Writing Instruction in First Grade: An Observational Study

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The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305A110484 to the University of Delaware. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

Coker, D., Jr., Farley-Ripple, E., Jackson, A., Wen, H., MacArthur, C., & Jennings, A. (2016). Writing instruction in first grade: an observational study. *Reading and Writing: An Interdisciplinary Journal, 29*(5), 793-832. http://doi.org/10.1007/s11145-015-9596-6

Abstract

As schools work to meet the ambitious Common Core State Standards in writing (Common Core State Standards Initiation, 2010), instructional approaches are likely to be examined. However, there is little research that describes the current state of instruction. This study was designed to expand the empirical base on writing instruction in first grade. Daylong observations were conducted four times during the year in 50 first-grade classrooms. Using a time-sampled, observational protocol, observers coded multiple dimensions of instruction, including grouping, instructional focus, teacher action, and student tasks. Results revealed that writing was commonly taught in whole-class settings with teachers presenting information and asking students questions. Considerable variability was observed at both the classroom and school level in the amount and focus of writing instruction and in student writing practice. Several moderate relationships were found between the instructional focus and the type of student practice. A few schools were identified with distinctive patterns in their approach to instruction and practice, signaling the potential importance of school-level factors. These findings reveal the inconsistent nature of first-grade writing instruction across classrooms and schools and point to instructional implications for teachers and schools.

Keywords: writing, instruction, first grade, observation

Writing Instruction in First Grade: An Observational Study

A central aim of recent reform efforts in US schools is to strengthen instruction. Many approaches have been attempted, but the implementation of the Common Core State Standards may represent one of the most widespread efforts to improve classroom instruction (Common Core State Standards Initiation, 2010). By establishing ambitious academic standards, the framers of the standards aim to strengthen students' academic performance in literacy and math. This effort may be particularly important for writing because US students' writing performance has been disappointing as indexed by the National Assessment of Educational Progress writing subtest (National Center for Education Statistics, 2012).

It seems likely that the standards can provide useful targets for student performance. However, they are silent on how teachers should help students meet those standards. The effort to improve writing instruction depends on a strong understanding of current instructional practices. Presently researchers have a limited understanding of the type and amount of writing instruction that occurs in schools. The goal of this observational study is to provide a more detailed picture of first-grade writing instruction.

Writing & Reading Instruction

Writing and reading are often conceptualized as separate but complementary processes (Shanahan, 2006). Despite their interdependence, reading research is generally recognized as better developed. For example, there is wide agreement on the importance of instruction in skills such as phonological awareness and letter-sound relationships as well as the importance of fluency and reading comprehension instruction, which have

been outlined in key reports (NICHD, 2000; Snow, Burns, & Griffin, 1998). These publications have been influential in shaping teachers' practice and have framed a consensus position in terms of reading instruction.

Writing research is not as extensive, but the body of instructionally relevant research is growing. In the last decade, several meta-analyses and consensus reports have summarized the growing evidence on effective writing instruction in elementary school (Graham & Hebert, 2010; Graham, McKeown, Kiuhara, & Harris, 2012). Of particular utility is a practice guide published by the Institute of Education Sciences (Graham, Bollinger, et al., 2012), which reviewed the available evidence on early writing instruction. The publication of this report signaled that instructional research was sufficiently developed to warrant a synthesis and a set of practical recommendations.

The authors offered the following four instructional recommendations: 1) include daily time for writing of at least one hour, 2) provide instruction in the writing process for various purposes, 3) teach word- and sentence-level skills to fluency (e.g., spelling, handwriting, word processing, and sentence construction), and 4) foster engagement and community in the writing classroom. The recommendations provide a framework for instruction and provide teachers with guidance on how to engage in evidence-based writing instruction. In order for students to benefit from high quality instruction, teachers must employ these practices in the classroom. However, it is difficult to determine how teachers approach writing instruction because the data on classroom writing practices are sparse (Cutler & Graham, 2008).

Classroom Writing Instruction

Much of the current data on primary-grade writing instruction is from teacher surveys. In a series of studies, Graham and his colleagues mailed instructional surveys to primary-grade teachers across the U. S. (Cutler & Graham, 2008; Graham, Harris, Fink-Chorzempa & MacArthur, 2003; Graham, Harris, Mason, Fink-Chorzempa, Moran, & Saddler, 2008; Graham, Morphy, Harris, Fink-Chorzempa, Saddler, Moran, & Mason, 2008). One consistent finding across the survey studies is the amount of variability in time devoted to instruction in writing skills and processes. For example, Cutler and Graham, (2008) surveyed primary-grade teachers who reported wide variability in the amount of time each week for instruction in spelling (74 mins, SD = 61.6), grammar (80 mins, SD = 76.7), handwriting (46 mins, SD = 61.6), planning (38 mins, SD = 28.3), and revising (33 mins, SD = 35). The average amount of instructional time allocated to handwriting, spelling, planning and revising varied in other survey studies, but in all of the studies, high variability around the average was consistent with Cutler and Graham's (2008) results (Graham, Harris, Fink-Chorzempa & MacArthur, 2003; Graham, Harris, Mason, et al., 2008; Graham, Morphy, et al., 2008).

Student grouping also seemed to vary by teacher and by the type of writing instruction. In Cutler and Graham's (2008) survey, primary-grade teachers reported teaching writing in a whole-class setting most of the time, with small group (23%) and individual instruction (24%) occurring less frequently, but there was considerable variation among teachers. However, when asked specifically about handwriting instruction, teachers reported that whole-class instruction was used 93% of the time (Graham, Harris, Mason, et al., 2008). In a survey of the instructional adaptations of primary-grade teachers, Graham, Harris, Fink-Chorzempa and MacArthur (2003) found that over half of the respondents reported that small-group instruction and individual support were offered when needed.

The content of writing instruction also reflected a lack of consistency among teachers. Primary-grade teachers reported spending considerable instructional time teaching grammar and writing skills with more time devoted to these skills in lower grades. Instruction in writing processes or strategies also occurred, usually weekly. While nearly all teachers engaged in both skills and process instruction, they varied widely in how much instruction was offered. The extensive variability in teacher reports may be partially explained by the lack of a commercial curriculum. Most teachers (65%) reported that their instructional approach to handwriting, spelling and composing was developed in house. There was also wide variability among teachers in the use of commercial curricula as 137 different programs were identified (Cutler & Graham, 2008).

Surveys of primary-grade teachers in the last decade have revealed that teachers recognize the importance of writing instruction but that there was little consistency in instructional content or practices. One limitation of surveys is that they depend on the accuracy of teachers' responses, which may be influenced by the difficulty of estimating the frequency of specific practices or by the desire to provide socially acceptable answers. Another limitation of surveys is that there may be variation in how respondents interpret or understand the individual items. For example, questions about spelling instruction may be designed to determine how frequently instruction in spelling is provided. Respondents may interpret these items as queries about how often students receive spelling homework or have spelling tests. Some of these limitations associated with survey research are difficult to overcome, so researchers depend on evidence from observational studies to corroborate the accuracy of survey data.

Observational Studies of Early Writing

The findings from observational studies have provided researchers with powerful insight into the strengths and limitations of literacy instruction. Studies of literacy instruction in effective schools have identified the importance of keeping students engaged and providing students with opportunities to write extended text (Bohn, Roehrig, & Pressley, 2004; Wharton-McDonald, Pressley, & Mistretta Hampston, 1998). These results suggested that teachers with high levels of engagement provided opportunities for integrated reading and writing instruction, provided students with scaffolded assistance, and supported students' self-regulation. However, these studies were not representative as they focused on exemplary classrooms rather than typical ones.

Although a number of large-scale observational studies of literacy instruction have been conducted in primary-grade classrooms, a limited number have addressed writing instruction. Taylor, Pearson, Peterson, & Rodriguez (2003), in a study of 88 teachers in grades 1-5, included two observational items that referenced writing: higher-order questions or writing about text, and lower-order questions or writing. In first grade, higher levels of reading comprehension instruction (or writing about text) and less time simply telling students about content was associated with better literacy outcomes.

Kim, Al Otaiba, Sidler, and Gruelich (2013) investigated child factors and instructional quality as predictors of first-grade writing. Using videos of the 90-minute literacy block in 34 classrooms, the authors coded instructional quality. The findings suggested that teacher responsiveness was related to writing quality, but there was little information provided about the nature and diversity of instruction. Two other observational studies of first-grade literacy instruction (Connor, Morrison, & Katch, 2004; Foorman, Schatschneider, Eakin, Fletcher, Moats, & Francis, 2006) included a few

codes about writing instruction, but neither study reported any findings related to writing instruction.

One recent study provides direct observations of writing instruction and practice (Puranik, Al Otaiba, Sidler, & Greulich, 2014). During the kindergarten year, two 90-minute literacy blocks were videotaped. The amount of time for writing instruction and practice during the ELA block averaged 6.1 minutes in the fall of the year and 10.4 minutes in the spring. Most of this time was devoted to student practice, with handwriting instruction being the most prevalent activity averaging about a minute in the fall and two minutes in the spring. Similar to results from teacher surveys, the observations uncovered considerable variability among teachers. In addition, Puranik et al. (2014) also found variability in both instruction and practice among the nine schools in the sample.

The surveys and observational studies have provided insight into the nature and variability of early writing instruction, but a number of questions remain unanswered. For example, the observational studies have limited data collection to the part of the school day reserved for literacy instruction, which is commonly 90 minutes long in the U.S. The authors of the IES practice guide recommend providing opportunities for writing instruction and practice across the school day. However, little is currently known about writing practices or writing-related instruction during other parts of the school day. Similarly, all of the relevant results suggest that there is wide variation among teachers in writing instruction and practice. However, it is not clear whether most of the variation exists between teachers or between schools.

Current Study

The goal of the current study is to contribute to our understanding of early writing instruction. Through the use of direct observations across the school year, we hoped to provide a clearer picture of the nature and variability of writing practices and instruction. Each participating classroom was observed four times during the first-grade year. It is difficult to be certain how many observations are needed to capture instruction fully, but other observational studies in elementary classrooms have analyzed data from three or fewer time points, which appeared adequate for capturing typical classroom instruction and finding meaningful correlations between instruction and student gains in reading (Connor et al., 2004; Foorman et al., 2006; Hoffman, Sailors, Duffy, & Beretvas 2004; Kim et al., 2013; Silverman & Crandall, 2010; Taylor et al., 2003).

The design of the study allows us to address some of the limitations in the existing research. We hoped to provide a comprehensive picture of writing instruction and practices in first grade by using full-day observations. The observers remained in the classroom all day, and whenever the classroom teacher was engaged in academic content, the observers continued their work.

Additionally the sample included 50 classrooms from 13 schools. This sample is large enough to estimate the amount of variability associated with classrooms and schools.

Research questions:

1. How is writing instruction conducted in first grade including allocated time, writing tasks, and instructional methods?
    a. How much instructional variation is there across classrooms and schools?
2. How much writing do first-graders do including allocated time, task, and complexity?
    a. How much variation in writing practice is there across classrooms and schools?
3. Are there relationships between classroom writing instruction and students' writing practices?

Method

In order to address the research questions, this study utilized a cross-sectional observational design to document teachers' instructional practice using a comprehensive instructional observation protocol developed as part of this research project. Three years were used for data collection with the first year spent on developing the observational protocol and the other two years devoted for data collection.

Participants

Participating schools were selected from three school districts in the Mid-Atlantic region of the United States. These districts are demographically diverse, medium-size districts (ranging from 10,000-17,400 students) in urban and suburban neighborhoods. District personnel recommended schools for the project based on our desire to have a representative sample and on principals' willingness to participate. Within the schools, all first-grade teachers were invited to participate by the research team. The final sample includes 57 teachers from 50 first-grade classrooms. Three classrooms used a co-teaching

model with two teachers in the classroom. In four classrooms, the original classroom teachers were replaced with long-term substitutes. Teacher demographic information is presented in Table 1. Those teachers who participated were given a $200 honorarium each semester for the year in which they were observed. Although teachers were recruited as participants in the study, we were interested in students' instructional experiences in the classroom. As a result, classrooms implementing a co-teaching model or those with a long-term substitute were included in the analysis.

Teachers in our sample classrooms used a range of reading curricula. Most commonly teachers utilized Houghton Mifflin's *Journey's* (n = 32) or Scott Foresman's *Reading Street* (n = 5). Ten classrooms had no reading curriculum and three classrooms used *Discovery Phonics*. For writing instruction 22 teachers used a writing curriculum that was integrated within the reading curriculum. Five teachers also used an adaptable writing curriculum resource, *Explorations in Nonfiction Writing* (Stead & Hoyt, 2011). Almost half of the teachers did not use a standard writing curriculum (n = 23).

Development of Classroom Observational Protocol

A year was devoted to the development of the classroom observation protocol. The observation protocol development involved identifying applicable writing codes from the literature and adding reading codes as well as classroom management codes.

In order to make our observational protocol sensitive to writing instruction, it was necessary to review the research on effective instructional practices for writing. Our review uncovered a number of well-supported instructional practices for writing in the early grades. These practices include teaching spelling and handwriting (Berninger, et al., 1997; Berninger, et al., 1998; Graham, Harris, & Fink, 2000; Graham, Harris, & Fink-

Chorzempa, 2002; Jones & Christensen, 1999), teaching process writing, modeling how to write, asking substantive questions, providing opportunities for students to write, and maintaining student engagement (Bohn, Roehrig, & Pressley, 2004; Wharton-McDonald, Pressley, & Hampston, 1998; Taylor, Pearson, Peterson, & Rodriguez, 2003).

It was also important to include codes for the kinds of writing practices that teachers were likely to use, even if those practices had not been identified as effective. To identify writing codes, we engaged in a review of observational studies of literacy instruction in primary-grade classrooms (e.g., Baker, Gersten, Haager, & Dingle, 2006; Bitter, O'Day, Gubbins, & Socias, 2009; Connor et al., 2004; 2009; Foorman et al., 2006; Hoffman et al., 2004; Taylor et al., 2003). These studies were designed to capture reading instruction and contained few codes relevant for writing instruction. The search was broadened to include survey research on early writing instruction. In their responses to surveys, teachers reported engaging in a wide range of instructional activities, including teaching grammar and lower-level skills, sharing both teacher and student writing, and conferencing with students (Cutler & Graham, 2008). Teachers also reported teaching primarily in whole-class settings, but small-group and individual instruction was occasionally used (Cutler & Graham, 2008; Graham, Harris, Fink-Chrozempa, & MacArthur, 2003). In total, sixteen writing-focused codes (e.g., editing, prewriting, punctuation, spelling, handwriting) were included in our observational protocol based on our reading of the instructional and survey research.

As reading and writing are interrelated literacy activities (Fitzgerald & Shanahan, 2000; Shanahan, MacArthur, Graham, & Fitzgerald, 2006; Tierney & Shanahan, 1991), it was important to also capture reading instruction in our observations. Our observational

protocol borrowed reading codes from the Center for the Improvement of Early Reading Achievement (CIERA) system (Taylor & Pearson, 2000; Taylor et al., 2003). The protocol included nine reading focused codes (e.g., comprehension, read aloud, vocabulary, word recognition). In addition, instructional management codes (e.g. teacher versus student managed) developed by Connor and colleagues were also included because of their relationship with student reading outcomes (Connor, Morrison, Fishman, Ponitz, Glasney, Underwood, et al., 2009; Connor, Morrison & Katch, 2004).

In addition to capturing teachers' instructional practices in reading and writing, we also wanted to understand students' reading and writing practices in the classroom. A category of codes, called the *Nature of Student Activity*, was developed. There were ten possible codes that indexed reading, writing, and speaking tasks and behaviors. For example, writing codes included a task that involved writing a single correct answer or copying a text, responding to a reading, and composing an open response. Reading codes included reading, reading chorally and taking turns reading. Student reading and writing activities can vary at the level of language used, so each reading and writing activity was coded for its level of language (letters, words, sentence, or connected text). During situations when students were using mixed levels of language, the code for the highest level of language was selected.

Guided by research on classroom observation, our protocol borrowed a number of widely used features. These included codes for reading and classroom management. In addition, the unit of analysis for the observational protocol was the student group (whole class, small group or individual), and a time-sampling approach to data collection was adopted. During the school day, observers coded classroom instruction in five-minute

intervals. During the first three minutes of the time block, observers watched instruction carefully, and during the next two minutes, they selected the appropriate codes.

Refining the observational protocol. Reliability and validity of the protocol were established through an iterative process. In order to test whether the codes were able to capture classroom instruction in first grade, we first coded YouTube videos of first-grade instruction posted by teachers. Then the research team engaged in a process of field-testing the observational protocol in seven first-grade pilot classrooms in four different schools. Two or three coders simultaneously coded the classroom activities, and their results were compared to assess the level of agreement. This process was iterative in nature and helped us identify problematic codes and clarify the description of the codes for observers. This process also brought about changes in the codes that were initially unable to capture the classroom activities. For example, marking response was added to the level of language options in the *Nature of Student Activity* to describe students' writing activity when they are simply completing multiple-choice worksheets. This iterative process of viewing instructional videos and piloting the protocol in classrooms allowed us to establish face validity for the protocol.

The process of refining our coding manual used a paper and pencil system. Once the coding system appeared comprehensive enough to depict instruction accurately, an iPad-based application was developed. The application, named "iSeeNCode," was developed and designed by Professor Fred Hofstetter, a colleague with extensive experience creating iPad-based applications. iSeeNCode facilitates data collection, data entry and data organization. iSeeNCode is also a time-sampled coding system that

prompts observers to code in five-minute intervals. The application also enables codes to be saved in a spreadsheet and then be exported easily for analysis after the observation.

After refining the protocol and converting it in to an iPad application, the classroom observation protocol included 111 individual codes organized into the following seven categories: 1) Grouping (whole class, small group, pair, individual); 2) Management of instruction (teacher-managed, teacher-student interactive management, peer-collaborative management, child-managed); 3) Broad literacy focus including reading versus writing focus and code versus meaning focus (e.g., code includes transcription and decoding; meaning includes vocabulary, composing, comprehension); 4) Specific focus (e.g., subcategories within the writing focus would include code-focus activities like spelling and handwriting, and meaning-focus activities like writing stories, planning, and revising); 5) Materials (e.g., narrative or informative texts, displays, pictures); 6) Teacher instructional mode (e.g., presentation, discussion, modeling process, conferencing, managing/checking work); and (7) The nature of student activity (e.g. possible options encompassing reading, writing and speaking such as correct/copied written response, drawing, oral response, reading chorally) with the level of language coded for each activity.

The seven categories of codes in the protocol were grounded in theory and the existing observational research. Compared to prior observational studies, the codes in the observational protocol were designed to be sufficiently comprehensive to capture the major dimensions of classroom instruction and to help us understand writing instruction in first grade.

Training Observers

Experienced classroom teachers were recruited and trained to conduct the observations. During the first year of data collection, observers participated in a three-day training that involved understanding the purposes of the study, reading and discussing the procedures in the coding manual and practicing coding videos of classroom instruction. The practice of classroom instruction video coding started with master coder's demonstration of the coding process and the use of the iPad system. Then all observers viewed, discussed, and coded 3-minute video segments together. Last observers coded video segments individually before discussion. All the practices entailed comparing codes and discussing any coding issues or questions about a specific activity. The coding disagreements were resolved by the master coder (the first author). After observers demonstrated that they could code with at least 80% agreement with the master coder in the training session during a 30-minute video segment, a field test was conducted in a local classroom. Each observer conducted an observation together with the master coder during the 90-minute literacy block. Then kappa and percent-agreement were calculated to evaluate inter-rater reliability. Both kappa and percent agreement showed that all observers reached a minimum threshold of .80. Average agreement within categories of codes (focus, grouping, management, etc) ranged from .87 to .96 with an overall average of .92.

To guard against observer drift over time, two practices were adopted. First, during both years of data collection reliability checks occurred during each of the four observation periods. Once again, observers were required to meet a minimum of .8 agreement with the master coder. Secondly, at the start of the second year of data collection, a reliability check-up was conducted. This involved a half-day classroom

session followed by video and classroom field testing. Before observers could collect data, they were required to reach the threshold of .80 agreement with the master coder.

Data

Our data were collected in 50 classrooms over two years time. Data from 21 classrooms at five schools were collected for the school year of Fall 2012 to Spring 2013. For the school year of Fall 2013 to Spring 2014, data from 29 classrooms from nine schools were collected. Four waves of observations were conducted in each classroom. The observations were evenly distributed across the school year; they began in late October and were completed by the end of May. The observations were scheduled at the teachers' convenience. The observations lasted all day and were not limited to language arts blocks so as to capture any opportunities for students to write across a school day. All academic instruction was observed for each classroom and codes were recorded every 5 minutes. Observers watched classroom instruction and took field notes as needed for three minutes, and then they coded for two minutes. Using this observational instrument, the collected data yielded indicators of instructional practices observed at the group level within each 5-minute block. In total, 200 observation days with 1134 5-minute observation blocks (M = 221 per classroom) were collected for analysis. Each block included binary codes indicating the presence or absence of 111 instructional characteristics included in the observational instrument. To reduce this data, we calculated the percentage of blocks in each day in which a practice was observed. This provided an indication of what kinds of instructional practices occurred throughout the school day. These analyses are based on the proportion of blocks in which practices are

observed in an observation, averaged across observation days to ascertain an average by teacher.

Analysis

For the first two research questions, the goal is to examine the amount of time that teachers devoted to writing instruction and the amount of time that students used for writing (writing practice). In our data, each 5-minute block was coded for the focus of instruction and the type of writing practice. Within each observation day, we calculated both the number of blocks (a measure of time to which students are exposed to writing activity) and the proportion of blocks (a standardized measure of time) dedicated to writing instruction and practice. The dataset ultimately included the number and proportion of blocks dedicated to different writing foci, grouping strategies, instructional modes, and the types of writing in which students were engaged during the day.

For both research questions we explored writing instruction and writing practice by presenting minimum, maximum, mean, and standard deviation across classrooms. The secondary questions pertain to exploring variability between teachers and between schools. We conducted a proportion of variance analysis on a series of dependent variables representing focus of writing instruction, grouping, teacher mode, and types of student writing practice. We utilized HLM7 to run two-level null models with teachers nested within schools. Resulting variance components were used to establish the proportion of variability in classroom instructional practices that occurred between observations, between teachers, and between schools. We further conducted analysis of variance to determine whether there were school differences in practice variables. We then used Tukey's post-hoc analyses to identify schools with significant differences. Our

third research question examines the relationship between writing instruction and writing practice, and these were explored by calculating the Pearson's correlation between the proportion of time spent on various writing foci, instructional mode, and grouping and the proportion of time students' engaged in particular forms and levels of writing practice.

Results

Descriptive analyses of time allocated to writing instruction, including the focus of writing instruction, grouping, and teacher instructional mode are presented in Tables 2 and 3. Overall, writing instruction was observed, on average across teachers, in 9.6% (SD = 4.6%, min = 2%, max = 27%) of the observation blocks. With an average number of blocks per observation day of 55, this translates to up to 25 minutes of writing instruction during a day. However, the percent of time allocated varied by teacher, with actual average allocation ranging from 2% to 27% with a standard deviation of 4.6%. This range is large and indicates meaningful differences among teachers in terms of allocation of time to writing instruction.

The focus of writing instruction – that is, the content of writing instruction – is wide ranging. We observed zero lessons focused on keyboarding, while spelling was the most frequently observed, with on average 19.9% of time devoted to writing instruction focused on spelling To simplify analyses, we combined several writing foci into larger categories including skills (consisting of spelling, grammar, handwriting, punctuation/capitalization, and keyboarding), composition (consisting of individual/collaborative informative/narrative foci), process (consisting of process writing, revising, and editing), and sharing (consisting of sharing by students and sharing by teachers). Among these categories, skills were, on average, the most frequent focus of

instruction (mean = 32% of writing instruction blocks) while sharing was the least frequent (mean = 9.7% of writing instruction blocks). Time allocated to specific writing foci varied considerably as evidenced by sizable standard deviations and ranges.

Instructional methods, which are inclusive of teacher mode and grouping, illustrate that the dominant model of writing instruction was for the teacher to engage in whole group instruction (mean = 82% of writing instruction blocks) featuring either teacher presentation (mean = 45% of writing instruction blocks) or teacher-led question and answer (mean = 66% of writing instruction blocks). Further, there were classrooms where all observed writing instruction occurred in that format. Observations revealed far fewer instances of other teacher modes of instruction, especially modeling (mean = 3.9% of writing instruction blocks), and grouping strategies such as pairing students (mean = 2.4% of writing instruction blocks), although the range suggests that some teachers were regularly utilizing other instructional methods.

The findings revealed a wide range of instructional practices with respect to writing, and we also sought to assess the variability across classrooms and schools. Decomposition of variance analyses conducted using null HLM models are presented in Figure 1 and Figure 2, and statistically significant differences were identified using ANOVA. The majority of variance across writing instruction and focus of writing instruction variables was between classrooms, with few exceptions. Emphasis on punctuation/capitalization was primarily at the school level (61.4% of variance, $f = 5.315$, $p = .000$), as was emphasis on collaborative narrative instruction (58.6% of variance, $f = 8.246$, $p = .000$). Approximately a third of variance was observed between schools for revising ($f = 2.565$, $p = .014$), editing ($f = 2.849$, $p = .007$), textual features ($f = 2.669$, p

= .011), and other foci (f = 2.823, p = .008), as well as for our aggregate categories of skills (f = 3.124, p = .004) and composition (f = 2.684, p = .011). In contrast, all or nearly all of the variance was located among classrooms for handwriting, vocabulary, individual narrative and informative, collaborative informative, sharing by teachers, assessment, and writing instruction occurring as part of reading instruction. Fewer instructional modes and grouping strategies were statistically significantly different between schools. A third of the variance in time allocated to discussion (f = 2.700, p = .010) and small groups (f = 2.666, p = .011) occurred between schools, while little to no variability was found between schools for question and answer, checking/managing, other modes, large grouping, and grouping as individuals.

Tukey's post-hoc analyses of ANOVA results were examined to identify any patterns in school differences in writing instruction. One school, School 5, was more likely to have an "other" instructional focus (44% of blocks, mean difference 36.4%) and to utilize discussion more than other schools (12.5% of blocks, mean difference of 12.4%). Further examination of the field notes for those blocks coded as "other" in School 5 revealed that these blocks were from a spring observation. On that day, students and the teacher were examining previously completed writing tasks and reflecting on their progress during the school year. This instructional focus is also consistent with higher levels of discussion given the nature of the activity. Additionally, School 1 was more likely to focus on revising (15.8% of blocks, mean difference 14.2%) and less likely to focus on skills in general (6.45%, mean difference 27.5%). Other significant school differences exhibited no interpretable pattern.

Our second research question attends to the writing tasks students engage in during the school day. In terms of time allocated to writing practice, teachers on average engaged at least some students in writing during 46.5% of observation blocks (SD = 7.8%, min = 29%, max = 64%). This translates to student writing occurring during 125 minutes of the day. Descriptive statistics about the nature of student writing are presented in Table 4. On average, students spent about a third of their time writing words (mean = 31.1% of student writing blocks) in contrast to only a quarter or a fifth of their time for sentence level or connected text respectively. Variability in these averages is sizeable; however, some classroom observations revealed, on average, no opportunity to write connected text and more than half of writing to be at the word level. Students were most often engaged in correct response or copying work (mean = 40.9% of student writing blocks) rather than writing about text (mean = 12% of student writing blocks) or open writing opportunities (mean = 25.2% of student writing blocks). The standard deviations and ranges indicate notable variability across classrooms, with as much as 70% of writing to be correct/copy or conversely the same proportion dedicated to open writing.

HLM and ANOVA analyses indicated greater variability among schools in student writing than in writing instruction, as evidenced in Figure 3. For only one variable – allocation of time to sentence-level writing – was nearly all the variability among classrooms. More than half the variability in writing connected text occurred between schools ($f = 6.922$, $p = .000$) with significant school variability also observed for open writing ($f = 3.808$, $p = .001$), writing about text ($f = 3.068$, $p = .004$), correct/copy tasks ($f = 2.834$, $p = .007$), and overall allocation of time to student writing ($f = 2.033$, $p = .047$).

Tukey's post hoc analyses revealed notable patterns in school differences. In School 1, where we previously noted greater attention to revising and less attention to skills, students were more frequently engaged in writing connected text (48.3% of writing blocks, mean difference 30.6%) and open writing (49.9% of writing blocks, mean difference 26.7%). Additionally, School 4, which exhibited no notable difference in writing instruction patterns, also engaged students more frequently in writing connected text (39.8% of writing blocks, mean difference 22.8%) and had similar levels of engagement in open writing as School 1 (no statistically significant difference).

Having explored writing instruction and writing practice, our third research question addresses the relationship between these two dimensions of writing in first grade classrooms. Correlation analyses presented in Tables 5,6, and 7 report the relationship between student writing (row variables) and categories of the focus of writing instruction and instructional methods (column variables). Results indicated a significant, moderate, and negative relationship between skills instruction and time allocated to sentence-level, connected text, and open writing. Process writing was positively and moderately associated with time spent on sentence level writing. There were no statistically significant correlations between time allocated to various student-writing tasks and either the instructional mode or grouping strategies used by teachers.

Discussion

In this study, our goal was to provide a comprehensive overview of writing instruction in first grade. Given that the implementation of the CCSS has raised the academic demands for students in the US, many schools will need to enhance their approach to writing instruction to help students meet those standards. It seems likely that

teachers and administrators who are concerned about students' writing achievement would incorporate recommended instructional practices into the classroom (Graham et al., 2012). However little current research has explored how writing is currently taught and whether teachers are incorporating these recommendations into their practice.

General Patterns

Our results indicated that teachers spent about 25 minutes a day, on average, teaching writing. This finding is a bit lower than the results in Cutler and Graham's (2008) survey of primary grade teachers who reported teaching writing for approximately 50 minutes per day. In that study, teachers from across the primary grades (grades 1-3) were surveyed, and it may be that teachers in higher grades devoted more time to instruction than teachers in first grade. The divergent the results may also be related to differences in the accuracy of surveys and direct observations.

Compared to the findings from Puranik et al.'s (2014) observations of kindergarten writing instruction, our results show more time for writing instruction. In kindergarten, teachers averaged only about 8 minutes of writing instruction (6.1 in the fall and 10.5 in the winter). There are two possible explanations for these differences. First, kindergarten teachers may teach less writing because their students may not have well-developed transcription skills. As a result, instruction in planning, revising or composing may not be common in many kindergarten classrooms. However, instruction in handwriting and spelling might well have been effective in kindergarten, and as Puranik et al. (2014) noted, little skills instruction was observed.

In addition, differences between our results and those found by Puranik et al. may reflect differences in the scope of the observations. Observers in our study remained

present throughout the school day in order to capture writing instruction that might occur during the reading block, the writing lesson or any other time during the day. In contrast, the observations in Puranik et al.'s kindergarten study were limited to the language arts block. It is possible that their results underestimated the amount of instructional time for writing because additional instruction—either planned or incidental—may have occurred outside the language arts block.

When we examined how teachers used writing instruction, skills instruction occurred most frequently (33%), followed closely by process writing instruction (28%), composition instruction (17%) and sharing (10%). Interestingly, the skills instruction was dominated by spelling and grammar instruction. Very little attention was given to handwriting instruction (e.g., 0.8% of writing instruction involved handwriting). Cutler and Graham (2008) also found that teachers focused more time on skills instruction than process writing or other instructional areas. However 59% of the participants reported teaching handwriting at least several times a week, which differed considerably from our observations. Survey studies also reported that teachers adopted a mixed or balanced approach to instruction that included attention to both skills and process (Cutler & Graham, 2008; Graham, Harris, MacArthur, & Fink, 2002). Our results provide further support for the claim that teachers recognize the value of both types of instruction and do not limit their instruction to one approach or another.

Our results suggested that first-grade teachers organized writing instruction in a fairly uniform way. Nearly all instruction was delivered in whole-class groupings (82.4% on average), and teachers relied on presentation and questions and answers to structure writing lessons. Certainly some variation existed in this pattern, which we discuss in the

next section, but largely, teachers presented information to students and asked them to respond orally to questions, but there was very little modeling of writing processes or student discussions. In Cutler and Graham's (2008) survey, teachers also reported using whole-class instruction as the most common way to organize instruction, but to a much lesser degree (56%).

Our observations also allowed us to estimate the amount of time students engaged in writing practice, the nature of the writing activity, and at what level of language students wrote. Overall, it appeared that students wrote a great deal in first grade as some writing was evident in 46.5 % of the instructional blocks (or 125 minutes a day), on average. Certainly these results appear encouraging, but it is important to recognize that the measure of student writing is likely inflated. During the observations, the observers were not following individual students. Instead, the unit of analysis was the group, which could be a whole class, small group, or an individual student. If any member of the group was writing, then the writing practice codes were entered for that block. In some blocks, there may have only been one student actually writing. As it a result, it is likely that the observations of the amount of practice time overestimate the true value of time devoted to writing practice for every student.

Of the time that students spent writing, a large portion of it involved copying text or responding to a question that had a single correct answer. However, a quarter of the writing tasks were open writing tasks, which include activities when students are expected to generate content. Across these activities, observers also coded the level of language of the task. Students were expected to write single words (31.1%), sentences (24.1%), or connected text (21.1%). However, it is important to note that these categories

are not mutually exclusive as more than more task could be coded during a writing block. Even keeping these limitations in mind, it appears that students engaged in a range of writing tasks.

Variability in Writing Instruction

Across nearly all of the variables that were investigated in this study there was considerable variability. Everything from the amount of time for writing instruction to the instructional foci, to the amount of student writing practice revealed large variability.

The pervasive variability in our results could point to two divergent conclusions. The first could be that the observational data are not reliable, and as a result, do not provide an accurate representation of first-grade writing instruction. However, we have considered this possibility, and there are several reasons to doubt it. First, great care was taken to establish inter-rater agreement among the observers. As detailed in the methods section, the observers received extensive training, which included video examples, live classroom training and reliability checks for each observational wave. A second reason that the observations appear reliable is that these results replicate the surveys (Cutler & Graham, 2008) and observations (Puranik et al., 2014) of early writing.

The second, and in our view more likely conclusion to be drawn is that early writing instruction differs considerably across schools and classrooms. Most of the variability in the instructional focus was between classrooms. It ranged from about 38% to 100% (see Figure 1). High levels of classroom variability signal that writing instruction has not been prioritized in schools and that teachers may be uncertain about how best to teach writing. If writing instruction were a more important component of the curriculum, it is likely that teachers would have common curricular supports, such as

spelling, handwriting and composing programs or more time devoted to instruction in these areas. Wide classroom differences may also point to teachers' uncertainty about writing instruction. In schools without curricular support, teachers are left to figure out writing instruction on their own. In situations like that, it seems likely that wide classroom differences would emerge in how writing is taught and in the amount and type of writing opportunities that student have.

Although most of the variability was associated with classrooms, there was considerable school variability as well. Some practices such as focusing on punctuation and capitalization, and engaging in collaborative narratives had more than 50% of the variability associated with the school. Student writing practices, such as time for student writing, open writing tasks, and writing connected text also had a significant amount of variability between schools. When we looked more closely at school differences, some significant differences emerged on several variables. For example, teachers at one school in our sample (School 1) devoted less time to skills instruction, more to revising, open writing tasks, and writing connected text. Another school (School 5) had more discussion during writing lessons than other schools.

From our data it is not clear why the instructional practices in School 1, for example, were different from the other schools. It may have been that teachers planned their writing lessons together or that the district had provided effective professional development for the teachers in writing. However, these differences suggest that it may be possible to implement school-level initiatives that influence how writing is taught. Certainly findings from comprehensive reform models support this conclusion (Borman, Hewes, Overman, & Brown, 2003).

Relations Between Instructional Methods and Student Writing Practice

There were, however, some moderate relationships between the foci of writing instruction and student writing practice (Table 5). Time devoted to skills instruction was negatively related to open writing tasks, writing connected text and writing sentences. A second relationship was found between instruction focused on process writing and time spent writing texts that were sentence length.

These relationships suggest that instruction focused on spelling, grammar, capitalization, punctuation, and handwriting is not associated having students write texts that are longer than a word. Given that skills instruction targets word or subword units, it is not surprising to find negative relationship between skills instruction and practice with longer texts. Conversely, when instruction targets the process of composing, students tend to write longer texts, but the association was stronger for sentence-level texts than for connected text. This is somewhat surprising since process writing instruction typically targets discourse units larger than a sentence. It may be that the challenges associated with writing longer texts were substantial for first graders. As a result, much of their writing was at the sentence level rather than consisting of connected text.

Instruction in both skills and process writing is recommended in first grade as is writing practice at all levels of language (Graham et al., 2012). These results provide some evidence that balancing skills and process instruction may be important for providing students with opportunities to words, sentences and connected text in the classroom.

It seemed likely that patterns would emerge between teachers' instructional methods and the types of writing tasks that students completed in school. Somewhat

surprisingly, there were no significant correlations between student grouping, teachers' instructional mode and students' writing practice (Tables 8 and 9). One explanation for these findings is that instruction and writing practice were not closely aligned in our data. As explained earlier, the observers coded writing instruction and practice across the school day, and there was much more evidence of writing practice than writing instruction in our sample. When teachers and administrators consider ways to strengthen writing instruction, it may be beneficial to consider instruction and practice separately. For example, opportunities for writing practice can be built into content-area lessons such as science or social studies. While these lessons may not be suitable for spelling or other types or writing instruction, students may benefit from cross-curricular opportunities to practice. By leveraging writing opportunities across the school day, teachers may find it easier to meet current recommendations for writing instruction.

Implications

In order to address the demanding writing standards of the CCSS, more writing instruction is needed. The IES Practice Guide recommends an hour a day for instruction and practice (Graham et al., 2012). Our data indicate that teachers in some classrooms were clearly meeting these standards, but many others were not.

Providing instruction in both writing skills and processes has been recommended for enhancing students' writing performance (Graham et al., 2012). In our sample, skills instruction was a focus of writing instruction; however, some important skills such as handwriting and keyboarding received very little attention. As teachers examine their approach to writing instruction, it is important to include these skills to the extent that students need them. Similarly, we urge attention to all the components of the writing

process (e.g., planning, revising and editing) as well as strategic instruction in these processes.

As schools look for ways to increase the amount of student writing, teachers may find it useful to look beyond the literacy block for writing opportunities. For example, tasks like responding to a text in social studies or writing descriptions of natural phenomena in science class can provide more writing practice for students. Increasing the amount of writing in the content areas can be a way to deepen content-area learning while expanding writing activities.

One of the more striking findings of this study is the amount of variability across classrooms and schools. To address this issue, schools need to adopt effective instructional approaches and to provide teachers with extensive training in writing development and instruction. In addition to the content of instruction, teachers also need support making time to teach writing. Administrators who value writing should help grade-level teams protect time for uninterrupted writing instruction in their daily schedule. Principals and other administrators can also prioritize writing across the school day.

Limitations

There are several limitations to this study that deserve attention. First, the way that student writing practice was measured likely resulted in overestimates of the time spent on writing. As discussed previously, writing tasks were coded when any student in the group was writing. From these data, it is impossible to tell whether all students were engaged in writing. One approach that could provide a more precise method to code student writing practice is analysis of classroom videos. This was not feasible in a study of this size; however,

in future work researchers should consider video taping classroom activities to determine the nature of student writing more accurately.

In this study, participating teachers were aware of our interest in writing instruction, and our classroom observations were scheduled in advance. Teachers may have planned their writing instruction with our observations in mind. Although there was no evidence that teachers engaged in uncharacteristic writing instruction during the observations, the possibility exists that our data overestimated the frequency or nature of regular instruction. However, it should be noted that there were a number of observation days with no observable writing instruction.

Another limitation of this study is the number of observations that were conducted. Based on previous observational studies (e.g. Connor et al., 2004; Foorman et al., 2006; Kim et al., 2013; Silverman & Crandall, 2010) and the challenges of data collection, we observed four days of instruction during the school year. In the future, the inclusion of more observation days may provide a more stable and accurate assessment of writing instruction.

Conclusion

The results of this observational study provide useful data about the current state of early writing instruction. In general, teachers were fairly consistent in how they organized writing instruction; however, considerable variation at both the classroom and school level was evident in the amount of writing instruction, the instructional focus and the amount of student practice. Several schools revealed different patterns in their approach to instruction and practice, suggesting that school-level factors may play a role in shaping how writing is taught. Furthermore, moderate relationships between the instructional focus and patterns of student practice were also found. Overall, the results

suggest that first-grade writing instruction is inconsistent in many ways across classrooms and schools and point to instructional implications for teachers and schools.

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Table 1

Total First Grade Teacher Demographics

		(*N* = 54*)	
		N	%
Gender	Female	52	96.3
	Male	2	3.7
Ethnicity	African American	2	3.7
	White	49	90.7
	Hispanic	1	1.9
	Other	2	3.7
Highest Degree	Bachelors	8	14.8
	Bachelors + additional coursework	10	18.5
	Masters	26	48.1
	Masters + additional coursework	10	18.5
		Mean	*SD*
Years Teaching Current Grade		8.69	6.97
Year Teaching Total		14.94	7.98

* Note: 57 teachers gave consent to participate in the study. Yet the teacher demographics are based on the teacher survey of 54 teachers who taught during the research project (*N*= 54). Three other teachers who left their classrooms in the middle of the semester and were later replaced by substitutes did not complete a survey.

Table 2
Descriptive statistics about time allocated to writing instruction

	N	Min	Max	Mean	SD
Focus Category: Skills	50	0.0%	75.0%	32.5%	22.0%
Spelling	50	0.0%	68.8%	19.9%	17.8%
Grammar	50	0.0%	50.0%	8.9%	12.8%
Handwriting	50	0.0%	18.8%	0.8%	3.0%
Punctuation/Capitalization	50	0.0%	33.3%	3.5%	7.7%
Keyboarding	50	0.0%	0.0%	0.0%	0.0%
Focus Category: Composition	50	0.0%	68.2%	16.5%	17.8%
Individual Narrative	50	0.0%	51.6%	4.8%	10.6%
Individual Informative	50	0.0%	41.3%	5.1%	9.7%
Collaborative Narrative	50	0.0%	33.3%	2.5%	6.8%
Collaborative Informative	50	0.0%	50.0%	3.9%	9.7%
Focus Category: Process	50	0.0%	83.3%	28.1%	19.9%
Process Writing	50	0.0%	83.3%	18.8%	17.6%
Revising	50	0.0%	31.6%	2.9%	6.7%
Editing	50	0.0%	50.0%	6.6%	12.1%
Focus Category: Sharing	50	0.0%	41.7%	9.7%	11.7%
Sharing by Students	50	0.0%	39.8%	8.2%	10.3%
Sharing by Teacher	50	0.0%	26.2%	1.7%	4.7%
Vocabulary	50	0.0%	16.7%	1.1%	3.3%
Textual Feature	50	0.0%	37.9%	4.9%	8.9%
Other focus	50	0.0%	50.0%	9.8%	14.1%

* *Note:* Means may total more than 100% because multiple activities can be coded in one 5-minute block.

Table 3
Descriptive statistics on instructional methods of writing instruction

Instructional Methods	Mean	SD	Min	Max	N
Teacher Mode					
Presentation	45.4%	21.5%	8.0%	100.0%	50
Q&A	66.3%	20.0%	18.0%	100.0%	50
Discussion	0.7%	3.6%	0.0%	25.0%	50
Modeling	3.9%	6.3%	0.0%	25.0%	50
Conf/Scaffold	15.3%	16.5%	0.0%	52.0%	50
Check/Manage	14.8%	14.8%	0.0%	66.0%	50
Assessment	4.4%	9.2%	0.0%	33.0%	50
Grouping					
Whole group	82.4%	18.2%	33.0%	100.0%	50
Large group	4.1%	8.8%	0.0%	39.0%	50
Small group*	12.0%	16.1%	0.0%	62.0%	50
Pairs*	2.4%	5.9%	0.0%	33.0%	50
Individual	22.7%	17.0%	0.0%	79.0%	50

* *Note:* Means may total more than 100% because multiple activities can be coded in one 5-minute block.

Table 4
Descriptive statistics on student writing activities

	Mean	SD	Minimum	Maximum	N
Writing tasks					
Correct/Copy	40.9%	14.8%	18.0%	70.0%	50
Writing about text	12.0%	9.4%	0.0%	36.0%	50
Open Writing	25.2%	13.3%	5.0%	68.0%	50
Level of text					
Word level	31.1%	10.6%	10.0%	54.0%	50
Sentence level	24.1%	11.6%	4.0%	54.0%	50
Connected text	21.1%	14.9%	0.0%	61.0%	50

* *Note:* Means may total more than 100% because multiple activities can be coded in one 5-minute block.

Table 5
Correlations among writing focus and writing practice variables

	Focus Category: Skills	Focus Category: Composition	Focus Category: Process	Focus Category: Sharing
Word level	.164	.005	-.075	-.017
Sentence level	-.315*	.001	.372**	-.155
Connected text	-.380**	-.239	.257	.211
Correct/Copy	-.082	-.126	.212	.067
Writing about text	-0.256	-.052	0.148	.003
Open writing	-.382**	.015	0.209	-.022

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Table 6
Correlations among instructional mode and writing practice variables

	Presentation	Q&A	Discussion	Modeling	Conf/ Scaffold	Check/ Manage	Assessment
Word level	-.111	-.162	.013	-.055	.223	.078	-.020
Sentence level	-.132	-.172	-.090	-.039	.002	.249	.048
Connected text	.237	.111	-.105	.196	-.013	-.040	.015
Correct/Copy	-.052	-.137	-.011	-.089	-.018	.188	-.004
Writing about text	.195	.271	-.056	.074	-.140	-.087	-.020

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Table 7
Correlations among grouping and writing practice variables

	Whole group	Large group	Small group	Pairs	Individual
Word level	-.234	.267	.228	.135	.030
Sentence level	-.147	-.213	.254	.197	.190
Connected text	.121	-.087	-.196	-.234	-.137
Correct/Copy	.015	.062	.010	.093	-.133
Writing about text	.026	-.272	.123	-.128	.099
Open Writing	-.134	-.087	-.003	-.001	.043

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Figure 1

Decomposition of variance in writing instruction focus by classroom and schools

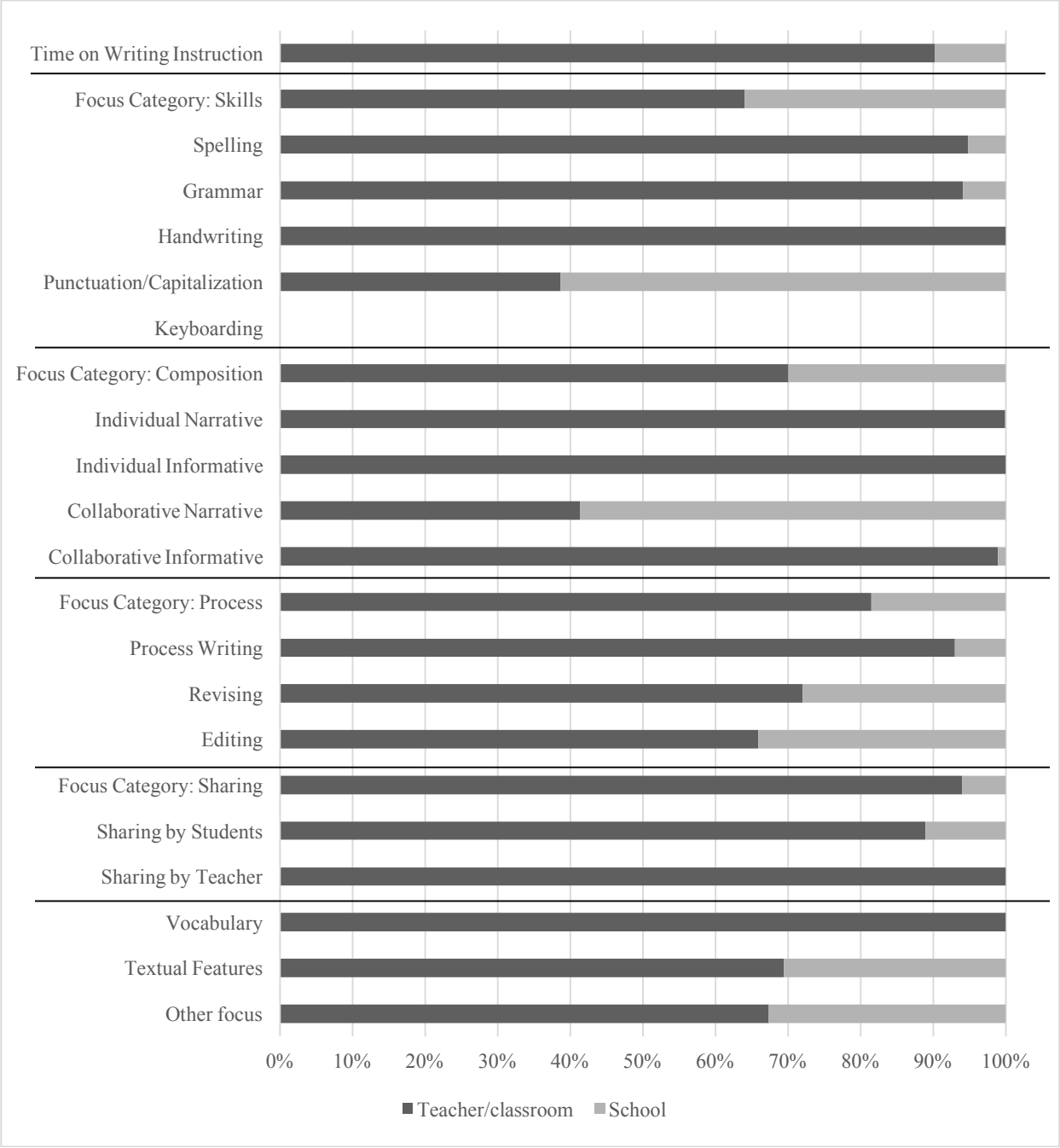

Figure 2

Decomposition of variance in writing by classroom and schools

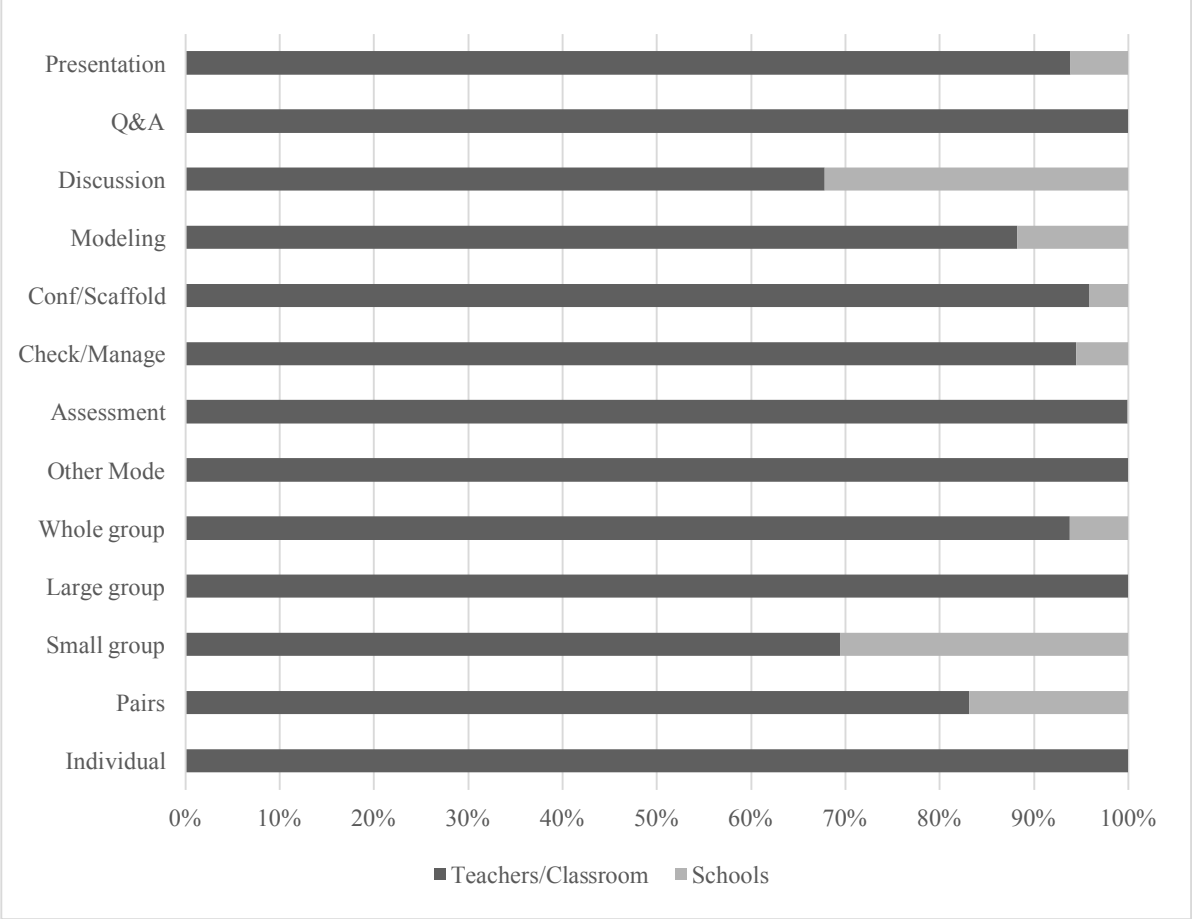

Figure 3

Decomposition of variance in writing practice by classroom and school