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Rietdijk, S.; van Weijen, D.; Janssen, T.; van den Bergh, H.; Rijlaarsdam, G.

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Teaching Writing in Primary Education: Classroom Practice, Time, Teachers' Beliefs and Skills

Saskia Rietdijk
University of Amsterdam and CED-Group, Rotterdam

Daphne van Weijen and Tanja Janssen
University of Amsterdam

Huub van den Bergh
Utrecht University

Gert Rijlaarsdam
University of Amsterdam; University of Antwerp; and Umeå University

The aim of this study was to provide insight into the current practice of writing instruction in Dutch primary education, as a stepping stone for designing and implementing sustainable innovations that could satisfy both practitioners and policymakers. We investigated the extent to which three domain-specific approaches—communicative writing, process writing, and writing strategy instruction—and general features of high-quality instruction were implemented in writing lessons in the upper grades of primary schools. We also examined the learning time for writing, teachers' views on writing and writing instruction, how efficacious they feel about teaching writing, and how skilled they are in the writing instruction domain. Lastly, we explored relations between classroom practices, learning time, and teachers' beliefs and skills through correlation analysis, to identify potential aids and constraints to guide innovations in writing education. Participants were 61 teachers of 45 primary schools in the Netherlands. Data were collected through questionnaires, stimulated recall interviews and over 100 lesson observations. Results indicated that the three domain-specific approaches for writing instruction were insufficiently implemented in Dutch classrooms, as were differentiating and the teaching of learning strategies. The allocated learning time was also insufficient, but the realized learning time and the extent to which teachers promoted active learning were satisfactory, providing a strong basis for curricular improvement. Several relations were found between teachers' classroom practices, learning time, and teachers' beliefs and skills in the domain of writing instruction. Finally, we discuss options for sustainable innovations of writing instruction in this national context.

Educational Impact and Implications Statement

The aim of this study was to provide insight into the current state of writing instruction in the upper primary level in the Netherlands, as a knowledge base for designing sustainable curricular innovations including professional development programs. The results indicated that teachers evaluate their writing lessons, are able to assess the communicative effectiveness of students' texts, promote active learning, and use the allocated learning time efficiently. However, not enough writing lessons are taught in Dutch primary schools. Also, little attention is paid to communicative aspects of writing, the writing process, teaching strategies, differentiating, and tracking students' writing development. Moreover, teachers' efficacy in teaching writing is moderate. The correlational network between teachers' beliefs and skills and classroom practices suggests that innovations must take these belief systems into account to be successful and sustainable. Overall, this study provides valuable clues for designing, adjusting, and implementing innovations in writing education in a particular region which could meet the concerns of both practitioners and policymakers.

Keywords: writing instruction, classroom practice, teachers' beliefs, teachers' skills, primary school

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Saskia Rietdijk, Research Institute of Child Development and Education, University of Amsterdam, and CED-Group, Rotterdam; Daphne van Weijen and Tanja Janssen, Research Institute of Child Development and Education, University of Amsterdam; Huub van den Bergh, Department of Languages, Literature and Communication, Utrecht University; Gert Rijlaarsdam, Research Institute of Child Development and Education, University of Amsterdam; Department of Linguistics, University of Antwerp; and Department of Language Studies, Umeå University.

Saskia Rietdijk is employed as a researcher by the CED-Group, which designs and publishes the Nieuwsbegrip (Comprehending the News) program mentioned in this paper. She worked for both the CED-Group and the University of Amsterdam while carrying out her PhD research.

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Correspondence concerning this article should be addressed to Saskia Rietdijk, CED-Group, Dwerggras 30, 3068 PC Rotterdam, the Netherlands. E-mail: s.rietdijk@cedgroep.nl

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Writing is of paramount importance to students, because it is a tool that enables them to communicate, function in society, acquire knowledge, and to display what they have learned. Yet, many children struggle to learn how to write. Large scale comparisons of student assessment across countries usually focus on reading, science, and mathematics instead of on writing (see, e.g., Kirsch et al., 2002), but national assessment studies have shown that writing proficiency problems are common in many countries, as a recent issue of *Reading and Writing* indicated (Graham & Rijlaarsdam, 2016). In the United States, for example, the National Assessment of Educational Progress (NAEP) pointed out that one-fifth of the students in Grades 8 and 12 scored below the basic level in writing, whereas only 27% of the students performed at or above the proficient level (Graham, 2013; National Center for Education Statistics, 2012). Likewise, in the United Kingdom many primary school students scored below the expected level for writing (Ofsted, 2005), whereas in Portugal more than half of the Grade 4 students were found to be poor writers (Cardoso, Pereira, Silva, & Sousa, 2009). Similarly, a large-scale assessment in Germany on language competencies of 9th-graders found that one-third of the students wrote unacceptable texts (Klieme, 2006; Neumann, 2012). Research on students' writing performance in the Netherlands paints a similar picture: two Dutch national assessment studies indicated that students' texts at the end of primary education (age 11–12 years) were severely flawed in terms of content, organization, style, and communicative effectiveness (Krom et al., 2004; Kuhlemeier, Van Til, Hemker, De Klijn, & Feenstra, 2013).

Clearly, the quality of writing education is in need of improvement in many countries. However, what such innovations should consist of, how they can be implemented successfully, and how their effects can be studied, might be context dependent (Graham & Rijlaarsdam, 2016). This article analyzed one specific national context—the Netherlands—to create a knowledge base for improving writing education. Such a knowledge base could be relevant for teachers and school principals, curriculum designers, teacher trainers, and policymakers, as well as instructional design researchers.

Writing Education in Dutch Primary Schools

Studies on writing instruction in primary education around the world pinpointed three main problems: (a) evidence-based writing practices are used infrequently (Brindle, Graham, Harris, & Hebert, 2016; Coker et al., 2016; Dockrell, Marshall, & Wyse, 2016; Gilbert & Graham, 2010), (b) students spend little time writing or being taught how to write (Brindle et al., 2016; Coker et al., 2016; Cutler & Graham, 2008; De Smedt, Van Keer, & Merchie, 2016; Gilbert & Graham, 2010; Hsiang & Graham, 2016), and (c) many teachers feel ill-equipped to teach writing (Brindle et al., 2016; Gilbert & Graham, 2010; Parr & Jesson, 2016). These problems also seem to play a role in Dutch writing education. In 2009, the Dutch Inspectorate of Education interviewed teachers and observed writing lessons in 179 primary schools (Grades 3 to 6; Henkens, 2010). The Inspectorate reported that writing was not taught properly in two-thirds of the schools. Little or no attention was paid to the writing process, collaborative writing, or text revision. Also, students were not provided with targeted feedback on their texts or writing processes. In addition, little time was spent on writing and writing lessons. The Inspectorate questioned whether teachers were adequately equipped to teach writing, and concluded that writing education and professionalization did not seem to be considered a priority (Henkens, 2010).

Kuhlemeier et al. (2013) examined writing education in Dutch primary schools, in the context of a periodic national assessment. They collected data on classroom practice through teacher and student questionnaires. Results indicated that writing received less attention than other aspects of the language curriculum: in Grades 4 to 6 teachers spent on average 18% of the available language curriculum time on writing, whereas 26% of the time was spent on reading, and 28% on spelling. Furthermore, the majority of the teachers indicated that they gave the same writing instruction to all students, but adapted the task according to students' level of proficiency and learning speed, whereas less than 10% of the teachers indicated that they differentiated both in terms of their instructions and exercises (Kuhlemeier et al., 2013).

When we compared these findings to the results of an earlier small-scale study in the Netherlands (Franssen & Aarnoutse, 2003), it seemed that little or no progress has been made in the past decade. Franssen and Aarnoutse observed 30 writing lessons taught by 10 primary school teachers in Grades 4 and 5 and interviewed these teachers. The researchers concluded that teachers involved students in prewriting activities, gave instructions on sub processes of the writing process (collecting information, generating, and selecting and organizing ideas), discussed sample texts, and promoted active student participation. However, the lessons were strongly teacher-oriented: peer interaction, collaborative writing, or peer feedback were rarely observed. Moreover, revision and reflection hardly took place. If reflection did occur, the issues addressed were related to the product, not the writing process (Franssen & Aarnoutse, 2003).

All in all, our knowledge of writing education in the Netherlands is fragmented. It is based on a small-scale study, a questionnaire study and a report by the Inspectorate of Education that provided no information about domain-specific approaches. Yet, it is clear that writing instruction needs to be improved. There is a call to implement so-called evidence-based practices, which are reported in meta-analyses of intervention studies performed in other cultural contexts than the Netherlands (for instance, Graham & Perin, 2007, reporting almost exclusively on United States-based research). However, implementing evidence-based practices requires local choices and adaptations. Views on writing and writing instruction, and classroom practices differ between countries because of cultural and historical differences (Graham & Rijlaarsdam, 2016) and can also differ because of the context in which writing takes place. For example, in his new Writer(s) Within Community Model of Writing, Graham (in press) proposes that writing is a social activity, which occurs within a writing community, in which multiple participants, including authors and readers, collaborate during text production. These writing communities, such as classrooms or writing groups, each have their own physical and social environment, which in turn influence and limit the way in which writing takes place within them. Therefore, it is important to study the local context, so that innovations can be tailored to it. To this end, we need to (a) determine which (combinations of) factors can "maximize writing instruction" (Graham & Perin, 2007, p. 468), and (b) make sure we know what is currently going on in Dutch classrooms before we propose any changes (Cutler & Graham, 2008). In the next section, we discuss the factors we consider to be relevant to include in such a baseline study in this particular context.

Writing Education Components in a Specific Context

As proposed by Cutler and Graham (2008), we first determined what the current practice was for writing education in Dutch primary schools. Figure 1 visualizes the three components we wanted to map in the present study: the opportunity to learn (allocated and realized learning time), the classroom practice for writing education (domain-specific and general aspects of instruction), and teachers' beliefs and skills (domain-specific and general). We focused on components at the teacher and classroom level, because these are factors that we wish to influence in future innovations and that are known to contribute to learning outcomes (Muijs et al., 2014). There are factors involved at school level as well (see Kyriakides, Creemers, & Antoniou, 2009), but in the present study we chose to focus only on the variables presented in Figure 1.

Below we will justify the elements we mapped out, based on the research literature, partly from general teacher effectiveness literature, partly, when available, from studies within the field of writing education. Although this study aims to create a knowledge base for future sustainable innovations, knowledge about teachers' role as change agents is indispensable. Therefore, it is important that innovators take teachers' beliefs and attitudes into account (e.g., Clark & Peterson, 1986; Tobin & McRobbie, 1996; van Driel, Beijaard, & Verloop, 2001). As Clark and Peterson's (1986) frequently cited and paraphrased claim states: "Teachers' belief systems can be ignored only at the innovators' peril" (p. 291). The teacher beliefs that correlate with features of classroom practice may be especially important. Therefore, we explored these relations. There is still little research-based knowledge to hypothesize which teacher beliefs will correlate with which classroom practice elements. However, below we will present available insights in these relations, when we discuss our choices for certain teacher variables.

Three Components to Map: Classroom Practice, Learning Time, and Teachers' Beliefs and Skills

Component 1: Classroom Practice

Classroom practices arise from teachers' beliefs, experiences, and skills, which are embedded in history and culture. Teachers mix what they have experienced in writing lessons when they were students themselves with what they learned in preservice teacher education, in-service professional development, from their colleagues in school, and from the textbooks they use. In this study we examined two types of classroom practices: domain-specific classroom practices and general classroom practices, each of which are described in more detail below.

Domain-specific classroom practices. In the Netherlands two approaches to writing instruction have been advocated in

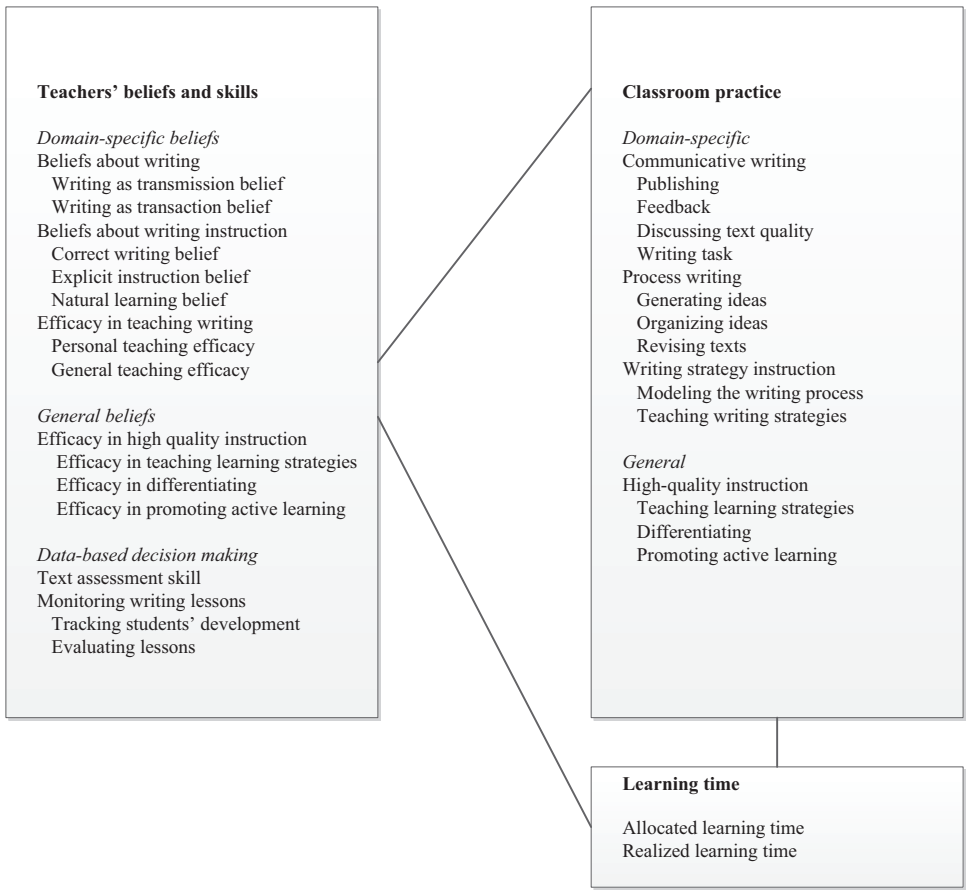

Figure 1. Factors that constitute writing education.

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curriculum documents since the 1970s: *communicative writing* and *process writing*. A third approach, *writing strategy instruction*, has recently also been promoted, but as yet seems to be relatively uncommon in Dutch writing education. Given the evidence of its positive effect on primary school students' writing performance (e.g., Graham, McKeown, Kiuhara, & Harris, 2012b; Koster, Tribushinina, De Jong, & Van den Bergh, 2015), it seems wise to incorporate writing strategy instruction in the curriculum and in classroom practice. Therefore, we wished to determine what the level of implementation of key elements of these three approaches was.

Communicative writing. The communicative approach to language teaching has been advocated since Moffett's (1968) influential work on teaching communicative discourse, and the introduction of the concept "communicative competence" by Hymes (1972). This concept has had a large influence on the conceptualization of what language teaching should entail and, thus, also influenced the content of teacher education programs and commercial textbooks (Ivanič, 2004; Sawyer & Van de Ven, 2007). In their writing process model, Flower and Hayes (1981) also addressed communication as the driving force for writing, when they stated that a writer first has to determine what the rhetorical problem is of the text that has to be written. This rhetorical problem is composed of the rhetorical situation, the audience, and the writer's own goals: "A good writer is a person who can juggle all of these demands" (Flower & Hayes, 1981, p. 369).

Writing is, in contrast to speaking, a solitary activity; writers have to construct and convey their message without direct support and feedback from a conversational partner while writing. Writers must imagine their readers, which makes it more difficult than speaking (Bereiter & Scardamalia, 1987). Emphasizing the communicative nature of writing may foster children's audience awareness (Bracewell, Scardamalia, & Bereiter, 1978; Chapman, 2006; Rijlaarsdam et al., 2009) as well as their motivation to write (Cotton, 1988; Lenhart, Arafeh, Smith, & Macgill, 2008). Moreover, several studies indicated that authentic writing tasks, in which students write with a clear communicative goal for an audience and receive readers' feedback (written or through observation), have a positive effect on students' text quality (Cotton, 1988; Evers-Vermeul & Van den Bergh, 2009; Holliway & McCutchen, 2004; Hoogeveen & Van Gelderen, 2015; Purcell-Gates, Duke, & Martineau, 2007; Rijlaarsdam et al., 2009).

Even though Dutch educationalists have been promoting communicative writing education since the 1970s (Leidse Werkgroep Moedertaaldidactiek, 1986; Rijlaarsdam, 1986; Ten Brinke, 1976), it is unclear to what extent teachers actually pay attention to communicative aspects of writing in their classrooms. Earlier studies found that goal-oriented writing rarely occurred (Franssen & Aarnoutse, 2003; Van den Branden, 2002) and that texts were usually only written for, read, and evaluated by the teacher (Evers-Vermeul & Van den Bergh, 2009; Van den Branden, 2002).

Process writing. In the 1970s attention shifted from the text to the process of writing (e.g., Galbraith & Rijlaarsdam, 1999; Ivanič, 2004). Following a trend in the United States (Emig, 1967), the single-draft composition was replaced by a multiple-draft approach that consisted of planning, drafting, and revising, to make the process more manageable for students. Flower and Hayes' (1981) process model, which added the concepts of recursiveness and monitoring to the process approach, was adopted early on in the Netherlands (in a review: Bochardt, 1984; in an intervention study: Rijlaarsdam, 1986). Dutch handbooks for teacher education and students' textbooks for primary and secondary education also paid more and more attention to the separate phases of planning, drafting, and revising (Nijmeegse Werkgroep Taaldidactiek, 1992; Rijlaarsdam & Hulshof, 1984).

Process writing is used all over the world and there is evidence that supports its effectiveness (Graham & Sandmel, 2011; Ivanič, 2004). The Dutch version of process writing focusses on goal- and audience-oriented writing, with separate stages to have more control over the process: planning, drafting, and revising. However, there are indications that it is not yet fully implemented in Dutch primary education. The outcomes of a study performed by the Dutch Inspectorate indicated that while 61% of the teachers informed their students how to tackle a writing task, and 71% of the teachers used prewriting activities, only one-third of the teachers asked students to revise their texts (Henkens, 2010). Furthermore, students only received feedback on the writing process, from either their teacher or a peer, at a quarter of the schools (Henkens, 2010). Franssen and Aarnoutse (2003) also concluded that although teachers did engage students in prewriting activities, text revision rarely took place. If students did revise their texts, their revisions focused on superficial issues, such as neatness.

Writing strategy instruction. We consider writing strategy instruction to be an elaboration of process writing. It involves the explicit and systematic instruction of strategies for executing one or more of the sub processes of the writing process such as planning, drafting, and revising texts. Such explicit instruction is not common in the process approach (Graham & Perin, 2007). Strategies can be general (i.e., applicable to all kinds of texts), or genre-specific: that is, applicable to a specific genre, such as narrative or argumentative texts. Mnemonics can be used to help students memorize the steps they have to carry out during the writing process, or recall the elements that their texts should contain (cf. the TREE strategy: Topic sentence, Reasons, Explain each reason, and Ending; Harris & Graham, 2009).

A well-known strategy-instruction approach is Harris and Graham's Self-Regulated Strategy Development (SRSD), which combines task strategies with self-regulation strategies such as goal setting and self-monitoring. The instructional sequence consists of six stages: develop and activate knowledge, discuss it, model it, memorize it, support it, and finally perform it independently (Harris & Graham, 2009). Modeling the strategy is a distinctive and key element in writing strategy instruction (see, e.g., Fidalgo, Torrance, Rijlaarsdam, Van den Bergh, & Lourdes Álvarez, 2015; Harris & Graham, 2009). During modeling, students can observe either an expert writer (usually the teacher) or fellow students at work (Rijlaarsdam et al., 2008).

Several meta-analyses indicated that writing strategy instruction can improve students' writing performance. It works for different types of learners (with and without learning difficulties), different genres, and across grades (Graham, 2006; Graham et al., 2012b; Graham & Perin, 2007; Koster et al., 2015).

In the Netherlands a kind of strategy instruction was introduced in the 1970s, in upper secondary and higher education textbooks (Drop & De Vries, 1976; Rijlaarsdam & Hulshof, 1984). This "procedural approach," based on task analysis, was mostly applied in courses on technical and professional writing in higher education. It breaks down parts of the writing process into smaller steps,

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to decrease the writers' cognitive load, and to optimize their control over the writing process. Opponents criticized this approach because it treated writing as a uniform linear stepwise process rather than as an individual recursive process, and it might demotivate students (Leidse Werkgroep Moedertaaldidactiek, 1986). However, textbooks based on the procedural approach are a commercial success, which suggests this approach is still frequently applied in higher education (Janssen, Van der Loo, Van den Hurk, & Jansen, 2012; Steehouder et al., 2006).

We do not know to what extent writing strategy instruction is implemented in Dutch primary schools, because previous studies (Franssen & Aarnoutse, 2003; Henkens, 2010; Kuhlemeier et al., 2013) did not examine the use of this approach. However, we expect that the basic components of writing strategy instruction are rarely implemented in Dutch primary education, even though strategy instruction has been in use in Dutch reading education for years.

General classroom practices. Besides these domain-specific approaches, we also studied general features of high-quality instruction, that is, instructional practices that are relevant across disciplines, not just in writing education. We focused on three practices: teaching learning strategies, differentiating, and promoting active learning. According to van de Grift (2007), these practices are indicators of effective teaching as they are all positively associated with student involvement and achievement. Teaching learning strategies and differentiating are usually especially observed in lessons taught by highly competent teachers (van de Grift & Van der Wal, 2011). If we wish to create a knowledge base for future innovations, it is important to determine to what extent these practices are currently used in Dutch writing classrooms.

Teaching learning strategies. Learning strategies are heuristics that can help students to perform higher-level operations. They are taught in various subject areas, through modeling, scaffolding, explaining, and by providing corrective feedback (van de Grift, 2007). Research has found that teaching learning strategies positively influenced students' performance (e.g., Carnine, Dixon, & Silbert, 1998; Ellis & Worthington, 1994; Good & Brophy, 1986; Slavin, 1996; van de Grift, 2007). Teachers usually become proficient in teaching these strategies through experience, as strategy instruction is an instructional component that is developed relatively late in teachers' professional careers. Furthermore, they are used far less often by weaker teachers, as van de Grift (2007) found in a large scale observational study of teachers' skills. The higher the level of implementation of these learning strategies in current practice, the more likely a writing education innovation focusing on writing strategy instruction is to be successful, because teachers already practice general instructional strategies.

Differentiating. Research has indicated that differentiating—adapting the educational environment to differences between students—may have a positive impact on students' performance (Kyriakides et al., 2009; Scheerens, Luyten, Steen, & Luyten-de Thouars, 2007; van de Grift, 2007). Two factors created a need for implementing differentiation in Dutch classroom practice. First, primary schools are increasingly compelled to set up multigrade classes because of the small number of students per grade, while other schools choose to set up multigrade classes for pedagogical reasons (Onderwijsraad, 2013). Second, variation in students' levels of achievement for reading and writing is increasing, partly because of the growing number of students with special needs who attend regular schools, and the growing number of students for whom Dutch is a second language.

Promoting active learning. Active learning is based on constructivist views on learning and instruction, according to which students must actively process and construct knowledge to relate new information to already existing cognitive structures (Good & Brophy, 1994; Perkins, 1999; Phillips, 1998). In this view learning is promoted by social interaction and collaborative learning: students must be given opportunities to compare and share their ideas (Good & Brophy, 1994).

In the Netherlands, the importance of active learning is emphasized at all educational levels (Simons, Van der Linden, & Duffy, 2000). Furthermore, promoting active learning is seen as crucial for effective instruction, across disciplines (van de Grift, 2007). Promoting active learning implies good classroom management, high levels of students' time-on-task, challenging cognitive tasks, and variation in instructional formats.

Component 2: Learning Time

Learning time is a precondition for learning. According to van de Grift (2007) numerous studies have shown that the amount of learning time is a good predictor for the effectiveness of teaching (see also Muijs et al., 2014). In the present study we examined both allocated and realized learning time.

Allocated learning time is the time set aside for teaching writing (Berliner, 1990). In their meta-analysis, Graham et al. (2012b) report that increasing the time available for primary school students to write has a medium positive effect ($ES = 0.30$) on the quality of their writing.

Elementary schools in the United States were advised to devote at least 1 hr a day to writing and writing instruction (Graham et al., 2012a). In the Netherlands there is no official national minimum instruction time for writing. However, the Dutch Inspectorate recommends spending at least two lessons a month on writing instruction within the language curriculum, which is roughly 30 min a week (Henkens, 2010). How much time schools and teachers actually spend on writing lessons remains to be determined.

We define *realized learning time* as the extent to which the allocated time devoted to writing lessons is used efficiently. In this study realized learning time is operationalized as students' time-on-task; the time spent by students engaged in particular instructional activities or learning tasks, as opposed to being off task. Time-on-task is an indication of teaching quality, especially the quality of classroom management (Berliner, 1990; Karweit, 1984; Muijs et al., 2014). In his meta-analysis Hattie (2009) reports an effect size of 0.30 for time-on-task on students' achievement. If students are more focused on the task at hand, this is likely to increase the quality of their work and increase the level of skill they attain.

Component 3: Teachers' Beliefs and Skills

Teachers can hold various conscious or unconscious beliefs (Basturkmen, 2012; Schoenfeld, 1998), which can influence their teaching and are, therefore, relevant to examine in the light of innovations. These beliefs act as mental filters on incoming information in classroom experiences, professional development trajec-

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tories, and readings on education (Kyriakides et al., 2009) and, thus, affect teachers' choices in the classroom. Graham, Harris, MacArthur, and Fink (2002) concluded that "(. . .) knowledge of teachers' theoretical orientations to instruction is an important element in understanding the teaching process" (p. 161).

Previous studies have indeed shown relations between teachers' beliefs and the way they teach writing (Brindle et al., 2016; Gaitas & Alves Martins, 2015; Graham et al., 2002; Hsiang & Graham, 2016; Lipson, Mosenthal, Daniels, & Woodside-Jiron, 2000; Troia, Lin, Cohen, & Monroe, 2011). Some studies found evidence that teachers' beliefs are related to students' writing outcomes (De Smedt et al., 2016; Ritchey, Coker, & Jackson, 2015). In the present study, we examined both domain-specific beliefs, related to writing and writing instruction, and more general beliefs, related to high-quality teaching.

Domain-specific beliefs.

Beliefs about writing. White and Bruning (2005) distinguished between transmissional and transactional writing beliefs. Teachers with transmissional beliefs view writing as a way to provide readers with information from authoritative sources; the writer as clerk. Teachers with transactional beliefs, on the other hand, view writing as a process during which writers personally construct a text "(. . .) by actively integrating their own thinking into the process" (White & Bruning, 2005, p. 168). We included these beliefs in this study, because they might well be related to teachers' pedagogical preferences regarding writing education.

Beliefs about writing instruction. In line with Graham et al. (2002), we focused on three orientations toward writing instruction: (a) *Correct writing*, which is related to how much emphasis teachers place on correctness in students' writing, and is based on a form focused approach to language education, (b) *Explicit instruction*, which refers to the importance of direct skill-based instruction, and is related to a more cognitive functional concept of language education, and (c) *Natural learning*, which emphasizes the role of informal learning methods in the teaching of writing, including student collaboration and sharing written texts with others, and is related to a pedagogical concept of language education.

Efficacy in teaching writing. Teachers' efficacy, that is, their belief that they can affect student learning, has been found to be related to both teacher practice and student outcomes (Ross, 1994; Tschannen-Moran, Hoy, & Hoy, 1998). In the domain of writing education, it was found that teachers with a strong sense of efficacy made more frequent use of evidence-based classroom practices for teaching writing, and engaged students more often in writing than low efficacy teachers (Brindle, 2013; Brindle et al., 2016; Graham, Harris, Fink, & MacArthur, 2001). Teachers with high efficacy beliefs were also "(. . .) better organized, more willing to try new ideas, and more likely to use positive strategies for classroom management. They also provided higher quality instruction and planned more" (Graham et al., 2001, p. 178).

In line with Graham et al. (2001) we included both personal and general teaching efficacy in teaching writing in this study. *Personal teaching efficacy* refers to teachers' beliefs about their individual ability to teach writing, while *general teaching efficacy* refers to beliefs about limitations on the effectiveness of teaching writing, created by environmental factors such as students' home environment. For professional development programs, it makes a difference whether teachers do not believe in the added value of writing education because of external factors—waste of effort—or that they do not believe that their personal instructional actions can contribute to students' learning.

General instructional beliefs. We included teachers' efficacy in three high-quality instructional practices: efficacy in teaching learning strategies, in differentiating, and in promoting active learning (van de Grift, 2007). These beliefs mirror the three general classroom practices, and may be related to these practices, and/or to the domain-specific classroom practices and learning time.

Data-based decision making. An important indicator of teachers' level of professional development is their ability to reflect on their practice. This means that, before, during and after the instructional sequence, they are aware of their options, able to collect data to evaluate the success of their teaching, and can generate new instructional options. In other words, teachers are seen as change agents of their own practice (Fullan, 1993). In such data-based decision making teachers (and schools) regularly determine what progress students have made, and use the results to design subsequent learning activities (Blok, Ledoux, & Roeleveld, 2013). In the present study we focused on two elements of data-based decision making, namely teachers' ability to evaluate the quality of their students' texts, and their ability to monitor writing lessons.

Text assessment skill. To gain insight into students' writing performance, differences between students, and their development as writers, teachers must be able to assess the quality of the texts written by their students. The quality of the data-based decision process depends on the quality of the data. Assessments provide teachers with input for giving students adequate feedback, and for adjusting their teaching. However, research has shown that teachers often find assessing students' texts challenging (Feenstra, 2014; Weigle, 2002). The ideas teachers have about what constitutes a good text, influence how much weight they give to certain aspects of writing and how they rate text quality (Bouwer, Koster, & Van den Bergh, 2016). In the present study we wanted to determine whether teachers are able to assess students' texts for their communicative effectiveness, to gain insight into their concept of communicative writing. If teachers are unable to distinguish between texts which attain their communicative goal and texts which do not, or to a lesser degree, this might influence the way in which they teach writing. Once we know whether teachers are able to do this, we can decide whether text assessment training needs to be included as an element in future innovations.

Monitoring writing lessons. Research has indicated that monitoring students' development may have a positive effect on their performance (Scheerens et al., 2007; van de Grift, 2007; see also Fuchs & Fuchs, 2002; Safer & Fleischman, 2005; Schildkamp & Kuiper, 2010). Similarly, to improve the quality of their lessons, teachers must first evaluate them: "What have students learned?," "What went well?," and "What did not go well?" (McKeown et al., 2016). They can then use the outcome of such an evaluation to determine how they can further improve the quality of their lessons (Schildkamp & Kuiper, 2010). These monitoring activities are preconditions for data-based improvement of practice.

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Aim of This Study

The aim of the present study was to determine to what extent domain-specific classroom practices and general aspects of high-quality instruction are currently implemented in writing education in Grades 4 to 6 of Dutch primary schools, as a starting point for designing and implementing innovations that integrate evidence-based approaches into current practice. An analysis and evaluation of current teaching practice and its context will help to maximize the potential success of the implementation of future regional and national sustainable innovations to improve the teaching of writing in upper primary education. We focused on three components: (a) classroom practice, (b) learning time, and (c) teachers' beliefs and skills. In addition, we explored the relations between these components, to investigate, for instance, whether variation in classroom practice is related to certain beliefs about writing instruction.

Based on this information, we wanted to determine how writing education in the Netherlands can be improved, so that in subsequent research and development projects adequate evidence-based course materials can be developed, as well as effective implementation strategies, and professional development programs.

The research questions were:

1. *Classroom practice*. Do teachers implement communicative writing, process writing, and writing strategy instruction sufficiently in their classrooms, and do they create a learning environment that sufficiently includes aspects of high-quality instruction?

2. *Learning time*. Do teachers allocate sufficient time to writing lessons, and do they realize sufficient learning time?

3. *Teachers' beliefs and skills*. What are teachers' beliefs toward writing and writing instruction, and do they hold positive efficacy beliefs toward teaching writing? Do they monitor their writing lessons, and are they sufficiently skilled at assessing students' texts?

4. *Relations.* What are the relations between the three components: classroom practice, learning time, and teachers' beliefs and skills?

Method

We collected data on the classroom practices of 61 primary school teachers, their beliefs and skills in the domain of writing instruction, and the learning time they allocated and realized for writing in their classes (see Figure 1) via individual teacher interviews, questionnaires, lesson observations, and a text assessment task.

Data Collection

Data were collected in two waves; from half May to late November in Year 1 ($n = 51$) and from end of August to early November in Year 2 ($n = 10$). Teachers volunteered to participate in a year-long research and development project, and were interviewed before the project started. We ran the project twice, in two academic years, with newly recruited teachers in the second year. Recruitment and data collection procedures were the same for both waves.

We visited teachers for the interview and the classroom observations. Participants responded to the online questionnaires and performed the text assessment task, after being invited to do so by e-mail.

Trained research assistants and Saskia Rietdijk conducted the teacher interviews and lesson observations. The assistants participated in a half-day training, during which they were informed about the aim of the study, and discussed (a) the interview guideline, (b) video segments of an interview, (c) the do's and don'ts for conducting interviews, and (d) the observation forms and constructs it contained (e.g., strategy instruction, time on task), practiced interviewing each other, and received instructions for transcribing the interviews. Then they practiced scoring students' time on task by viewing, coding, and discussing video segments of several lessons.

Teachers were invited to authorize their interview transcripts; no changes were proposed. We asked the children's parents or guardians for permission to observe their children in the classroom. Parents of eight children indicated that they did not want their child to participate in the study; these children participated in the lessons but their data were subsequently excluded from the study.

Participants

We recruited primary school teachers who used the reading comprehension program *Nieuwsbegrip* (Comprehending the News), a reading strategy-oriented program that is used in 75% of Dutch primary schools (personal communication, CED-Group). Teachers were approached via the *Nieuwsbegrip* website and newsletter, online teacher communities, and by phone.

Sixty-one teachers (74% female) from 45 primary schools in the Netherlands volunteered to participate. Their mean age was 43 years ($SD = 12$), they had on average 16.5 years teaching experience ($SD = 11$), and taught four days a week. All but one participant were qualified teachers. Three participants had followed a training course in the domain of writing instruction, in the previous 5 years.

A quarter of the teachers taught Grade 5, while 20% of the teachers taught Grade 4, and 8% of the teachers taught the final grade, Grade 6. Children in these grades are between 9 and 12 years old. The rest of the teachers, about half of them, taught multigrade classes, in which several grades were combined. The average number of students per class was 23 ($SD = 6.9$), varying from 8 to 38.

The teacher sample was found to be nationally representative with respect to teachers' age and the percentage of teachers teaching fulltime. However, male teachers and teachers who taught at public schools were overrepresented compared to the Dutch national average (see Table 1). There were no significant differences in teachers' age,

Table 1
Demographics for Primary School Teachers in the Population and in the Sample

Demographic	Population (year, 2012) %	Sample (years, 2013/2014) %
Gender: Male	15	26
Age: Younger than 40	44	42
Age: Older than 60	7	5
Teaching fulltime	36	35
Teaching at public schools	32	48

Note. *Source:* Stamos (2012).

gender, teaching experience, fulltime employment, or school type (public/private) between the two waves ($p > .20$, so the null hypothesis—differences would be observed—had to be rejected with caution).

Measures

Component 1: Classroom practice.

Domain-specific classroom practices. We determined the presence of teachers' use of domain-specific classroom practices through individual interviews and lesson observations. We chose to assess frequency of occurrence, the lowest level of implementation of effective instructional features (Kyriakides et al., 2009).

Stimulated recall interviews. We designed and piloted an interview guideline consisting of three sections: (a) teachers' evaluation of the quality of students' texts, (b) the content and form of their writing lessons delivered in the context of language arts, and (c) the extent to which teachers monitored their writing lessons. Before the interview, the teachers were asked to send us copies of two students' texts: a weak and a strong text. These materials were used as stimuli for the interview. The interview started with a discussion of these texts, which focused on (a) the teacher's criteria for assessing their quality, and then on (b) the content and form of the lesson in which these texts were written. Most questions were open ended (for instance: 'What happened in this lesson before students wrote their texts?'), followed by clarification questions (e.g., Did you provide instruction? What kind of instruction? Did you teach a strategy? Did you model the writing process?). Follow-up questions were optional: whether they were asked depended on the teacher's response to the open ended questions. Finally, the teachers were asked whether they tracked students' writing development, and whether they designed and evaluated their own writing lessons.

Fifty-eight teachers (95%) were interviewed. On average, an interview took 41 min to complete ($SD = 10$). The interviews were audio taped and transcribed verbatim by the assistants who did the interviews.

The interview transcripts were subsequently coded for whether or not teachers reported paying attention to aspects of communicative writing, process writing, and writing strategy instruction. Because the analysis was straightforward (codes: yes or no), this was done by one coder. The aspects of text quality that were mentioned by the teachers in the discussions of text samples were analyzed to determine whether attention was paid to communicative aspects of writing (audience awareness and goal orientation), using a list of text criteria. A second coder rated the text quality answers in 15 interviews (Cohen's κ .88).

Lesson observations. We conducted lesson observations to capture teachers' practices and effective management of learning time (see Realized learning time, below). The writing lessons of 58 teachers (95%) were observed and audio-taped. For most teachers ($N = 48$) two consecutive writing lessons were observed, on two separate days. For practical reasons we could only observe one writing lesson of 10 other teachers. All in all, we collected data for 106 writing lessons, which were all delivered in the context of the language arts curriculum.

For coding the audio-tapes of the observations, we designed and piloted a coding scheme consisting of 25 items based on the Writing Observation Framework (Henk, Marinak, Moore, & Mallette, 2003) and an observation instrument of the Dutch Inspectorate (Henkens, 2010). All items were closed questions. All but two were binary (yes or no) questions, centering on whether or not the teacher used elements of communicative writing, process writing, and writing strategy instruction, during the lesson observed. Examples of items were: "Did the teacher provide a realistic writing task, situated in a real life context?" (communicative writing), "Did the teacher encourage students to generate ideas before writing?" (process writing), and "Did the teacher pay attention to one or more writing strategies?" (writing strategy instruction). Two questions had a multiple choice format, about the genre that was taught during that lesson and the source of the writing task. Observers coded the audio-recordings within a week after the observation took place. A second rater coded a sample of 10 audio-recordings (10%) from different observers (average Cohen's κ: .66).

General classroom practices. An online questionnaire was designed and piloted to ascertain the extent to which teachers provided high-quality instruction in their writing lessons. It was based on a questionnaire by van de Grift (2007), and contained three scales: teaching learning strategies (7 items), differentiating (9 items), and promoting active learning (15 items). According to van de Grift and Van der Wal (2011) the first two skills represent so called high-quality instruction, which is associated with higher student involvement and achievement. Here again the level of implementation was frequency of occurrence (Kyriakides et al., 2009). We asked participants to indicate how often they engaged in these activities during their writing lessons on a 5-point Likert scale (1 = *never*, 5 = *always*). Examples of items are included in Table 2.

The response rate was high (98%), and the reliability of the subscales was sufficient (Cronbach's α: .84–.86). The three scales correlated significantly ($r = .69$–$.74$), which is not surprising, as the three concepts represent instructional behavior observed in lessons of effective teachers (van de Grift & Van der Wal, 2011).

Component 2: Learning time. Data on the time allocated to writing lessons were collected through the interviews (see above). The realized learning time was measured by observing students' time-on-task during writing lessons.

Allocated learning time. In the interviews teachers were asked "How many writing lessons a month did you teach?" and "How long did a writing lesson usually last?"

Realized learning time. During the lesson observations ($N = 106$), eight randomly chosen students were observed, preferably an even number of boys and girls, who were not seated next to each other. Each student was observed for 1 min, during which the observer scored twice (after 30 s) whether the student had been mainly on or off task during the preceding 30 s interval. After the eight students had been observed, the assistant paused for 1 min, and then observed the same students again, in the same order. This continued until the lesson ended. In a typical lesson the eight students were each observed five times, resulting in 80 observation points per lesson (8 students $\times$ 5 min $\times$ 2 observations per minute). A code for "off task" was assigned if a student was clearly not engaged in the lesson content. We followed a lenient policy: in case of doubt about whether a student was on task or off task (for instance, if it was unclear whether the student was thinking about the task or just daydreaming), "on task" was chosen.

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Table 2
Reliability and Item Examples of the Teachers' Beliefs Questionnaires

Questionnaire scale	Number of items in original scale	Number of items deleted	Cronbach's α of final scale	Item examples
Beliefs about writing				
Writing as transmission	6	4	.65	The key to good writing is to report accurately on what experts think.
Writing as transaction	13	3	.75	Writing helps me to understand the complexity of ideas.
Beliefs about writing instruction				
Correct writing	7	1	.66	Children should be reminded to use correct spelling.
Explicit instruction	6	1	.73	It is important to teach children strategies for planning, checking and correcting their texts.
Natural learning	6	3	.70	Children gradually learn the requirements to which written texts should comply by writing and responding to others' texts.
Efficacy beliefs in teaching writing				
Personal teaching efficacy	10	3	.65	When students' writing improves greatly, it is usually because I have found a more effective teaching approach.
General teaching efficacy	6	2	.65	A teacher only has limited influence on students' writing performance; the students' home environment is more important.
Efficacy in high-quality instruction				
Efficacy in teaching learning strategies	7	1	.86	Asking students to explain which writing strategy they use.
Efficacy in differentiating	9		.89	Adapting writing lessons to students' different ability levels.
Efficacy in promoting active learning	15	4	.85	Asking questions that encourage students to think.

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The observer also noted the type of classroom activity (instructing, modeling, working, or discussing) and grouping arrangement (whole class, small group, pair, or individual) at each observation point. The percentage of students' time-on-task during the observed lessons was calculated for each teacher, per classroom activity, and grouping arrangement.

Component 3: Teachers' beliefs and skills. Teachers' domain-specific and general beliefs were measured through four questionnaires, administered in an online environment.

Domain-specific beliefs.

Beliefs about writing. We administered the Writing Beliefs Inventory, a questionnaire developed and tested by White and Bruning (2005), which was translated into Dutch and tested by Baaijen (2012). The questionnaire contains two scales: Writing as transmission (6 items) and Writing as transaction (13 items). Teachers could respond to items on a 5-point Likert scale, ranging from 1 (*totally disagree*) to 5 (*totally agree*).

Beliefs about writing instruction. Teachers' beliefs about writing instruction were measured with the Writing Orientation Scale (Graham et al., 2002), which contains three scales: Correct writing (5 items), Explicit instruction (4 items), and Natural learning (4 items). We translated the questionnaire into Dutch and added two items per scale, which were appropriate for the Dutch context. Teachers responded to the items using a 5-point Likert scale (1 = *totally disagree*, 5 = *totally agree*).

Efficacy in teaching writing. Teachers' efficacy in teaching writing was measured with the Teacher Efficacy Scale for Writing (Gibson & Dembo, 1984; Graham et al., 2001; Troia, & Maddox, 2004). This is a 16-item instrument, representing two dimensions. The first dimension, personal teaching efficacy, reflects teachers' beliefs about their competence in teaching writing. The second dimension, general teaching efficacy, reflects teachers' beliefs concerning the limits of what might be achieved through the teaching of writing, given external influences. The general teaching efficacy items were recoded, so that a higher score indicated a greater sense of efficacy. Teachers responded to the items using a 5-point Likert scale (1 = *totally disagree*, 5 = *totally agree*).

General beliefs.

Efficacy in providing high-quality instruction. We based this questionnaire on an existing instrument (van de Grift, 2007). We used three scales from this instrument, which are associated with higher student involvement and achievement: teaching learning strategies (7 items), differentiating (9 items), and promoting active learning (15 items). Teachers were asked to indicate how competent they considered themselves to be in each activity on a 5-point Likert-scale (1 = *not good at all*, 5 = *very good*).

The response rate for all questionnaires was 98%. Table 2 presents examples of items as well as the reliabilities for each scale. As Table 2 shows, a number of items were deleted to increase the reliability index. The final reliabilities were fair to good (α = .65–.89).

The two scales measuring beliefs about writing were not significantly correlated, nor was there a significant correlation between personal and general teaching efficacy in writing education. Explicit instruction and natural learning were significantly correlated but not strongly, $r = .58$, $p < .001$. Strong, significant correlations

were found between the efficacy scales for teaching learning strategies, differentiating, and promoting active learning, r = .73–.80, $p < .001$.

Data-based decision making.

Text assessment skill. We used a text assessment task to measure teachers' ability to evaluate students' texts for their communicative effectiveness. In the text assessment task teachers were asked to rate 30 narrative and 30 argumentative texts written by Grade 6 students, collected by Pullens (2012). The teachers rated the texts holistically. To support the rating process, teachers were provided with a manual. They were instructed to focus on the communicative effectiveness of the text. That is, how entertaining were the narratives, and how persuasive were the argumentative texts? The manual contained two essay scales, one for each genre, consisting of five anchor texts with fixed scores, taken from Pullens (2012). The teachers rated the texts in a digital environment; they could choose when and where to do the assessment. The task took about an hour (M = 63 min, SD = 27) and the response rate was high (82%).

To establish a criterion, a jury of seven trained raters assessed the texts individually as well, in the same way as the teachers. The jury members were university students who had received a half-day training. Half of them already had extensive experience in rating upper primary school students' texts with benchmark scales. Since the ratings of the jury members (r = .63, range = .53–.70) were consistent (α = .90), we used an average score for each text to compare teachers' ratings to the jury's rating (correlations).

Monitoring writing lessons. Whether teachers monitored their writing lessons was investigated using two interview questions: "Do you track your students' writing development?," and "Do you evaluate your writing lessons?"

Data Analysis

First, we calculated descriptive statistics: percentages "present" for the dichotomous variables (present/absent), and means and *SD*s for the scales. These scores provided insight in the level of implementation of all kinds of features of writing education in the specific context of the Netherlands.

Second, to determine whether the classroom practices were sufficiently implemented and whether the learning time, teachers' efficacy beliefs and their text assessment skill were sufficient, we compared the outcomes to preset standards. For allocated learning time, we used the minimum number of writing lessons recommended by the Dutch Inspectorate, which was two a month, as standard (Henkens, 2010). For realized learning time, we set the standard at 80% time on task, based on literature on effective teaching (Kauchak & Eggen, 1993; Muijs & Reynolds, 2010). For all other variables we could not rely on externally established standards. We applied a three-step norm-setting procedure: (a) per type of item/scale we marked a cut-off score, (b) we calculated the percentage of teachers who met the cut-off score, and (c) we checked whether at least 80% of the teachers reached this standard. Eighty percent was our overall norm. For instance, for the domain-specific approaches, the cut-off score was present. We calculated the percentage of teachers who used a certain element (e.g., revising texts). When this percentage reached 80% we decided that this element was sufficiently implemented in Dutch writing education. Applied to scales based on items with a frequency scale, such as the general classroom practice scales, the cut-off score was "applied the practice at least sometimes" and then again, we decided whether 80% of the teachers met this score.

As criterion for teachers' text assessment skill we reasoned that a teacher's assessment should correlate sufficiently with the criterion, in our case, the jury-members' scores. We chose the lowest interrater correlation between jury members (r = .53) as minimum criterion for the correlation between the teachers' scores and the jury score.

Finally, we calculated correlations, to explore the relations between the variables of the three components: classroom practice, learning time, and teachers' beliefs and skills (see Figure 1).

Results

We present the results in four sections, following the three components of our model (see Figure 1). For classroom practices, learning time, and teachers' efficacy beliefs and skills we present descriptive results, and, if applicable, the percentage of practices that met the cut-off scores. The final section addresses relations between classroom practice, learning time, and teachers' beliefs and skills.

Component 1: Classroom Practice

Domain-specific classroom practices. Table 3 shows the percentage of teachers who applied features of communicative writing, process writing, and writing strategy instruction in their classrooms.

Less than half of the teachers provided writing assignments that explicitly stated the goal for writing (e.g., informing, persuading) and/or the intended audience. Students' texts were read aloud for an audience of classmates and/or published in some other way in nearly all classrooms. A small majority of the teachers provided feedback on communicative effectiveness and/or audience awareness of students' texts, and half of the teachers mentioned goal orientation and/or audience awareness while evaluating texts in the postwriting phase (see Table 3). All teachers applied at least one of the four communicative writing features, while 72% applied at least two out of four. Seventeen percent of the teachers applied all four features.

For process writing, the observations indicated that a large majority of the teachers encouraged students to generate ideas as a prewriting activity, and more than half of the teachers encouraged students to organize their ideas before writing. About half of the teachers reported in the interviews that they asked students to revise their texts (see Table 3). Two-thirds of the teachers implemented at least two of the three process writing features, while 23% applied all three features.

The observations indicated that about a third of the teachers explicitly taught writing strategies and 40% of the teachers modeled one or more components of the writing process in some way (see Table 3). Half of the teachers applied at least one of the two elements of writing strategy instruction: 26% of the teachers modeled and explicitly taught strategies, while 24% did one or the other.

High-quality instruction. Table 4 shows how often teachers, on average, applied elements of high-quality instruction in their writing lessons. Teachers reported that they sometimes taught

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Table 3
Use of Domain-Specific Classroom Practices

Variable	Source	*N*	% Teachers who used it
Communicative writing			
Students' texts are read aloud and/or published	Interview	58	90
Feedback is provided on the texts' communicative effectiveness and/or audience awareness	Observation	58	52
Goal orientation and/or audience awareness are mentioned while discussing text quality	Interview	58	50
Communicative goal and/or audience are specified in the writing task	Interview	58	41
Process writing			
Generating	Observation	58	90
Organizing	Observation	58	55
Revising	Interview	48	48
Writing strategy instruction			
Modeling the writing process	Observation	58	40
Teaching writing strategies	Observation	58	36

learning strategies and sometimes differentiated, whereas they promoted active learning quite often. Around three quarters of the teachers met our criterion and taught learning strategies at least sometimes. Sixty-seven percent of the teachers reported differentiating at least sometimes in their writing lessons, while nearly all teachers promoted active learning at least sometimes. Overall, 58% of the teachers indicated that they applied all three high-quality instruction practices at our norm level (at least sometimes); 23% two out of three, 15% one, and 3% none of them.

Component 2: Learning Time

Allocated learning time. On average teachers taught about three writing lessons a month ($M = 2.6$, $SD = 1.5$, range 0.3–7), while roughly 75% of the teachers spent at least two lessons a month on writing (see Table 5), the minimum recommended by the Dutch Inspectorate (Henkens, 2010), which we adopted as a criterion.

A writing lesson took 48 min on average ($SD = 13.5$, range 17–90 min). Table 6 shows how the available learning time was distributed over learning activities and grouping arrangements.

Most of the lesson time was dedicated to the teacher giving instructions to the whole class (27%) and to students working on tasks, mostly individually (43%). Little time was spent, in general, on collaborative writing in pairs or small groups. In nearly all classrooms, about 11% of the time was devoted to discussion or other postwriting activities. Furthermore, brief episodes of modeling were observed in the lessons of 40% of the teachers.

Realized learning time. Table 6 also presents the mean percentage of students' time-on-task per activity. The realized learning time was generally high: students were on task, on average, 89% of the observed time ($SD = 14$). The on task percentage per teacher ($N = 58$) ranged from 44 to 99%, while in the lessons of 90% of the teachers students were on task at least 80% of the time, which was our criterion.

Component 3: Teachers' Beliefs and Skills

The third research question related to teachers' beliefs and skills, in the context of writing instruction.

Domain-specific beliefs. Table 7 (upper panel) shows the mean scores, *SD*s, and the percentage of teachers who tended to agree with a domain-specific belief, per scale.

On average teachers held low transmissional beliefs, and high transactional beliefs about writing (see Table 7). While around two-thirds of the teachers agreed with the writing as transaction belief, none of them agreed with the writing as transmission belief. This means that they supported a view of writing as a way to create a text involving personal thinking, rather than as a way to provide readers with information from authoritative sources. With regard to writing instruction, relatively few teachers (12%) agreed with correct writing as the main focus of instruction, whereas all teachers moderately agreed with explicit instruction and natural learning. Closer inspection showed that 10% of the teachers agreed with all three writing instruction beliefs, while 78% agreed with two out of three of them. On average, teachers leaned more toward agree

Table 4
Means and SDs of Teachers' Use of High-Quality Instruction in Writing Lessons, and the Percentages of Teachers Who Scored 3.0 ("Sometimes") or Higher in the Questionnaire (N = 60)

Variable	*M*	*SD*	% ≥ 3
Teaching learning strategies	3.3	.67	73
Differentiating	3.1	.68	67
Promoting active learning	3.7	.45	97

Note. Scale: 1 = *never*; 2 = *seldom*; 3 = *sometimes*; 4 = *often*; 5 = *always*.

Table 5
Percentage of Teachers per Number of Writing Lessons Taught per Month (N = 54), According to the Interview

Number of lessons	Teachers %
<1	4
1	20
2	26
3	19
4	24
>4	7

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Table 6
Percentages of Observed Time per Activity, Number of Teachers (N = 58) Who Applied the Activity in at Least One of the Observed Lessons, and Mean Percentages Time-on-Task per Activity

Activity	Observed time %	Teachers %	Time-on-task *M*	Time-on-task *SD*
Instructing				
Whole class	27.4	100	91	10
Individually	.3	10	81	40
In pairs/small groups	.6	2	80	14
Modeling				
Whole class	3.7	40	91	14
Individually	—	—	—	—
In pairs/small groups	—	—	—	—
Working				
Whole class	1.1	12	95	6
Individually	43.4	93	85	9
In pairs/small groups	11.0	57	89	13
Discussing				
Whole class	10.0	76	90	14
Individually	.1	2	—	—
In pairs/small groups	.8	19	90	19
Other episodes	1.6	38	96	11
Total	100		89	14

than disagree on the personal and general teaching efficacy scales. Yet, the percentage of teachers who tended to agree with these beliefs was not high: 45% did not feel efficacious in this domain. Moreover, only one-third of the teachers attributed the extent to which students learned to write to writing education. Overall, 17% of the teachers tended to agree with both the personal and the general efficacy beliefs, 57% with one or the other, and 27% with neither.

Efficacy in providing high-quality instruction. Table 7 (lower panel) shows that, on average, teachers considered themselves to be reasonably skilled in the aspects of high-quality instruction we measured. Eighty percent of the teachers reported that they were reasonably able, able, or very able to promote active learning, but only half of the teachers felt reasonably or very able to teach learning strategies or to differentiate. When we look at combinations of these aspects, it turns out that only 38% of the teachers considered themselves to be reasonably skilled in applying all three practices, 20% in two out of three.

Data-based decision making. We examined whether teachers were able to assess texts for their communicative effectiveness and whether they monitored their writing lessons.

For text assessment skill, we computed teachers' correlations with the jury's average scores, $r = .65$, range = .34–.82. We based the norm on the interrater correlation between the trained raters, $r = .63$, range = .53–.70. We considered a correlation of .53 or higher, that is, the lowest interrater correlation within the jury, an indication of sufficient text assessment skill. Results indicated that 88% of the teachers met this criterion.

For monitoring writing lessons, we examined two activities: whether teachers tracked their students' writing performance, and whether they evaluated their writing lessons. Fifty-three percent of the teachers indicated that they tracked students' writing performance and 93% reported that they evaluated their writing lessons, while 48% of teachers reported doing both.

Relations Between Classroom Practice, Learning Time, and Teachers' Beliefs and Skills

The fourth research question focused on identifying the significant relations between classroom practice, learning time, and teachers' beliefs and skills. In this section, we report which statistically significant relations were found between the three components in pairs: (a) the relations between teachers' beliefs and skills and classroom practice, (b) between classroom practice and learning time, and (c) between teachers' beliefs and skills and learning time. Tables A1, A2, and A3 in the Appendix display all correlations, including the nonsignificant ones.

Teachers' beliefs and skills and classroom practice. Figure 2 shows the statistically significant correlations found between teachers' beliefs and skills on the one hand and their classroom practices on the other hand. Nearly all these correlations exceed .30, which means they all had at least a moderate effect size.

Domain-specific classroom practices. For process writing, the level of implementation of generating ideas and organizing ideas correlated positively with text assessment skill and an explicit instruction belief, respectively. Therefore, teachers who provided students with opportunities to generate ideas, were more aligned with our jury scores on communicative effectiveness of students' texts. In addition, teachers who provided opportunities to organize ideas, agreed more on the explicit instruction belief.

Providing communicative formative feedback was positively related to a belief in the effectiveness of teaching writing (general teaching efficacy) and negatively to a belief in the importance of correctness (correct writing belief). Therefore, the more teachers believed that teaching writing can have an effect on students'

Table 7
Means and SDs of Teachers' Domain-Specific Beliefs,[a] *and the Percentages of Teachers Who Scored 3.5 or Higher (Upper Panel) and Teachers' Efficacy in High-Quality Instruction,*[b] *and the Percentages of Teachers Who Scored 3.0 or Higher (Lower Panel) in the Questionnaire (N = 60)*

Questionnaire scale	*M*	*SD*	% > 3.5
Beliefs about writing			
Writing as transmission	2.2	.51	0
Writing as transaction	3.7	.40	65
Beliefs about writing instruction			
Correct writing	2.9	.56	12
Explicit instruction	4.1	.39	93
Natural learning	4.2	.45	92
Efficacy in teaching writing			
Personal teaching efficacy	3.5	.41	55
General teaching efficacy	3.4	.52	35
	M	*SD*	% ≥ 3
Efficacy in high-quality instruction			
Teaching learning strategies	2.9	.71	53
Differentiating	2.9	.70	47
Promoting active learning	3.5	.54	80

[a] Scale: 1 = *totally disagree*; 2 = *disagree*; 3 = *neutral*; 4 = *agree*; 5 = *totally agree*. [b] Scale: 1 = *not good at all*; 2 = *not so good*; 3 = *reasonably good*; 4 = *good*; 5 = *very good*.

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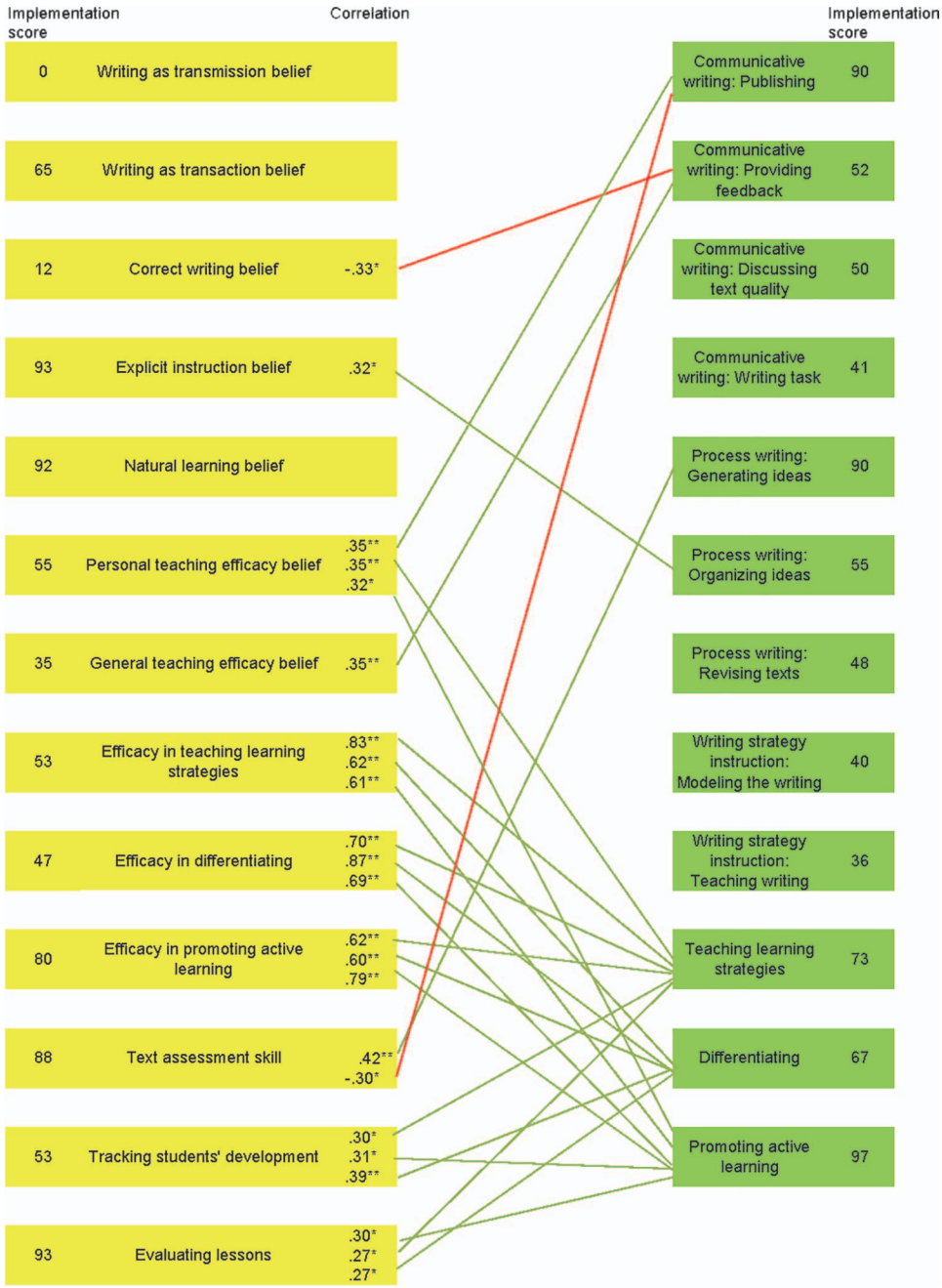

Figure 2. Significant correlations between teachers' beliefs and skills and classroom practice, and their implementation scores. * $p < .05$. ** $p < .01$. See the online article for the color version of this figure.

writing skill development, the more students may receive feedback on the communicative quality of their texts. Conversely, the more teachers adhere to the correct writing belief, stressing language forms more than content, the less students will receive feedback on communicative aspects of their texts. Furthermore, the practice of publishing students' texts was negatively related to teachers' text assessment skill but positively to a personal teaching efficacy belief: teachers who did not provide opportunities to share texts in public were better in rating texts holistically on communicative effectiveness than teachers who did provide such opportunities. Also, teachers who believed in their ability to teach writing were more inclined to enable their students to share their texts. No significant relations were found between writing strategy instruction and a teacher belief or skill.

General classroom practices. High-quality instruction practices correlated positively with each of the high-quality instruction efficacy beliefs. In addition, the level of implementation of teaching learning strategies and of promoting active learning correlated

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positively with a personal teaching efficacy belief and the two teacher skills involved in monitoring teaching practices. The extent to which teachers differentiated was positively related to monitoring teaching practices as well.

Classroom practice and learning time. Four relations between a classroom practice and a learning time variable were statistically significant (see Figure 3). All high-quality instructional aspects were positively related to realized learning time: the more teachers taught learning strategies, differentiated, and promoted active learning, the more students were on task. Publishing texts was positively related to realized learning time as well. This implies that students whose texts will be shared with others are more engaged during the writing lesson. No significant relations were found between allocated learning time and classroom practices.

Teachers' beliefs and skills and learning time. Figure 4 shows the statistically significant correlations between teachers' beliefs and skills on the one hand, and learning time on the other hand. The correlations are moderate in effect size.

Teachers who were relatively efficacious in teaching learning strategies and in promoting active learning taught more lessons a month than teachers who were less efficacious in these domains. Teachers who tracked their students' development provided more learning opportunities.

Realized learning time was positively related to a natural learning belief, a personal teaching efficacy belief, and the three high-quality instructional beliefs (teaching learning strategies, differentiating, and promoting active learning). There was a negative relation with realized learning time as well: the stronger teachers believed in writing as transmission, the lower they scored on realized learning time.

Discussion

Previous research indicated that writing instruction in Dutch primary schools appears to fall short and is in need of improvement (e.g., Henkens, 2010). The aim of the present study was to determine to what extent domain-specific approaches for teaching writing and providing high-quality instruction are currently implemented in writing lessons, as a basis for maximizing the success of future innovations. In addition, we explored the relations between classroom practice, learning time, and teachers' beliefs and skills (see Figure 1), to identify possible aids and constraints for future innovations in writing education.

In this section we present our interpretations of the results, singling out in which respects the current practice is satisfactory, in which respects there is room for improvement, and which teachers' beliefs and skills seem important to focus on in the future. For national innovations, the focus might be on curricular elements that are implemented by less than 80% of the teachers. Figure 5 gives an overview of the implementation of the various elements. In the following paragraphs we describe the current state of affairs of Dutch writing education and evaluate in which respects it is sufficient, according to this implementation overview (see Figure 5). For efficacy beliefs, we also considered adherence by at least 80% of the teachers as acceptable: for example, when 80% of the teachers' personal efficacy level is sufficient, there is no need to focus on personal efficacy in future innovations.

The overall 80% boundary might seem somewhat arbitrary. However, the choice for another criterion, 70 or 90% for instance, would hardly have changed the outcome of our evaluation of Dutch writing education, because nearly all the elements involved were either implemented by a large majority or a minority of the teachers.

Component 1: Classroom Practice

We found that only two domain-specific classroom features were common practice in Dutch primary schools (see Figure 5): providing opportunities for generating ideas and publishing, that is, sharing final versions of texts with peers. All other domain-specific features were only implemented by about 50% of the teachers or less. Therefore, we conclude that communicative writing, process writing, and writing strategy instruction are all insufficiently implemented in Dutch upper primary education. Franssen and Aarnoutse (2003) and Henkens (2010) also found that prewriting activities in which students generated ideas occurred frequently in Dutch primary schools, whereas other communicative and process writing practices (e.g., revising) were hardly used at all. The present study, with a variety of methods, a relatively large sample of teachers, and additional information on classroom practices—the use of writing strategy instruction is new—and teachers' beliefs and skills, confirms and extends the findings of earlier studies.

According to teachers' self-reports, the implementation of the high-quality instructional practices varied from about 70 to 95%, which is quite high and in line with earlier findings by Franssen and Aarnoutse (2003) for promoting active learning and with Kuhlemeier et al. (2013) for differentiating. Based on our 80% norm, however, we still conclude that differentiating and the teaching of learning strategies are insufficiently implemented in Dutch classrooms (see Figure 5). However, the need to improve specific issues in writing education seems to be more prominent than the need to improve more general teaching issues.

Component 2: Learning Time

About three-quarters of the teachers met the criterion of spending at least two lessons a month on teaching writing, which is slightly less than our 80% criterion. The outcome confirms an earlier finding by Kuhlemeier et al. (2013) who reported that 79% of the Dutch primary school teachers taught at least two writing lessons a month, averaged over Grades 4 to 6. Two hours a month for writing is very little, however, compared with the learning time for reading. Kuhlemeier et al. (2014) reported that Dutch teachers in Grade 6 spent 80 min per week on average on reading comprehension, and a further 58 to 87 min on advanced technical reading. Clearly, significantly more time is spent on reading instruction in Dutch primary schools than on writing instruction.

The lesson observations in the present study provided information about how learning time is spent in writing lessons. Most of the lesson time was dedicated to whole-class instruction (27%) and students' working individually on writing tasks (43%). Little time was spent on collaborative writing. A form of modeling was observed in the lessons of 40% of the teachers, usually for a relatively short period of time. Postwriting activities—sharing the final versions of the written texts—took place in nearly all

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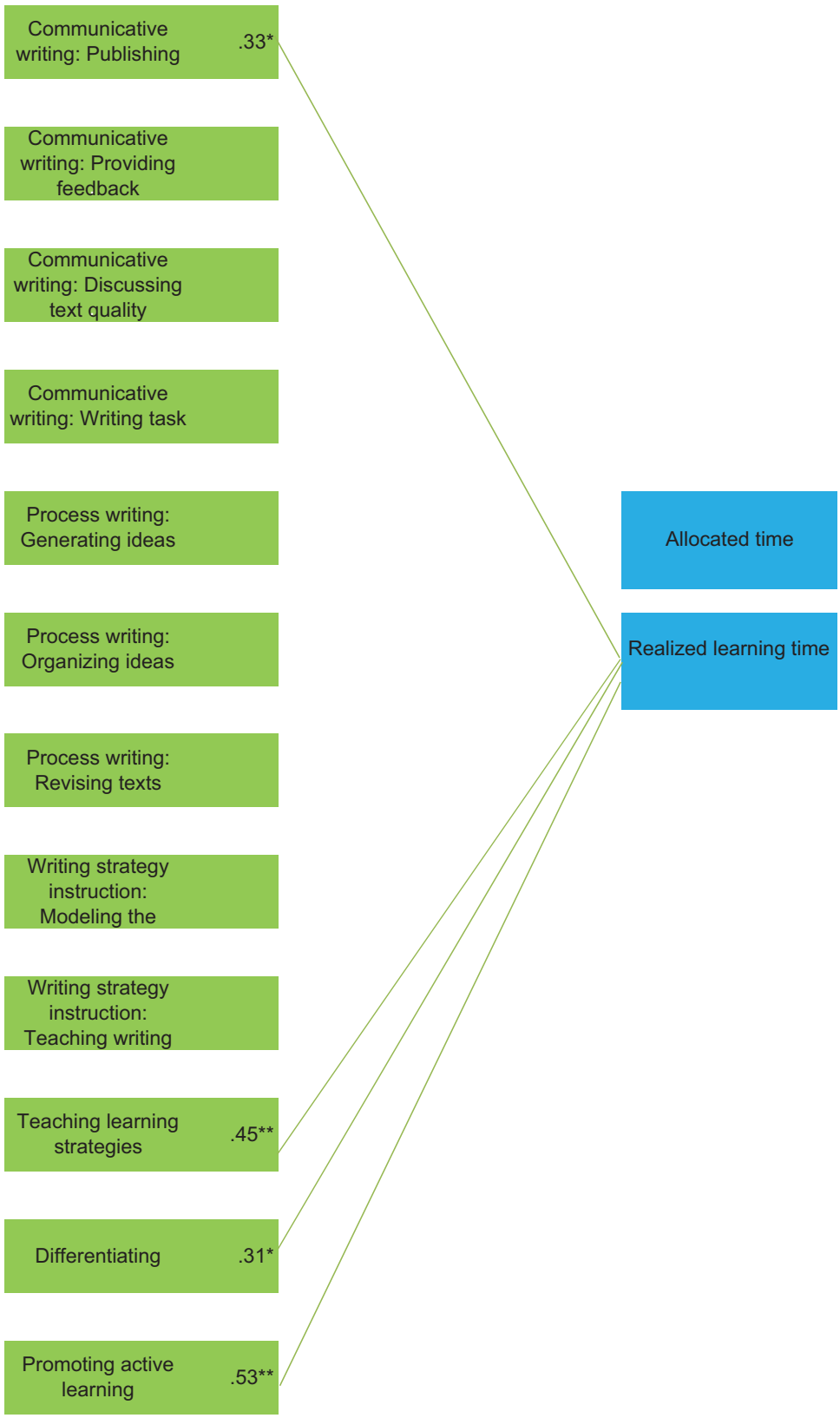

Figure 3. Significant correlations between classroom practice and learning time. * $p < .05$. ** $p < .01$. See the online article for the color version of this figure.

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Figure 4. Significant correlations between teachers' beliefs and skills and learning time. * $p < .05$. ** $p < .01$. See the online article for the color version of this figure.

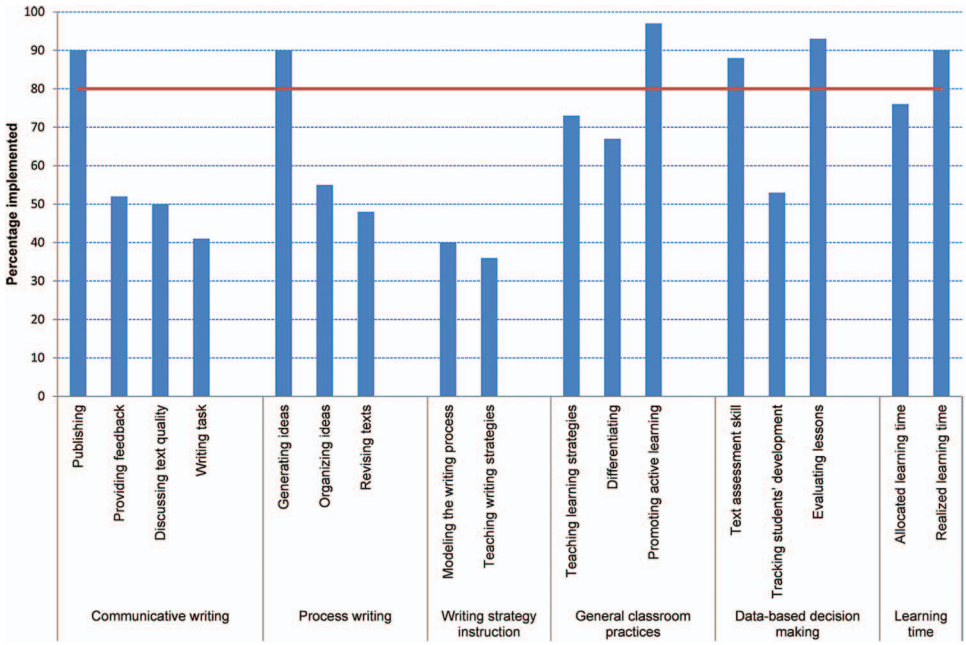

Figure 5. Implementation of classroom practices, learning time, and data-based decision making in percentages of teachers. See the online article for the color version of this figure.

classrooms. These findings are in line with results from an observational study involving first-grade teachers in the United States, by Coker et al. (2016), who found that most instruction was delivered in whole-class settings, little time was spent on modeling the writing process, and collaborative learning seldom occurred.

Furthermore, our classroom observations revealed that students were engaged at least 80% of the time in the lessons of 90% of the teachers. Therefore, the realized learning time was generally sufficient. This result is in line with van de Grift (2007), who reported that about 80% of the Dutch primary school teachers organized their classroom management efficiently. It indicates that teachers' classroom management skills are adequate and thus form a good basis for further improvement on higher levels of instructional skill (Kyriakides et al., 2009). For future innovations this might mean that we can rely on fairly proficient teachers as change agents.

Component 3: Teachers' Beliefs and Skills

Few teachers adhered to the efficacy beliefs on teaching writing; the general idea about the effectiveness of writing education, the personal efficacy belief that their teaching can make a difference, and efficacy in teaching learning strategies and differentiating. By contrast, a large majority of the teachers (80%) felt confident about their ability to promote active learning.

Teachers proved to be rather skilled in assessing texts' on communicative effectiveness, and a large majority of the teachers evaluated their writing lessons. A weak spot in the data-based decision making process is tracking students' progress in writing: in the individual interviews only a small majority of the teachers indicated doing so. For future innovations this means that it is important to strengthen teachers' efficacy beliefs and stimulate teachers to track students' development over time.

Relations Between Components

Our last research question pertains to relations between the three components we examined: classroom practice, learning time, and teachers' beliefs and skills (see Figure 1). Several of the relations we found point to issues that are valuable for curriculum innovators, designers of writing education programs and professional development programs.

Teachers' beliefs and skills and classroom practice. With regard to the use of the three domain-specific classroom practices, we found, for instance, that encouraging students to organize their ideas before writing (a process writing activity) was positively related to an explicit instruction belief. Stimulating teachers to create more opportunities for students to organize their generated ideas, and providing instruction how to do so, may help to strengthen their beliefs in explicit instruction such as "It is important to teach children strategies for planning, checking, and correcting their texts." Furthermore, providing communicative feedback was positively related to a general teaching efficacy belief and had a negative relation with a correct writing belief. Therefore, to encourage teachers to provide more communicative feedback, it seems important to strengthen their belief in the effectiveness of teaching writing, and to discourage an overly strong focus on correctness. Finally, none of the teachers' beliefs or skills included in the present study were related to the extent to which teachers provided writing strategy instruction. This means that we did not detect any aids or constraints in teachers' belief system that might influence their willingness to implement this approach.

What is more, several classroom practice variables correlated with teachers' efficacy beliefs, so these seem important to take into consideration in future writing education innovations. This is in line with several studies which reported that teachers' efficacy and their classroom practice are related (e.g., Brindle, 2013; Graham et

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al., 2001; Ross, 1994). The importance of teachers' efficacy in teaching writing for their teaching practice is illustrated by a comment made by one of the teachers in the present study during an interview:

> *I find myself completely incapable to teach writing. I just do random things. Then I would rather not do it. I'd rather do it right than do it badly. . . . So as a result of my own insecurity about teaching writing I don't even want to start doing it.* (Martha)

Lastly, the extent to which teachers provided high quality instruction in writing lessons (e.g., differentiating) was positively related to whether they monitored their writing lessons. As a consequence, professional development programs may want to combine teaching differentiating skills and monitoring skills, because these seem to strengthen each other.

Learning time. Our results showed that the amount of allocated learning time was not significantly related to particular classroom practice features. In other words, more allocated time does not seem to go hand in hand with particular writing instruction activities. However, when innovations aim to implement more elements of communicative writing, process writing, and writing strategy instruction, it is likely that more learning time will be required. Since the amount of allocated learning time was correlated with teachers' efficacy in teaching learning strategies, their efficacy in promoting active learning, and whether they tracked students' development or not, innovations might also focus on these three variables in professional development programs. One classroom activity was positively related with realized learning time: sharing and publishing student texts, one of the few elements of communicative writing that was sufficiently implemented. It might not be too difficult to further increase the level of implementation, given that so many teachers implemented it. It seems that those teachers who did not implement it had low personal teaching efficacy beliefs and/or low levels of text assessment skills.

All in all, based on our findings we recommend that the focus of a future innovation program should be on: (a) acquainting teachers with the essence of each of the three domain-specific approaches and their integration in one curricular system, (b) raising teachers' efficacy beliefs, and (c) encouraging teachers to extend the allocated learning time for writing.

Increasing teachers' efficacy beliefs requires the acquisition of theoretical insights as well as practical training. Teachers need to be informed about the instructional options available to them and how to organize these effectively in their classrooms. In addition, they should have the opportunity to try them out and adjust them to their school context and individual preferences. To optimize the effects of such in-service training, additional individual or team based coaching might be effective, in the context of improving reflective teaching (Kretlow & Bartholomew, 2010; McKeown et al., 2016).

Strengths and Limitations

More and more is known about the teaching of writing in specific regions and cultures, as a recent special issue of *Reading and Writing* shows (Graham & Rijlaarsdam, 2016). Our study adds to this body of knowledge. We examined writing education in the upper grades of primary schools in a specific region, the Netherlands, and inspected what was satisfactory and what needed to be improved. We examined teachers' classroom practices, learning time for writing lessons, their beliefs and skills, and how these were related, with the aim to collect data to maximize the potential success of future innovations. Besides domain-specific approaches to the teaching of writing, we also took general features of high-quality instruction into account. The outcomes present an approximation of the state of the art of writing education in the Netherlands in upper primary education.

We are cautious in drawing conclusions, if only because part of the findings are based on teacher self-reports, which cannot provide more than an approximate picture of classroom practices. The outcomes, however, do provide new insights into factors that are related to classroom practice and learning time in the context of writing education. Overall, the study provides a useful knowledge base for future innovations in the teaching of writing. A strength of this study is that we used a wide range of instruments to investigate classroom practices: questionnaires, stimulated recall interviews, and lesson observations. This is in line with Cutler and Graham's (2008) recommendation to supplement teachers' self-reports with classroom observations.

This study has several limitations. First, our diagram (see Figure 1) is a simplification of reality. We selected communicative writing and process writing as specific approaches to writing instruction, based on the current Dutch curriculum, research and policy documents. That implies, for instance, that our operationalization of the process writing approach shares important elements of descriptions of United States practices, but at the same time, some key-elements of these United States practices were not included, such as collaborative work, because these elements are not relevant in this particular context. In addition, we included writing strategy instruction because various meta-analyses have shown its effectiveness in improving students' writing performance. However, one might argue that we restricted the operationalization of writing strategy instruction to two major components: providing explicit and systematic instruction on strategies and teacher modeling. No data was collected on the extent to which teachers taught self-regulation strategies, for example, which is a main component of the SRSD approach to strategy teaching (Harris & Graham, 2009). However, given that the two components on which we collected data had a low level of occurrence, we do not expect that self-regulations strategies would have appeared frequently in classroom observations. Furthermore, other variables that might influence classroom practice were not included in this study: school level variables (e.g., school climate), teacher characteristics (e.g., teachers' training), and student characteristics (e.g., students' socioeconomic status, ethnic background, and special needs; Kyriakides et al., 2009). Because these variables are difficult to influence or cannot be influenced at all, we did not take these into account in this study.

Second, we reported correlations in the present study, but the direction of the relations found between classroom practice, learning time, teachers' beliefs and skills was not assessed. Nonetheless, adding teachers' beliefs and skills and investigating the relations between components provided valuable explorative insights, which can support the choice of content and design of innovative writing programs and professional development programs. Here we refer to the result we discussed between sharing texts in class, realized learning time and teachers' personal teaching efficacy

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beliefs and/or low level of text assessment skills. Other kinds of studies, with larger samples, and perhaps less variables, could model these variables in structural equation models to provide information about causal relationships and the mediating and moderating functions of teachers' beliefs, professional skills, and attitudes on general instructional and domain-specific classroom practices.

Third, a potential limitation of this study might be a lack of representativeness of its participants. With respect to age and fulltime teaching positions, the teachers in our sample were representative for the population, but male teachers and public school teachers were overrepresented. However, there are no indications that these characteristics are related to differences in writing classroom practice. Moreover, a sizable number of key-findings were in line with earlier studies in the same context.

Future Research

We examined and evaluated the current practice of teaching writing in Dutch upper primary education and explored the relations between classroom practice, learning time, and teachers' beliefs and skills. The premise is that the more teachers implement communicative writing, process writing, and writing strategy instruction in their writing lessons, the better their students will learn to write. However, an obvious research question that remains to be answered is to what extent the implementation of these classroom practices really influences students' writing performance. That is certainly a component to include in future studies.

Another addition that we would recommend for the evaluation part, is a contextual valid standard: what is an acceptable or sufficient level of implementation? Before a national decision can be taken on what might best be included in writing innovations, given the current state of the art, more fine-grained studies of curriculum implementation are necessary. We would suggest to conduct a panel study, for instance via a Delphi procedure, in which the current practice of writing education is systematically evaluated in the light of the expectations and needs of relevant parties: teachers, parents, policymakers, and other stakeholders (Graham & Rijlaarsdam, 2016; Rijlaarsdam, 1992). Such a study might increase the credibility of the assessment, especially the norm-setting.

We designed this study as a "local" national study, to describe and evaluate writing education in a particular context. We applied instruments designed and tested in other countries, but adapted them to the specific national context. We used concepts such as "process writing," and "writing strategy instruction," but the semantics probably vary across linguistic regions. Concepts of what a good text entails partly vary across countries, as do concepts of what good writing education is. Therefore, our description of teachers' classroom practices and relations between teachers' beliefs and skills and their practices is probably not generalizable to other contexts (see also Graham, in press). However, what we wanted to contribute to research on writing in other contexts is to show that innovations in writing education might be based on the state of the art in that context, including relevant teachers' beliefs and skills. The need, expressed in many countries to improve writing education (Graham & Rijlaarsdam, 2016) calls for sustainable innovations that focus on teachers as change agents and that take into account their beliefs and skills. It would be very interesting if we could conduct these types of to some degree context bound studies on the state of the art in different countries, and then compare them to discover commonalities and variations between them.

Conclusions

There is still ample room for improvement in the teaching of writing in the upper grades of Dutch primary schools, in terms of classroom practice, allocated learning time, and efficacy beliefs. The outcomes of this study provide suggestions for the design of writing programs and professional development courses, which we will briefly delineate below.

First, writing course materials should incorporate elements of the advocated, "historically grounded" curriculum—communicative writing and process writing—because these approaches are not yet adequately taught in Dutch classrooms, integrated with a form of evidence-based writing strategy instruction.

Second, professional development programs can play a significant role in strengthening teachers' efficacy beliefs. This is important because teachers' efficacy beliefs in the domain of writing instruction are moderate, while these beliefs are positively related to teachers' writing classroom practices and to the number of writing lessons taught. Possibly, teachers' use of successful writing teaching practices is currently constrained by a lack of self-confidence and "know-how" in teaching writing. Teacher educators can strengthen teachers' efficacy by providing teachers with information and by demonstrating, discussing, and practicing how to apply relevant skills, for example, modeling the writing process, providing adequate feedback, and tracking students' development.

All in all, this study has shown in which respects writing education in the upper grades of Dutch primary schools needs to be improved and provides valuable clues for the design and implementation of future successful innovations.

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(*Appendix follows*)

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Appendix

Overview of Correlations Between Classroom Practice, Learning Time, and Teachers' Beliefs and Skills

Table A1
Correlations Between Teachers' Beliefs and Skills and Classroom Practice

	Classroom practice											
	Communicative writing				Process writing			Writing strategy instruction		High-quality instruction		
Variable	Publishing	Feedback	Discussing text quality	Writing task	Generating ideas	Organizing ideas	Revising texts	Modeling the writing process	Teaching writing strategies	Teaching learning strategies	Differentiating	Promoting active learning
Beliefs												
Writing as transmission	.04	.04	.10	.07	.10	.19	−.03	−.12	.16	−.01	−.01	−.16
Writing as transaction	.17	−.08	−.25	−.19	−.17	.18	.22	.23	−.15	.12	−.03	.17
Correct writing	−.02	−.33*	−.05	.01	.02	−.10	−.07	−.17	−.03	.09	.11	.17
Explicit instruction	.08	.06	−.16	−.13	−.08	.32*	.13	.11	.12	.06	−.11	.10
Natural learning	.18	−.09	−.06	.14	.09	.06	.18	.15	−.05	.06	−.08	.18
Personal teaching efficacy	.35**	.004	−.10	.19	−.09	.03	.02	.07	−.10	.35**	.23	.32*
General teaching efficacy	.08	.35**	−.07	−.03	.06	−.15	−.05	.18	.01	−.15	−.04	.06
Efficacy in teaching learning strategies	.10	−.03	.10	.12	−.26	−.06	.13	.18	.25	.83**	.62**	.61**
Efficacy in differentiating	.15	−.02	.10	.06	−.18	−.17	−.07	.06	.16	.70**	.87**	.69**
Efficacy in promoting active learning	.26	.08	.14	.11	−.16	−.22	.12	−.001	.08	.62**	.60**	.79**
Data-based decision making												
Text assessment skill	−.30*	.02	.21	.07	.42**	−.01	−.18	−.24	−.18	−.10	−.22	−.12
Tracking students' development	.14	.09	.11	.05	−.09	−.15	.09	.05	−.02	.30*	.39**	.31*
Evaluating lessons	.16	−.20	.06	−.09	−.10	−.11	.08	.07	.06	.27*	.27*	.30*

* $p < .05$. ** $p < .01$.

(*Appendix continues*)

Table A2
Correlations Between Classroom Practice and Learning Time

Variable	Allocated learning time: Number of lessons	Realized learning time
Communicative writing		
Publishing	.14	.33*
Feedback	.04	−.02
Discussing text quality	.19	.02
Writing task	.19	−.17
Process writing		
Generating ideas	−.03	.02
Organizing ideas	.02	−.07
Revising texts	.11	.09
Writing strategy instruction		
Modeling the writing process	−.02	.22
Teaching writing strategies	.06	.19
High quality instruction		
Teaching learning strategies	.14	.45**
Differentiating	.08	.31*
Promoting active learning	.04	.53**

* $p < .05$. ** $p < .01$.

Table A3
Correlations Between Teachers' Beliefs and Skills and Learning Time

Variable	Allocated learning time: Number of lessons	Realized learning time
Beliefs		
Writing as transmission	.21	−.30*
Writing as transaction	.17	.06
Correct writing	.06	−.08
Explicit instruction	−.01	.18
Natural learning	.07	.28*
Personal teaching efficacy	.07	.34*
General teaching efficacy	.04	.14
Efficacy in teaching learning strategies	.32*	.31*
Efficacy in differentiating	.23	.30*
Efficacy in promoting active learning	.28*	.35**
Data-based decision making		
Text assessment skill	−.12	−.10
Tracking students' development	.38**	.15
Evaluating lessons	.07	.23

* $p < .05$. ** $p < .01$.

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