the interaction in which the focus of instruction is repeated. Such rules define the students' roles and structure their conversation. In addition, students should be encouraged to take notes during the writing conference of the things to be changed. This helps them to focus on the main points of attention and prevents them from getting lost in the complexity of issues for revision. Finally, it is recommended that teachers model writing conferences as expert-models. The rules for interaction and the use of linguistic features are demonstrated in front of the classroom with a few selected students.

Fourth, some practical measures to facilitate the process of commenting on texts and text revision should be taken. Regarding the duration of writing conferences, the experiences in this study revealed that after preparing writing conferences with self-evaluations of texts, about 10 minutes is enough time to keep students at work and to afford sufficient comments for revision. For rewriting texts, the use of computers was very useful for text revision. Students participating in this experiment were facilitated to rewrite and edit their texts by use of word processors. In addition, the publication of texts in attractively designed books to be read by a broader audience seemed very important to support students' writing motivation.

In this study writing with peer response and genre knowledge appeared to be a feasible and effective approach for writing instruction to a sample of (academically heterogeneous) students in 6th grade. Implementation of this type of writing instruction in classroom practice of teachers in other schools seems to be a big challenge. In this intervention study, the first important step has been taken: demonstrating that the approach leads to improved writing proficiency of the students. For a successful distribution of the innovation on a large scale, additional research directed at curriculum innovation in in-service and pre-service training of teachers is needed.

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NEDERLANDSE SAMENVATTING

Schrijven met peer response en instructie in genrekennis; een interventiestudie in de basisschool

Dit proefschrift gaat over leren schrijven met peer response en instructie in genrekennis. We definiëren peer response als een vorm van samenwerking tussen leerlingen (in tweetallen of groepjes) tijdens de verschillende fasen van het schrijfproces. In een interventiestudie is het effect onderzocht van een lessenserie voor het schrijven van verhalen en instructies met peer response en genrekennis op de schrijfvaardigheid van leerlingen uit groep 8 in het primair onderwijs. In hoofdstuk 1, de inleiding op dit onderzoek, worden de achtergronden van deze studie geschetst. In hoofdstuk 2 wordt verslag gedaan van een literatuurstudie naar empirisch onderzoek naar leren schrijven met peer response, die aan het effectonderzoek voorafging. In hoofdstuk 3 en 4 rapporteren we twee deelstudies naar effecten van de lessenserie. In hoofdstuk 5 vatten we de resultaten van de studie samen, reflecteren we op de onderzoeksmethode en beschouwen we de resultaten vanuit het perspectief van leerplanontwikkeling. We besluiten met enkele aanbevelingen voor vervolgonderzoek en voor de praktijk van het schrijfonderwijs. Doel van deze studie is het leveren van een bijdrage aan de ontwikkeling en implementatie van de didactiek van schrijven met peer response.

HOOFDSTUK 1

In hoofdstuk 1 plaatsen we het onderzoek in de context van leerplanontwikkeling voor schrijfvaardigheid met peer response. Voorafgaand aan deze studie werd bij het Nationaal expertisecentrum voor leerplanontwikkeling (SLO) een project uitgevoerd waarin een curriculum voor leren schrijven met peer response ontwikkeld werd. De aanleiding tot leerplanontwikkeling voor schrijfvaardigheid in het basisonderwijs was de constatering dat de schrijfprestaties van leerlingen te wensen overlaten, dat er

in de praktijk van het taalonderwijs te weinig aandacht wordt besteed aan deze complexe taalvaardigheid, en dat leerlingen te weinig procesgerichte instructie krijgen in schrijven. Onderzoek naar de praktijk van het schrijfonderwijs toonde dat deze praktijk als 'traditioneel' getypeerd kan worden: leerlingen krijgen een schrijfoopdracht en worden geacht zonder specifieke instructie in het schrijfproces, teksten te schrijven die door de leerkracht beoordeeld worden. Er is weinig aandacht voor het schrijfproces en voor de communicatieve functie van schrijven: de tekst afstemmen op het beoogde doel en publiek. Onder invloed van een verschuiving van opvattingen over taalonderwijs in de jaren '70 van traditioneel naar communicatief taalonderwijs, waarin taal gezien wordt als een functioneel instrument in communicatieve situaties, is een curriculum voor leren schrijven met peer response ontwikkeld. Het curriculum is gebaseerd op een in de Verenigde Staten ontwikkelde aanpak voor procesgericht schrijfonderwijs, bekend onder de naam 'Writers' Workshop approach'. Kenmerkend voor deze aanpak is dat leerlingen bij het schrijven van teksten verschillende fasen in het schrijfproces (plannen, formuleren, reviseren) doorlopen en via reflectie van henzelf en van medeleerlingen op hun teksten (leerling-commentaar tijdens tekstbesprekingen) hun kennis van teksten en hun schrijfvaardigheid ontwikkelen.

Het curriculum is ontwikkeld en geïmplementeerd volgens een 'praktijknabije' ontwerp- en implementatiestrategie. Kenmerkend hiervoor is dat materialen in nauwe samenwerking met projectscholen, lerarenopleiders, schoolbegeleiders en onderzoekers in de context van de onderwijspraktijk ontwikkeld worden en op basis van gebruikservaringen worden bijgesteld. Het curriculum bevatte materiaal voor docenten (beschrijving van uitgangspunten, een didactisch fasenmodel voor schrijflessen, voorbeeldlessen en suggesties voor de opbouw van het schrijfonderwijs in alle leerjaren) en had het karakter van een ideeënboek. Leerkrachten werden geacht hun schrijfonderwijs op basis van de suggesties in het ideeënboek zelf verder vorm te geven.

Tijdens het ontwikkeltraject werd het gebruik van het curriculum op projectscholen formatief geëvalueerd met casestudies waarin lessen van leerkrachten geobserveerd werden en leerkrachten geïnterviewd werden over hun ervaringen met de lessen. De resultaten van deze studies toonden dat de leerkrachten de doelstellingen van procesgericht, communicatief schrijfonderwijs met peer response ondersteunden en het vernieuwingsvoorstel ervoeren als een oplossing voor de problemen die zij in hun schrijfonderwijs vaststelden: leerlingen zijn weinig gemotiveerd voor schrijven, krijgen te weinig

instructie, en hun teksten worden te eenzijdig beoordeeld op vorm- en verzorgingsaspecten (grammatica, spelling, interpunctie). De resultaten van de lesobservaties toonden echter dat de communicatieve doelstellingen in praktijk een ondergeschikte rol speelden. De leerkrachten organiseerden hun lessen volgens het voorgestelde didactisch fasenmodel voor schrijflessen, maar bleven bij de invulling van de verschillende fasen sterk gefocust op hun routines bij het geven van schrijflessen. Ze besteedden weinig aandacht aan de schrijfprocessen van de leerlingen en de communicatieve functie van teksten (aandacht voor doel- en publiekgerichtheid in verschillende genres) en handhaafden de aandacht voor traditionele inhouden van hun schrijfonderwijs (vorm- en verzorgingsaspecten). Het belangrijkste probleem dat in de schrijflessen geobserveerd werd, had betrekking op de kern van het vernieuwingsvoorstel: het reflecteren op teksten in tekstbesprekingen waarin leerlingen samenwerken met het oog op het reviseren van de teksten (peer response). Leerkrachten bleken sterk vast te houden aan hun routine om teksten klassikaal te bespreken en teksten te evalueren met criteria gericht op de vormgeving (verzorgd handschrift, titel) en verzorging (spelling, interpunctie) van teksten. Eenzelfde oriëntatie op oppervlaktekenmerken van teksten bleek tijdens de besprekingen van teksten door samenwerkende leerlingen: hun commentaar beperkte zich tot algemene evaluatieve opmerkingen ('Ik vind je tekst leuk om te lezen', 'Je zou nog wat meer kunnen schrijven') en aandacht voor formele aspecten ('Je bent hoofdletters vergeten'). De resultaten van de formatieve evaluatie van de uitvoering van het curriculum toonden dat leerkrachten er onvoldoende in slaagden om de uitgangspunten van het vernieuwingsvoorstel in de praktijk te implementeren: leren schrijven door reflectie op het schrijfproces en op kenmerken van teksten die van belang zijn voor het realiseren van de communicatieve functie van teksten.

HOOFDSTUK 2

In dit hoofdstuk rapporteren we een literatuurstudie naar interventiestudies over leren schrijven met peer response. De literatuurstudie werd uitgevoerd om ten behoeve van een herontwerp van het curriculum theoretisch en empirisch onderbouwde aanwijzingen te vinden voor de oplossing van het probleem van oppervlakkig leerlingcommentaar tijdens tekstbesprekingen. Er werden 26 studies verzameld naar leren schrijven met peer response in de leeftijdsgroep

van leerlingen van 6 tot 15 jaar. Deze studies werden geanalyseerd op aspecten van instructie die peer response effectief maken.

Uit meta-studies naar de effectiviteit van instructies voor schrijfvaardigheid komt leren schrijven met peer response als een effectieve aanpak naar voren. Deze studies vergelijken echter diverse aanpakken voor het schrijfonderwijs, waarvan peer response er slechts één is en geven daardoor geen zicht op *wat* peer response effectief maakt. De literatuurstudie moest daarom antwoord geven op deze vraag.

De instructie in de studies over schrijven met peer response werd geanalyseerd vanuit drie theoretische perspectieven. Vanuit een cognitief perspectief op schrijven, waarin schrijven vooral gezien wordt als een probleemoplossing proces, wordt peer response een functie toegekend in het ondersteunen van de individuele schrijver bij het doorlopen van het complexe schrijfproces. Er is vanuit dit perspectief veel aandacht voor instructie in schrijfstrategieën. Vanuit een sociaal-cognitief perspectief wordt daarnaast de sociale functie van peer response benadrukt: reacties van lezers op de tekst dragen bij aan de motivatie voor het schrijven en helpen de schrijver om het schrijfproces te reguleren. Vanuit dit perspectief richt de instructie zich op het reguleren van het interactieproces tussen leerlingen. Vanuit een genreperspectief wordt de kennis die een schrijver moet hebben van de vormen en functies van geschreven taal van belang geacht. Peer response kan leerlingen helpen genrekennis te verwerven en toe te passen en draagt bij aan de ontwikkeling van een metataal die nodig is om over teksten te kunnen praten. Vanuit het genreperspectief is de aandacht gericht op instructie in genrekennis (bijv. tekststructuren, doel- en publiekgerichtheid van verschillende genres).

De resultaten van de literatuurstudie komen overeen met de resultaten van de meta-analyses naar instructie in schrijfvaardigheid: schrijven met peer response lijkt een effectieve didactische aanpak voor het schrijven en reviseren van teksten. Leerlingen die samenwerken bij het schrijven en bespreken van teksten schrijven betere teksten en reviseren hun teksten beter dan leerlingen die alleen werken. Studies rapporteren daarnaast positieve effecten op de attitudes van leerlingen, de motivatie voor het schrijven, het gebruik van metataal, en op de criteria die leerlingen hanteren voor tekstkwaliteit: hun aandacht is minder gericht op oppervlaktekenmerken van teksten (spelling, interpunctie) en meer op de betekenis van teksten. In 24 van de 26 studies werd aanvullende instructie bij schrijven met peer response gegeven. De aandacht voor aanvullende instructie en de resultaten van deze studies lijken het belang ervan te onderstrepen.

Leerlingen die aanvullende instructie krijgen bij het schrijven met peer response schrijven betere teksten dan leerlingen die hun teksten individueel schrijven, met of zonder instructie. In slechts 2 studies werd geen aanvullende instructie bij het schrijven met peer response gegeven. Ook deze studies rapporteren positieve effecten van peer response op het reviseren van teksten.

Bij de positieve effecten van peer response die uit de literatuurstudie naar voren komen, zijn enkele kanttekeningen te plaatsen. Een eerste kanttekening is dat in een groot aantal studies sprake is van zwakke (quasi) experimentele designs of van designs zonder controlegroepen. Daarnaast werd de schrijfvaardigheid van leerlingen in veel studies gemeten met slechts 1 natoets. Deze beperkingen leiden ertoe dat de resultaten niet gegeneraliseerd kunnen worden naar andere leerlingen en taken en maken een causale verklaring van de effecten niet mogelijk. Een tweede kanttekening is dat het effect van peer response met aanvullende instructie niet erg systematisch onderzocht is. De studies zijn divers in hun onderliggende theoretische perspectieven en in een meerderheid van de studies is sprake van multi-componentiële instructie: instructie in schrijfstrategieën, regels voor interactie en genrekennis wordt gecombineerd. Dit maakt het niet goed mogelijk om te bepalen welke instructiecomponent, of welke combinatie van componenten van belang is voor het schrijven met peer response. Naar de rol van instructie in genrekennis zijn alleen casestudies verricht, die het niet mogelijk maken generaliserende uitspraken te doen over de effectiviteit van peer response met aanvullende instructie in genrekennis. Een derde kanttekening is dat in nagenoeg alle onderzoeken instructie met peer response vergeleken wordt met leerlingen die individueel werken. Er zijn geen studies waarin peer response met instructie in één component vergeleken wordt met peer response en instructie in een andere component. Ten slotte worden in het verrichte onderzoek problemen van het werken met peer response gerapporteerd die ook tijdens de formatieve evaluatie van het curriculum naar voren kwamen. Zo lijken leerlingen reviseren eerder als een doel op zich te zien, dan als een middel om hun teksten te verbeteren. Ze zijn meer gericht op zichzelf als schrijver dan op de lezer en hanteren soms dubieuze criteria voor genres ('een goed verhaal is een verhaal met heel veel personen'). Daarnaast geven ze vaak algemeen en oppervlakkig commentaar op teksten, en zijn ze tijdens tekstbesprekingen meer gericht op het beoordelen van de tekst dan op het geven van suggesties voor revisie.

Deze observaties lijken het belang van aanvullende instructie bij het schrijven met peer response te onderstrepen. Op basis van de literatuurstudie en de formatieve evaluatie in de exploratieve fase van het project, werd een herontwerp van het curriculum 'Schrijven leren' gemaakt. Het herontwerp bestaat uit een lessenserie van twaalf lessen (1 uur per les) voor 2 genres (6 lessen voor verhalen en 6 lessen voor instructies). De lessenserie is vervolgens in een interventiestudie op effect beproefd.

HOOFDSTUK 3

In dit hoofdstuk beschrijven we een experimentele studie waarin de effecten van peer response met aanvullende instructie in genrekennis onderzocht zijn bij 141 leerlingen uit groep 8 van het primair onderwijs. De literatuurstudie toonde dat er geen experimenteel onderzoek is waaruit het afzonderlijke effect van instructie in genrekennis kan worden afgeleid. Dergelijke instructie kan leerlingen hulp bieden bij het plannen, formuleren, bespreken en reviseren van teksten omdat ze concrete aandachtspunten aangereikt krijgen voor reflectie op hun tekst, waarop ze zich tijdens de verschillende fasen van het schrijfproces kunnen richten. Mogelijk biedt instructie in genrekennis een oplossing voor het gesignaleerde probleem dat leerlingcommentaar te algemeen en te oppervlakkig is om een bijdrage te leveren aan het ontwikkelen van schrijfvaardigheid. Studies waarin peer response met aanvullende instructie in genrekennis onderzocht is, gebruikten echter genrekennis van een tamelijk globale aard (bijv. tekststructuren, doel- en publiekgerichtheid van genres). De veronderstelling in deze studie is dat instructie in het gebruik van meer specifieke genrekennis (zoals kennis van linguïstische middelen om bepaalde effecten te bereiken) leerlingen meer concrete handvatten verschaft om de aandacht tijdens het plannen, schrijven, bespreken en reviseren van teksten op te richten. Het gebruik van specifieke talige middelen verschaft concrete criteria voor het reflecteren op teksten tijdens het schrijven en tijdens de tekstbesprekingen, en voor het reviseren van teksten op basis van het commentaar van lezers.

In deze studie is het effect van twee typen (additionele) instructie in genrekennis onderzocht: instructie in peer response met specifieke genrekennis (SGK; het gebruik van indicatoren voor tijd en plaats en hun functie in verschillende genres) en instructie in peer response met genrekennis van een meer globale aard, aangeduid als 'algemene aspecten van communicatief

schrijven' (AACCS; het algemene doel van verschillende genres, doel- en publiekgerichtheid in verschillende genres). Er worden twee genres onderwezen: verhalende en instructieve teksten. De schrijfprestaties van de twee experimentele condities (conditie-SGK en conditie-AACCS) werden vergeleken met de schrijfprestaties van een controle-conditie die taalonderwijs volgde bij de eigen leerkracht. Leerlingen werden klasgewijs a-select toegewezen aan elk van de drie condities en de drie groepen kregen les in afzonderlijke lokalen. Om een getrouwe uitvoering van de essentiële onderdelen van de lessen te bevorderen werd instructiemateriaal voor zelfstandig gebruik door leerlingen ontwikkeld (instructieboekjes, werkboekjes en antwoordboekjes)⁷. De lessen werden gegeven op reguliere basisscholen, binnen de gewone lesroosters en aan leerlingen van bestaande klassen, verdeeld over verschillende condities. De lessen voor de experimentele condities werden gegeven door getrainde leerkrachten.

De schrijfvaardigheid van de leerlingen werd beoordeeld met een score voor globale tekstkwaliteit op vier natoetsen (2 verhalende en 2 instructieve teksten). Verondersteld werd dat de leerlingen uit de conditie-SGK beter scoren op globale tekstkwaliteit dan de leerlingen uit beide andere condities.

Om zicht te krijgen op het gebruik van de aangeboden genrekennis door leerlingen tijdens tekstbesprekingen werden tevens video-opnames gemaakt. Deze videoregistraties (60 in totaal) werden geanalyseerd op de tijd die de leerlingen uit de experimentele groepen besteedden aan verschillende aspecten van de tekstbesprekingen: specifieke genrekennis (indicatoren van tijd en plaats), globale inhoud van de tekst (onderwerp, tekststructuur, doel- en publiekgerichtheid, begrijpelijkheid, titel), vorm van de tekst (grammatica, spelling, lay-out), samenwerking (rolverdeling, beschikbare tijd e.d.), en niet-taakgerichtheid (leerlingen zijn bezig met iets anders dan met de opdracht).

De veronderstelling dat de conditie-SGK effectiever is dan beide andere condities is bevestigd. De leerlingen uit deze conditie schrijven significant veel betere teksten dan de leerlingen uit zowel de AACCS-conditie als die uit de controle-conditie. Er werden geen verschillen gevonden tussen de AACCS-conditie en de controle-conditie. De resultaten van de analyse van de video-opnames toonden dat leerlingen uit de SGK-conditie veel meer tijd besteedden aan indicatoren van tijd en plaats dan de leerlingen van de AACCS-conditie. Instructie in peer response met specifieke genrekennis richt dus de aandacht

⁷ Het lesmateriaal is in te zien op <http://www.slo.nl/primair/leergebieden/ned/peerresponse>.

van de leerlingen tijdens tekstbesprekingen op belangrijke aspecten van tekstkwaliteit. Daarmee is aannemelijk dat de instructie in het gebruik van specifieke linguïstische middelen ook (mede) heeft geleid tot de geconstateerde betere schrijfprestaties.

HOOFDSTUK 4

In het vierde hoofdstuk rapporteren we een nadere analyse van de onderzoeksdata. Deze analyse was gericht op het beantwoorden van de volgende onderzoeksvragen:

1. Welke relatie is er tussen het gebruik van functionele indicatoren van tijd en plaats en globale tekstkwaliteit?
2. Gebruiken leerlingen in de SGK-conditie meer functionele indicatoren van tijd en plaats in hun teksten, dan leerlingen in de AACS-conditie en leerlingen in de controle-conditie?
3. Maken leerlingen in de SGK-conditie meer functionele revisies (zowel bij indicatoren van tijd en plaats, als bij andere betekenisgerichte en vormelijke aspecten) dan leerlingen in de AACS- en controle-conditie?

Met betrekking tot de eerste vraag is de achterliggende kwestie dat uit veel studies blijkt dat teksten van jonge schrijvers weinig samenhangend zijn. Leerlingen verzuimen vaak om zaken expliciet te benoemen, en gebruiken vage verwijswaarden ('dit', 'het' 'daar'). In verhalende teksten is het onderwerp meestal de enige referentie voor het geven van informatie, wat ertoe leidt dat zinnen wel samenhangen met het onderwerp, maar niet met elkaar. Bovendien laten jonge schrijvers de vertelde tijd in een verhaal vaak overeenkomen met het tijdsverloop in werkelijkheid, waardoor ze geen gebruik maken van diverse tijdsindicatoren om samenhang te creëren. Het continue gebruik van 'en toen' is daar een voorbeeld van.

In onderzoek naar de ontwikkeling van schrijfvaardigheid van jonge schrijvers wordt het gebrek aan samenhang in hun teksten gerelateerd aan het hanteren van een 'knowledge telling' schrijfstrategie (Bereiter & Scardamalia, 1987). De kinderen zijn vooral bezig met stofvinding en schrijven op wat in hen opkomt zonder planning of revisie. Dit komt de retorische kwaliteit en de samenhang van hun teksten niet ten goede. Ze hebben bovendien weinig aandacht voor de manier waarop de betekenis van teksten tot stand komt door gebruik van linguïstische middelen die voor verschillende genres geëigend zijn.

De veronderstelling bij de eerste onderzoeksvraag is dat een functioneel gebruik van indicatoren voor tijd en plaats in teksten een positieve bijdrage levert aan de coherentie van teksten. De resultaten van deze analyse bevestigen deze veronderstelling. Het aantal functionele indicatoren voor tijd en plaats correleert positief met de beoordeelde tekstkwaliteit. Het gebruik van deze indicatoren lijkt belangrijk voor het realiseren van een goede samenhang in teksten. De veronderstelling met betrekking tot vragen 2 en 3 was dat instructie in peer response met specifieke genrekennis leidt tot het gebruik van meer functionele indicatoren van tijd en plaats in teksten en tot meer revisies van dit type indicatoren. Bovendien was het de vraag of aandacht voor deze genrespecifieke indicatoren ook leidde tot meer en andere vormen van revisie, die wellicht ook de tekstkwaliteit bevorderen.

Onderzoek naar reviseervaardigheden toont dat reviseren voor jonge kinderen niet eenvoudig is: ze vinden het moeilijk om vanuit het perspectief van de lezer naar hun teksten te kijken en onduidelijkheden in de tekst te identificeren, zijn sterk gericht op oppervlaktekenmerken van teksten (spelling, interpunctie), en wanneer zij revisies aanbrengen blijken die vaak van weinig betekenis voor de verbetering van de kwaliteit van de tekst. Om die reden is het van belang meer precieze informatie te krijgen over de effecten van de conditie SGK op de revisies van de leerlingen. Ter beantwoording van de tweede onderzoeksvraag werden effecten gemeten met een analytische codering van het aantal gebruikte indicatoren voor tijd en plaats in de teksten van de leerlingen. Om de derde onderzoeksvraag te beantwoorden werden de revisies die de leerlingen in hun tweede tekstversies aanbrachten gecodeerd.

Er bleken sterke effecten te zijn van conditie op het aantal functioneel gebruikte indicatoren van tijd en plaats in de teksten die de leerlingen schreven en op het aantal revisies gericht op deze indicatoren. De leerlingen uit de SGK-conditie gebruikten meer functionele aanduidingen van tijd en plaats in hun teksten dan leerlingen uit de AACS-conditie. Bovendien reviseerden de leerlingen uit de SGK-conditie veel meer indicatoren voor tijd en plaats dan de andere leerlingen. Tenslotte brachten de SGK-leerlingen ook veel meer andere betekenis- en vormrevisies aan. Kennelijk leidde de aandacht voor aanduidingen van tijd en plaats bij deze leerlingen niet af van andere aspecten die voor revisie in aanmerking komen. Het tegendeel blijkt het geval: ook die andere aspecten werden veel vaker onderwerp van revisie bij de SGK-leerlingen. Dit wijst op een meer algemeen bewustzijn van het belang van linguïstische elementen als neveneffect van de instructie in indicatoren voor tijd

en plaats. Tussen de conditie-AACS en de controle-conditie werden geen verschillen gevonden. De resultaten van de hoofdstukken 3 en 4 tezamen rechtvaardigen de conclusie dat instructie in het gebruik van specifieke genrekennis leerlingen uit groep 8 op diverse manieren helpt betere teksten te schrijven dan leerlingen die instructie krijgen in meer algemene kennis over verhalende en instructieve teksten. Als additionele instructie voor het schrijven met peer response is specifieke genrekennis dus kennelijk veel beter geschikt.

HOOFDSTUK 5

Het slothoofdstuk bevat een samenvatting van de resultaten van het onderzoek en een reflectie op de reikwijdte van het onderzoek. Daarnaast worden de resultaten beschouwd vanuit het perspectief van leerplanontwikkeling en worden aanbevelingen gedaan voor vervolgonderzoek en voor de onderwijspraktijk.

In deze studie zijn grote effecten van schrijven met peer response en specifieke genrekennis op de schrijfprestaties van leerlingen in groep 8 gevonden. Echter, de resultaten zijn niet direct generaliseerbaar naar jongere leerlingen of oudere leerlingen. Ook zijn de resultaten niet direct generaliseerbaar naar leerlingen met leerproblemen. Eenzelfde beperking geldt voor de generaliseerbaarheid van de resultaten naar andere dan de onderzochte genres (verhalen en instructies) en de typische kenmerken van deze genres. Vervolgonderzoek zal meer inzicht moeten geven in de effectiviteit bij zulke andere doelgroepen en genres.

Ook replicatiestudies ter controle van de validiteit en betrouwbaarheid van de resultaten van deze studie zijn van belang. Replicatiestudies met andere schrijfonderwerpen en taken met andere formats (bijvoorbeeld zonder het gebruik van voorbeeldteksten) kunnen uitwijzen of dezelfde effecten gevonden worden. In deze studie werden de teksten beoordeeld door twee beoordelaars: de onderzoekster en een van de getrainde leerkrachten. Replicatieonderzoek met andere beoordelaars is nuttig om vast te stellen of de resultaten hetzelfde zijn. Onderzoek naar de effecten op langere termijn is eveneens gewenst. Deze effecten werden in deze studie niet onderzocht.

Het doel van deze studie was het beproeven van het effect van een herontwerp van een curriculum voor leren schrijven met peer response. Vanwege de interpretatieproblemen die zich manifesteerden tijdens de

formatieve evaluatie van de implementatie van het oorspronkelijke 'open' curriculum, werd het herontwerp aangepast. Er werd lesmateriaal voor leerlingen ontwikkeld (in plaats van uitsluitend instructies voor de leerkracht). De gedachte achter het ontwikkelen van lesmateriaal was dat dit leerkrachten niet alleen meer houvast zou bieden bij het uitvoeren van de lessen tijdens het experiment, maar ook bij toekomstige implementatie op grotere schaal. Bovendien werd additionele instructie in specifieke genrekennis centraal gesteld in het lesmateriaal, terwijl dat in het oorspronkelijke curriculum geheel afwezig was. De aanname achter de uitwerking van peer response met aanvullende instructie in specifieke genrekennis (SGK) was dat dit leerlingen meer steun biedt bij het schrijven, bij tekstbesprekingen en bij het reviseren van teksten dan peer response waarbij alleen algemene aspecten van communicatief schrijven (AACCS) benadrukt worden. De vraag of leerkrachten de lessen met het gewenste resultaat in hun eigen praktijk kunnen uitvoeren is echter nog niet beantwoord. Vervolgonderzoek gericht op de kennis en vaardigheden waarover leerkrachten moeten beschikken om de lessen getrouw aan de basisprincipes te implementeren, is daarom gewenst.

Het oorspronkelijke curriculum kan getypeerd worden als een 'open' curriculum. Het bood veel interpretatievrijheid en was gebaseerd op het idee dat instructie in peer response met algemene aspecten van communicatief schrijven leerkrachten en leerlingen genoeg steun zou bieden voor de uitvoering van lessen. In onderzoek naar curriculuminnovatie wordt de laatste decennia het belang van professionalisering van de leerkracht, met name op het gebied van kennis van de vakinhoud, sterk naar voren gebracht. Centraal in de pleidooien voor een sterkere gerichtheid op de vakinhoud in plaats van op algemeen onderwijskundige kennis, staat het begrip 'pedagogical content knowledge'. Het begrip verwijst naar verschillende domeinen van kennis van de vakinhoud waar leerkrachten over zouden moeten beschikken: algemene vakkennis, specifieke vakkennis op meta-niveau, vakkennis afgestemd op leerlingen, en vakkennis gericht op hoe kennis- en/of vaardigheden onderwezen kunnen worden. Hoewel kenmerken van curriculummaterialen, zoals specificatie van de vakinhoud, kunnen bijdragen aan een getrouwe implementatie van vernieuwingsvoorstellen, is ook duidelijk dat leerplanontwikkeling gepaard zou moeten gaan met scholing van leerkrachten. Reguliere lerarenopleidingen en nascholing zouden een faciliterende rol kunnen spelen bij het implementeren van vakinhoudelijke vernieuwingen. Een belangrijke aanbeveling voor vervolgonderzoek betreft het uitvoeren van

onderzoek naar de implementatie van het lesmateriaal door leerkrachten, waarbij implementatie samen gaat met scholing van leerkrachten.

Voor de onderwijspraktijk lijken een aantal didactische maatregelen van belang om schrijven met peer response te optimaliseren. Om zinvolle tekstbesprekingen te entameren is aanvullende instructie in specifieke genrekennis gewenst, omdat dit leerlingen concrete aandachtspunten levert voor het schrijven en reviseren van hun teksten. Peer response met specifieke genrekennis zou niet alleen ingezet moeten worden tijdens besprekingen van eerste tekstversies. Leerlingen kunnen ook samenwerken bij het plannen (stofvinding, reflectie op genre, doel, publiek) en tijdens het schrijven (elkaars vragen beantwoorden, revisie tijdens het schrijven). Een heldere formulering van de schrijfpdracht is van belang zodat leerlingen weten wat er van hen verwacht wordt. Het publiek, de tekstsoort, tekstkenmerken, en linguïstische kenmerken (bijvoorbeeld indicatoren van tijd en plaats) waarmee de beoogde functie van de tekst gerealiseerd kan worden, moeten genoemd worden.

De resultaten van deze studie suggereren dat schrijven met peer response en specifieke genrekennis een veelbelovende aanpak is voor de verbetering van het schrijfonderwijs. Het ondersteunen van een grootschaliger implementatie van deze aanpak in de onderwijspraktijk lijkt de belangrijkste uitdaging voor verder ontwikkel- en implementatieonderzoek.

APPENDICES

Appendix 1

Characteristics of the studies included

(Chapter 2)

Appendix 2

Focus of instruction in intervention studies on writing with peer response

(Chapter 2)

Appendix 3

Analysing a sample text: the use of indicators of time

(Chapter 3 and 4)

Appendix 4

An example of a writing and revision assignment

(Chapter 3 and 4)

Appendix 5

An example of a students' text and the positive and negative qualifications used for scoring

(Chapter 3 and 4)

Appendix 6

Fragments of a students' text and a protocol of a writing conference about these fragments

(Chapter 3)

APPENDIX 1

Characteristics of studies included (chronologically ordered)

Reference	Genre	Experimental design	Stage of writing proces	Age	N	Duration	Lessons	Students	Results
Olson (1990)	Narratives	3 experimental conditions 1 control group	Planning, formulating, discussion first draft, revision	11-12	93	18 weeks	6	Full range	Peer response with revision instruction has a positive effect on writing performance
Englert et al. (1991)	Expository texts	1 experimental condition 1 control group	Planning	10-11	183	28 weeks	8	Regular + LD	CSIW instruction with peer response has positive effects on writing performance, transfer and metacognitive knowledge
Mac Arthur et al. (1991a)	Narratives	1 experimental condition 1 control group	Discussion first draft, revision	9-12	29	6-8 weeks	7	LD	Peer response has positive influence on text quality, the number and quality of revisions, and the development of metacognitive knowledge
Englert et al. (1992)	Expository texts	1 experimental condition 1 control group	Planning, discussion first draft	10-11	63	24 weeks	?	Regular + LD	CSIW instruction with peer response has a positive influence on writing performance, metacognitive knowledge and use of metalanguage. Positive relationship between metacognitive knowledge and writing performance
Prater & Bermudez (1992)	Narratives Essays	1 experimental condition 1 control group	Planning, discussion first draft	9-10	46	3 weeks	3	LEP	Peer response has positive effects on text length and number of content elements
Daiute & Dalton (1993)	Narratives	1 experimental condition	Planning, formulating	8-9	14	12 weeks	7-9	LA	Peer response has positive influence on the use of story elements
Stoddard & Mac Arthur (1993)	Narratives	1 experimental condition	Discussion first draft, revision	12-13 14-15	6	?	12	LD	Peer response with revision instruction has positive effect on revisions and text quality.
Zammuner (1995)	Narratives	3 experimental conditions	Formulating, revision	9-10	34	6 weeks	2	Full range	Peer response has positive influence on revision of texts on local and global text level

Reference	Genre	Experimental design	Stage of writing proces	Age	N	Duration	Lessons	Students	Results
Goldberg et al. (1996)	Expressive, informative, persuasive texts	3 experimental conditions	Discussion first draft	8-9 10-11 13-14	117	?	3	Full range	Peer response has little influence on number and quality of revisions
Toth (1997)	Narratives	1 experimental condition 1 control group	Planning, formulating	6, 12	72	6 weeks	?	Full range	Peer response has positive influence on writing performance
Sutherland & Topping (1999)	Narratives	1 experimental condition 1control group	Planning, formulating, discussion first draft, revision	8	64	8 weeks	16	Full range	Paired Writing has positive influence on writing performance of different ability pairs
Chinn et al. (2000)	Report experi-ment	2 experimental conditions	Discussion first draft	10-11	100	?	5	Full range	Discussing texts with a comparison strategy has positive influence on peer discussions and text quality
Nixon & Topping (2001)	Narratives	1 experimental condition 1control group	Planning, formulating , discussion first draft, revision	6, 11	20	6 weeks	11	Full range	Paired Writing has positive influence on writitng performance of both tutors and tutee's
Yarrow & Topping (2001)	Narratives	1 experimental condition 1 control group	Planning, formulating, discussion first draft, revision	10-11, 11-12	28	6 weeks	14	Full range	Paired writing has positive influence on writing performance
Kos & Maslowski (2001)	Narratives	Case study	Planning, formulating, discussion first draft	7-8	15	8 weeks	16	Full range	Peer response has positive influence on perceptions of students of good writing. Peer response has positive effect on generating ideas during planning
Sims (2001)	Journals	Case study	Formulating, discussion first draft, revising	9-11	16	16 weeks	?	LA	Peer response has a positive influence on writing fluency on text quality
Corden (2002)	Narratives	Case study	Discussion first draft	9-12	60	28 weeks	?	Full range	Peer response has positive influence on text quality, metacognition, use of meta-language and self-esteem
Mullen (2003)	Narratives	1 experimental condition	Revising	11	23	6 weeks		Full range	Peer response has positive influence on number and quality of revisions
Peterson (2003)	Narratives	1 experimental condition	Planning, formulating, discussion first draft	14-15	4	13 weeks	10	Full range	Peer response has positive influence on revision on word-, sentence- and structural text level
Rouiller (2004)	Narratives	2 experimental conditions	Planning, revision	11-12	15	?	?	Full range	Peer response has positive effect on number and quality of revisions
Medcalf et al. (2004)	Narratives	1 experimental condition	Planning, formulating, discussion first draft	6, 10-11	17	10 weeks	6	Full range	Peer response has positive influence on text quality of tutors and tutees. Tutees profit the

Reference	Genre	Experimental design	Stage of writing proces	Age	N	Duration	Lessons	Students	Results
		1 control group							most of peer response
Boscolo & Ascorti (2004)	Narratives	1 experimental condition 1 control group	Discussion first draft, revision	9-10, 11-12, 13-14	122	12 weeks	?	Full range	Peer response has positive influence on writing performance, and identification of unclarities in others' texts
Graham, Harris & Mason (2005)	Narratives Essays	2 experimental conditions 1 control group	Planning	8-9	73	20 weeks	5	Struggling writers	SRSD instruction with peer response has positive influence on transfer of metacognitive knowledge when writing other genres
Ferguson-Patrick (2007)	Narratives	1 experimental condition	Planning, formulating	6-7	12	24 weeks	14	Full range	Peer response has positive influence on writing productivity Mixed ability pairs recorded the most progress
Corden (2007)	Narratives	Case study	Discussion first draft	7-11	96	40 weeks	?	Full range	Peer response has positive influence on text quality and use of meta language
Duran & Monerero (2008)	Narratives	2 experimental conditions	Planning, formulating, discussion first draft, revision	14	24	?	2	Full range	Peer response has positive influence on writing performance, and the self- concepts of tutors

Note: Full range = full range of writers found in typical classrooms; LD = students with Learning Disability; LEP = Limited English Proficient students; LA = Low Achieving writers who were not LD; Struggling writers = identified as at risk writers on the basis of a test of written language

APPENDIX 2

Focus of instruction in intervention studies on writing with peer response

Intervention studies Author, date	General instruction			Planning			Formulating			Discussion 1 st draft			Revision		
	Strat	Interact	Genre	Strat	Interact	Genre	Strat	Interact	Genre	Strat	Interact	Genre	Strat	Interact	Genre
1. Olson (1990)	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. MacArthur et al. (1991)	+	-	-	-	-	-	-	-	-	+	+	-	-	-	-
3. Englert et al. (1991)	+	?	+	+	?	+	-	-	-	?	?	?	-	-	-
4. Englert et. al. (1992)	+	?	+	+	?	+	-	-	-	+	+	+	-	-	-
5. Prater& Bermudez (1992)	-	+	-	-	+	-	-	-	-	-	+	-	-	+	-
6. Daiute & Dalton (1993)	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
7. Stoddard & MacArthur, (1993)	+	+	-	-	-	-	-	-	-	+	+	-	+	+	-
8. Zammuner (1995)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9. Goldberg et al. (1996)	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-
10. Toth (1997)	+	+	+	-	+	-	-	+	-	-	+	-	-	-	-
11.Sutherland & Topping (1999)	-	+	-	-	+	-	-	+	-	-	+	-	-	+	-
12. Chinn et al. (2000)	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-
13. Kos & Maslowski (2001)	+	+	+	+	-	+	+	-	+	-	+	+	-	-	-
14. Nixon & Topping (2001)	-	+	-	-	+	-	-	+	-	-	+	-	-	+	-
15. Sims (2001)	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-
16. Yarrow & Topping (2001)	-	+	-	-	+	-	-	+	-	-	+	-	-	+	-
17. Corden (2002)	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-

Intervention studies Author, date	General instruction			Planning			Formulating			Discussion 1 st draft			Revision		
	<i>Strat</i>	<i>Interact</i>	<i>Genre</i>	<i>Strat</i>	<i>Interact</i>	<i>Genre</i>	<i>Strat</i>	<i>Interact</i>	<i>Genre</i>	<i>Strat</i>	<i>Interact</i>	<i>Genre</i>	<i>Strat</i>	<i>Interact</i>	<i>Genre</i>
18. Mullen (2003)	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-
19. Peterson (2003)	-	+	+	-	-	-	-	-	-	-	+	+	-	-	-
20. Boscolo & Ascorti (2004)	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-
21. Medcalf et al (2004)	-	+	-	-	+	-	-	+	-	-	+	-	-	-	-
22. Rouiller (2004)	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
23. Graham et al. (2005)	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
24. Corden (2007)	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-
25. Ferguson & Patrick (2007)	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
26. Duran & Monereo (2008)	-	+	-	-	+	-	-	+	-	-	+	-	-	+	-

Note: Strat = strategy-instruction; Interact = interaction-instruction; Genre = genre-instruction ; + = focus of instruction is present; - = focus of instruction is not present; ? = focus of instruction is unclear.

APPENDIX 3

Analysing a sample text: the use of indicators of time

The secret shack

At eight o'clock Rosa arrives on her bike. Suddenly she sees Sacha and Lidwien waiting at the bushes next to the playground, as they had agreed. Once the playground had been their meeting point. In the time they attended primary school they had a club (...).

- **Read the explanation about the story you just read:**

The writer uses words indicating when something happens. We call this *indicators of time*. Sometimes the writer uses **one word** (for instance: *once*). Other times the writer indicates time using **more words** (for instance: *In the time they attended primary school (...)*).

Even the **tense of verbs** shows if something happens at present (for instance: *sees*) or in the past (for instance: *had agreed*).

APPENDIX 4

Example of a writing and revision assignment

Part 1 Writing assignment: a story about a person

- Read the following text:

In this piece Roald Dahl describes his remembrances of the saleswoman he bought sweets from when he was at primary school:

The candy store of Mrs. Patchett was on the corner of the street next to our school. For us it was what a pub is for a drunk. From our class, we could clearly see who went inside. After school, we went there ourselves. There was one big drawback to that shop: Patchett was a horror. She was a skinny little old bag with a moustache on her upper lip and a mouth as sour as a green gooseberry. Near her nose was a mole, with a hair growing out. She never smiled when she stood behind her wooden counter. The most horrible was her filthiness. Her apron which came down from her hips, was grubby and dirty. Remains of her breakfast clung to her blouse. Her hands were the worst; they looked like those of a coalman. With these hands she grabbed in the jars with candy when we asked for liquorice.

- Make the following writing assignment (15 minutes):

Write a story about someone in the time that you attended primary school and who made a big impression. Make your text vivid by precise descriptions of the place and the changing of places. You may exaggerate a little to make your story funny. Write your text in about 150 words (as in the example text).

Part 2 Revision assignment: improvement of your personal story

- Make the following assignment (10 minutes):

Read your story well as if you read it *for the first time*. Check whether your text is funny and intelligible for the reader who does not know who you are describing. Did you clarify for the readers *what* you mean exactly and *where* things are happening? Take also care that your text is carefully edited. Put lines in the text at places you are not contented with. Then you know exactly where you want to change something.

So take care that your text becomes as good as possible. Think of the price to win in the reading competition! You can also put your text in the book we are making, called "Memories about primary school". Next years' sixth graders will love to read it.

APPENDIX 5

An example of a students' text and the positive and negative qualities used for scoring

Score 50

TARIK RUEL

Tarik is a boy whom I see often. Plays outside often. And he is a very smart boy. But he frequently shows off. He does so particularly at school. He is pretty tall, has black hair and can play soccer well. I think it is strange of him that he does not stand up for himself very often. His best friend is his father. He has a little brother. He himself admits himself that he is bad in everything except SOCCER. His favourite subject is MATH. Has small feet. Big hands, and can hear well. Makes jokes during gym often. Is a cute boy to talk with to play with and a lot more. His pupils are black (so black eyes for who don't understand) He often laughs about nearly all jokes. Bijna is his friend im pressed the teachers already in the first grade. Have been to camp with him.

Positive:

- Genre: it is a story (behaviour and characteristics of the person are being described)
- Content: the setting is primary school, description makes clear what impression the person made
- Language use: relatively careful (punctuation, few spelling errors)

Negative:

- Structure: unclear because of chaotic switches between the description of characteristics; no coherent image of the person; structure is enumerative instead of narrative
- Content: no precise descriptions of place and change of places, few details
- Language use: several incomplete sentences, the sentence "Bijna (...)" is not intelligible
- Caricature: not really

Score: Genre +, Content +/-, Structure -, Language +/-, Caricature -

APPENDIX 6

Fragments of a students' text and a protocol of a writing conference about these fragments

1. Students' text 'Ginny and the first grade'

Fragment 1

"1...2...3!! We are going to start now", teacher Lars shouts.

Ginny has to do a solo in the musical. Actually she doesn't have the nerves, but everyone says she can sing so well. **That's why she thought 'why not' so now she does a solo for the whole school and her parents of course.** She starts to sing (.....).

Fragment 2

"Well done!" Samira says. "I wish I could sing so well".

"Thanks" Ginny says. She takes a sip of water.

She thinks that after the musical she only has a few more weeks left and then it's over with the old familiar primary school.

They used to play tag and hide-and-seek. And you went around the classes on your birthday.... they won't do that anymore either.

"**Hey, I asked you to move from my bag!**". Ginny looked into Mitch's eyes.

"Oh yes. Sorry".

2. Protocol of a writing conference

Student	Protocol
Peer	<p>(Students read principle 5 for writing conference: "give tips for improving the description of time")</p> <p>.....tips, well you might add some more flash-backs..back in time and... perhaps something about time in it, for instance in the past, or now and then. (about fragment 1) And...with the... musical for instance that eh the whole school and her parents could see her that she.... sang, but that for instance you... could also grade one...that for instance you... could have said grade one, grade two, or something. Or just grade one to grade eight. Instead of...'the whole school', that could also be. And...for instance while eh, (about fragment 2) while... dreaming away, he was eh, he was sitting on the bag. That you added that in the text... that he in advance, that he already had said to move from eh...from... the bag, because now you write 'hey, I asked you to move from my bag'.</p>
Writer	<p>But.....</p> <p>But it is the way that she hadn't heard it and that you don't put it in the story, you know? Do you understand?</p>
Peer	<p>Yes, oh yes, yes. Well this is all, I guess.</p>

CURRICULUM VITAE

Mariëtte Hoogeveen (1957) studied Dutch language and literature at the Radboud University in Nijmegen. She graduated (1985) on a study into writing instruction in primary schools (cum laude). This study was part of a curriculum-innovation project of the Netherlands institute for curriculum development (SLO). She worked at the Radboud University of Nijmegen (1986-1998) combining research on language instruction with teaching writing courses to students and publishing about writing instruction. Since 1998 Mariëtte is curriculum developer at the SLO in Enschede, carrying out several projects directed to curriculum innovation for Dutch language education in primary schools. Her PhD research was conducted in collaboration with the Kohnstamm institute of the University of Amsterdam (2006-2012).

