Formative Assessment Through Written Feedback: Examining Elementary School Teachers' Written Feedback Beliefs and Practices, and the Effect of Models on Written Feedback

Caterina Almendral
Graduate Center, City University of New York

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FORMATIVE ASSESSMENT THROUGH WRITTEN FEEDBACK: EXAMINING ELEMENTARY SCHOOL TEACHERS’ WRITTEN FEEDBACK BELIEFS AND PRACTICES, AND THE EFFECT OF MODELS ON WRITTEN FEEDBACK

by

CATERINA LA FATA ALMENDRAL

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Helen L. Johnson, Ph.D.  

Date  

Chair of Examining Committee  

Alpana Bhattacharya, Ph.D.  

Date  

Executive Officer  

Anastasiya Lipnevich, Ph.D.  

Bert Flugman, Ph.D.  

Supervisory Committee  

THE CITY UNIVERSITY OF NEW YORK
Abstract

FORMATIVE ASSESSMENT THROUGH WRITTEN FEEDBACK: EXAMINING ELEMENTARY SCHOOL TEACHERS’ WRITTEN FEEDBACK BELIEFS AND PRACTICES, AND THE EFFECT OF MODELS ON WRITTEN FEEDBACK

by

Caterina La Fata Almendral

Adviser: Professor Helen L. Johnson

The current study explored three main aspects relating to the use of written feedback as a formative assessment tool: the types (form or content) of written feedback provided by elementary school teachers and the levels (task, process-Self-Regulation) at which those types of feedback are provided; whether elementary school teacher beliefs about written feedback principles and their own written feedback practice correspond to the actual written feedback they provide; and whether exposure to a model of written feedback influences teacher written feedback practice.

Data were collected from 188 elementary school teachers spirally assigned to five groups (four treatment, one control). Treatment groups were exposed to different written feedback models and subsequently all teachers were asked to provide written feedback on a fifth grade student’s social studies writing sample. All teachers responded to a demographic survey as well as a questionnaire containing a series of questions related to their beliefs about written feedback and their written feedback practice.

Findings showed that elementary school teachers provided form type comments almost ten times more frequently than content type comments. Teachers’ beliefs regarding feedback practices did not match the actual feedback provided on the Written Task. Specifically, teachers
believed that they provide content written feedback more frequently than was reflected in their actual feedback. There was no statistically significant relationship between teacher beliefs about process-SR related feedback principles and the actual number of process-SR level comments teachers gave on the Written Task. Exposure to written feedback models influenced the levels of written feedback participants delivered. Group 1 (form and task) provided significantly more task level feedback than Group 2 (form and process-SR) or the control group. Further, trend level differences were found between Group 2 and Group 1, with Group 2 providing more process-SR comments than Group 1. No differences were found by written feedback type or between Group 3 (content and task) and Group 4 (content and process-SR).

Study findings suggest that teachers would benefit from support geared towards enhancing their written feedback practice to provide more content comments at the process-SR level. Practical and classroom applications are discussed.
ACKNOWLEDGEMENTS

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# Table of Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHAPTER 1: INTRODUCTION</strong></td>
<td>1</td>
</tr>
<tr>
<td>Writing and Written Feedback</td>
<td>3</td>
</tr>
<tr>
<td>Written feedback types</td>
<td>3</td>
</tr>
<tr>
<td>Feedback levels</td>
<td>4</td>
</tr>
<tr>
<td>Written feedback types within feedback levels</td>
<td>5</td>
</tr>
<tr>
<td>Written Feedback in the Classroom</td>
<td>6</td>
</tr>
<tr>
<td>Written feedback in elementary school classrooms</td>
<td>6</td>
</tr>
<tr>
<td>Written feedback models</td>
<td>7</td>
</tr>
<tr>
<td><strong>Current Study</strong></td>
<td>7</td>
</tr>
<tr>
<td>Research Questions</td>
<td>8</td>
</tr>
<tr>
<td><strong>CHAPTER 2: LITERATURE REVIEW</strong></td>
<td>9</td>
</tr>
<tr>
<td>Assessment</td>
<td>9</td>
</tr>
<tr>
<td>Formative Assessment</td>
<td>9</td>
</tr>
<tr>
<td>Feedback</td>
<td>11</td>
</tr>
<tr>
<td>Written feedback types</td>
<td>12</td>
</tr>
<tr>
<td>Implementation of form written feedback</td>
<td>16</td>
</tr>
<tr>
<td>Written feedback levels</td>
<td>19</td>
</tr>
<tr>
<td>Written feedback types within feedback levels</td>
<td>22</td>
</tr>
<tr>
<td>Feedback and the Writing Process</td>
<td>23</td>
</tr>
<tr>
<td>Models of writing</td>
<td>24</td>
</tr>
<tr>
<td>Sociocultural models of writing</td>
<td>25</td>
</tr>
<tr>
<td>Feedback within sociocultural models of writing</td>
<td>25</td>
</tr>
<tr>
<td>Teacher written feedback beliefs and practice</td>
<td>26</td>
</tr>
<tr>
<td><strong>Current Study</strong></td>
<td>28</td>
</tr>
<tr>
<td>Research Questions and Hypotheses</td>
<td>29</td>
</tr>
<tr>
<td>Research Question 1</td>
<td>29</td>
</tr>
<tr>
<td>Research Question 2</td>
<td>29</td>
</tr>
<tr>
<td>Research Question 3</td>
<td>29</td>
</tr>
<tr>
<td><strong>CHAPTER 3: METHODS</strong></td>
<td>31</td>
</tr>
</tbody>
</table>
## Participants

<table>
<thead>
<tr>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
</tr>
</tbody>
</table>

  - Inclusion and exclusion criteria 31
  - Descriptive Statistics 33
  - Group assignment 34
  - Measures 36
    - Written Task 36
      - Part I: Feedback models 37
      - Part II: Participant written feedback 37
    - Teacher Questionnaire 38
    - Demographic Survey 39

## Procedure

39

## Data Analysis

41

- Coding scheme for written feedback 42
- Inter-rater reliability 43

## Statistical analyses

43

- Research Question 1. What types and levels of written feedback do elementary school teachers provide? 43
- Research Question 2. To what extent do elementary school teachers’ beliefs about written feedback and their written feedback practice match the actual written feedback teachers provide? 44
- Research Question 3. To what extent does exposure to a model of written feedback influence teacher written feedback practice? 45

## CHAPTER 4: RESULTS

47

### Preliminary Analyses

47

- Research Question 1: What types and levels of written feedback do elementary school teachers provide? 48
- Research Question 2: To what extent do elementary school teachers’ beliefs about written feedback and their written feedback practice match the actual written feedback teachers provide? 50
  - Teacher beliefs about their written feedback practice 50
  - Teacher beliefs about written feedback principles 50
Research Question 3: To what extent does exposure to a model of written feedback influence teacher written feedback practice 51

CHAPTER 5: DISCUSSION 56
Research Question 1: What types (form or content) and levels (task or process-SR) of written feedback do elementary school teachers provide? 58
Research Question 2: To what extent do elementary school teachers’ beliefs about written feedback and their written feedback practice match the actual written feedback teachers provide? 62
Research Question 3: To what extent does exposure to a model of written feedback influence teacher written feedback practice? 64
Limitations 65
Educational Implications and Future Research 67
Conclusions 69
APPENDIX A: Written Task (All Groups) 71
APPENDIX B: Teacher Questionnaire 81
APPENDIX C: Demographic Survey 84
APPENDIX D: Cover Letter 87
APPENDIX E: Coding Rubric 89
APPENDIX F: Table F1. Table of Non-Significant Demographic Differences in the Dependent Variables for the Control Group 93
REFERENCES 95
List of Tables

Table 1: Participant Background and Educational Information 34
Table 2: Participant Group Distribution by Feedback Type and Level 36
Table 3: Descriptive Statistics for Feedback Comments, Types, and Levels 47
Table 4: Descriptive Statistics for Control Group Feedback Comments, Types, and Levels 49
Table 5: Average Number of Type, Level, and Type-Level Comments by Group 52
Table 6: Teacher Model Ratings by Intervention Group 54
Table 7: Research Questions, Hypotheses, and Findings 57
Chapter 1: Introduction

The current study explored how teachers implement and think about written feedback in elementary school settings. Teacher reports about their beliefs about written feedback principles and beliefs about their own written feedback practice were compared to the written feedback they actually gave. Additionally, teacher exposure to different models of written feedback was manipulated to see if teacher practice was influenced by this exposure. This chapter will first define the key study constructs of written feedback types and feedback levels, consider the relationship between constructs, and consider the role of written feedback in the classroom. Subsequently, the study will be detailed, key questions will be addressed, and research implications will be described.

Feedback is a formative assessment tool that allows teachers to engage individual students in thinking about specific aspects of their academic work. While feedback has been shown to have a substantial influence on learning outcomes and student development, this influence varies based upon the way feedback is delivered (Hattie & Gan, 2011; Lipnevich & Smith, 2009). Written feedback is one feedback application in which teachers frequently engage and which teachers find important (Goldstein, 2004). It can help learners identify “performance expectations, judge their level of understanding, and become aware of misconceptions” (Mason & Bruning, 2001, p.2). It may give students insight about the best ways to address their errors, provide them with information specific to their understanding or performance (Hattie & Timperley, 2007), and help them address existing gaps (Shute, 2008). The focus on written feedback originated from the need to support teacher practice through the identification and further understanding of strategies that could be used across all classrooms to address students’ academic language and writing development.
Writing is an essential part of a student’s academic development (Russell, 2002), yet academic writing and language skills are often challenging for students to master (De La Paz & Graham, 2002). Much research has been done to explore strategies that can be used to facilitate students’ writing development. This research has examined topics ranging from the importance of teachers relaying useful strategies to students, to various stages of the writing process such as planning, drafting, and revising (De La Paz & Graham, 2002), and various cognitive models, such as goal-setting and self-monitoring (Zimmerman & Kitsantas, 2002). Graham and Perin’s (2007) meta-analysis of writing intervention research (occurring in grades 4 – 12) focused on different types of interventions, including: process writing approach; explicit teaching of skills, process, or knowledge; scaffolding of student knowledge; word processing; and extra writing. They found that effect sizes were greatest for strategy instruction, summarization, peer assistance, and setting product goals (Graham & Perin, 2007). In addition, literature about teacher pedagogical advancement suggests a number of ways teachers can facilitate student writing development, including group and individual practice, teaching self-regulatory skills, student-teacher dialogues, and materials such as cue cards (Harris, Graham, Mason, and Friedlander, 2008). Recent research has made progress in understanding ways that teachers can facilitate student academic writing development. However, more research is needed on how teachers utilize written feedback as a formative assessment tool – particularly, in elementary school settings, how this feedback is delivered, and how the relationship between teacher beliefs and practice regarding written feedback align. The current work aims to fill some of these gaps in the research.
Writing and Written Feedback

Previous research has analyzed teacher written feedback in terms of feedback type (Ashwell, 2000; Lipnevich & Smith, 2009; Matsumura, Patthey-Chavez, Valdes, & Garnier, 2002; Olson & Raffeld, 1987) and feedback level (Hattie & Timperley, 2007). Type describes the aspect of the written material the feedback addresses, for example, form and/or content. Level refers to the way the written feedback comment is framed for the student receiving the feedback, for example, task, process, self-regulation, and self (i.e., self as a person). These two constructs are further detailed next.

Written feedback types. The current study focused upon two types of written feedback, form and content. Form written feedback consists of feedback directed towards grammar, word usage, and punctuation (e.g., *Today I have*)ed the opportunity to spend the day with him.*. On the other hand, content written feedback encompasses the organization and/or meaning of a written work (e.g., *Tosay I had the opportunity to spend the day with him.* Give your reader more background information.). These written feedback types were selected for the current study based upon research findings indicating that content written feedback is effective but minimally applied (Lee, 2009; Matsumura et al., 2002), and that teachers believe content written feedback is important, but mostly give form written feedback (Lee, 2009).

Teachers are frequently exposed to contradictory information about the best ways to implement these written feedback types and their effectiveness. There is a lack of accord between researchers regarding form written feedback, with some advocating for its usefulness for student writing development (Chandler 2003; Ferris, 2010; Sheen, 2007), and others claiming that it inhibits student learning (Truscott, 1996) or does not produce enough improvement to warrant the time it takes teachers to implement (Robb, Ross, & Shortreed, 1986). Similarly,
research on content written feedback varies in its scope and findings. While researchers contend that content written feedback improves learning (Ashwell, 2000; Fathman & Whalley, 1990), research suggests that content written feedback is often ambiguous and difficult for students to understand (Williams, 2003).

In addition to the mixed findings on feedback types, the research that has been conducted has occurred largely with teachers of secondary or higher education students (Bitchener, 2008; Bitchener, Young, & Cameron, 2005; Ferris & Roberts, 2001), and/or second language learners (Ferris, 1997; Kepner, 1991; Olson & Raffeld, 1987; Zamel, 1985). Within these populations, research suggests that students receiving content written feedback learn more course material (Olson & Raffeld, 1987), and show improvement in the quality of their final work (Ashwell, 2000). However, it is form written feedback that is used most frequently in elementary school, secondary school, and university settings (Lee, 2009; Matsumura et al., 2002). To gain a better understanding of the use of written feedback, particularly at the elementary school level, the current study explored the types of feedback given by elementary school teachers along with the level at which that feedback was delivered.

**Feedback levels.** Hattie and Timperley (2007) presented a psychological model of feedback that could be implemented to help students reach learning goals by considering three questions (“Where am I going?” “How am I going?” and “Where to next?” (Hattie & Timperley, 2007, p.86). These questions could be answered, and feedback thereby delivered, at one of four interconnected levels: task, process, self-regulation, and self. Task level feedback encompasses comments directly related to a learner’s performance on the current task (e.g., “This should be ‘their’ not there”). In contrast, process level feedback relates to relationships and the processes involved in completing the task at hand (e.g., “Use the strategies we discussed for including
more descriptive information so your reader gets a better understanding of your main ideas”). Self-regulation level feedback generates student self-monitoring (e.g., “Check your work upon completion to make sure all the components from the rubric have been addressed”), whereas self as a person feedback relates to personal attributes (e.g., “Great job,” or “Well done”). This last level is not associated with learning gains, as it provides no information that a student could use to improve his or her work. This four-level model was based upon foundational research and a meta-analysis of feedback applied in school settings. Findings showed higher effect sizes for feedback that gave information about a task and how it could be accomplished (Hattie & Timperley, 2007). The authors contend that while feedback about the task is an important base upon which to build, it is feedback about the process and self-regulatory strategies that students can use across different tasks and thus are associated with the greatest transfer of learning. In the current study, process and self-regulatory feedback were combined since they are both associated with transfer of learning. This combined level was termed process-SR. Additionally, the self as a person level was not included in the research as this level is not associated with learning or providing students with information that they can use to further their work.

**Written feedback types within feedback levels.** Exploration of written feedback types in conjunction with written feedback levels breaks new ground. To date, little to no research has been conducted that attempts to explore how written feedback types are delivered within these levels. The current study aims to fill this gap by considering how the two written feedback types (form and content) are woven into both the task and process-SR levels by elementary school teachers.
written feedback in the classroom

there is a documented need for teacher support regarding the written feedback process, as teachers appear to find providing written feedback frustrating, anxiety inducing, time consuming, and challenging (ferris, pezone, tade, & tinti, 1997; lee, 2009). moreover, the ways that teachers give written feedback underscore the support they might need implementing systematic and effective written feedback. studies have shown that teacher written feedback is at times vague and difficult to understand (williams, 2003), and that the written feedback teachers give at times varies from their beliefs about good written feedback practice and even their beliefs about how they themselves apply written feedback in their classrooms (lee, 2009).

lee (2009) documented that secondary and higher education teachers provide mostly form written feedback even though they believed that content written feedback is also important. similarly, other researchers have found that form written feedback was more frequently applied in elementary (matsumura et al., 2002), and middle school (patthey-chavez, matsumura, & valdes, 2004) classrooms, even though in one study the amount of content written feedback significantly predicted the quality of a student’s final work (matsumura et al., 2002). thus, while teachers may believe certain written feedback principles, those beliefs are not always reflected in their actual practice.

written feedback in elementary school classrooms. while much research examines written feedback in secondary school or university settings, written feedback in elementary school settings has been minimally represented in the literature (almendral, 2012; matsumura et al., 2002). the need for research with elementary school students is supported by evidence that students of varied age groups interact with information differently based on their developmental stage (duckworth, 1964; kuhn & paese, 2006). elementary school students might therefore be
expected to benefit from different kinds of written feedback than secondary or university-aged students. The current study will contribute to and expand upon this small body of research.

**Written feedback models.** Modeling is often used in learning communities and is a strategy that is frequently implemented with students to support their writing development by providing them with exemplars that they can then approximate (De La Paz & McCutchen, 2011; McArthur, 2006). Providing teachers with written feedback models, that is, examples of written feedback given to students on their written work, is one way to enhance teacher awareness of how these written feedback types and levels may be delivered. In turn, these models could be used to engage teachers in the practice of considering and refining the written feedback they give to students. In fact, pilot study findings by Almendral (2012) indicated that exposure to models containing written feedback types and levels can influence elementary school teachers’ written feedback. This possibility needs to be explored in greater depth to better understand the best method to help teachers develop their ability to provide effective written feedback to their students.

**Current Study**

The current study built upon the above-mentioned findings (Almendral, 2012) by manipulating elementary school teacher exposure to different written feedback models to investigate if model exposure influenced the type and level of written feedback subsequently given by elementary school teachers. Written feedback models were created by varying the type (form/content) and level (task/process-SR) at which written feedback was given on a fifth grade student’s social studies writing piece. Four treatment groups were then exposed to different written feedback models: 1) form feedback at the task level; 2) form feedback at the process-SR level; 3) content feedback at the task level; and 4) content feedback at the process-SR level.
After exposure to the model, treatment group teachers were asked to provide their own written feedback on a sample of student writing. A control group that was not exposed to the written feedback model was also asked to provide written feedback on the student writing sample. All teachers, treatment and control, were asked to provide information about their beliefs about written feedback and their written feedback practices, along with background information, including information about their education and teaching experiences.

**Research questions.** Three main questions guided the current research:

1. What types (form or content) and levels (task or process-SR) of written feedback do elementary school teachers provide?

2. To what extent do elementary school teachers’ beliefs about written feedback and their written feedback practice match the actual written feedback teachers provide?

3. To what extent does exposure to a model of written feedback influence teacher written feedback practice?

The study contributes to the literature in three ways: 1) Providing some baseline descriptive data on elementary school teachers’ written feedback practices, with specific attention to the types and levels of feedback employed; 2) Clarifying the extent to which teachers’ beliefs about written feedback and their own feedback practices are reflected in the feedback they actually provide; and, 3) Informing teacher professional development by examining whether providing teachers with written feedback models is a feasible way to influence teachers’ written feedback practice.
Chapter 2: Literature Review

In an academic context, assessment refers to the evaluation of learning and achievement (Gipps, 2012). Assessment can occur through tests, classroom work – written and orally presented, portfolios, observations, as well as through other means. Moreover, there are numerous forms of assessment, such as performance-based assessments, criterion-based assessment, norm-referenced assessment, and formative assessment. In this chapter, formative assessment will be more closely examined; specifically, what it is, how it can be implemented, and what outcomes can be expected after implementation. Consideration will then be given to feedback, a key component of formative assessment, as it is applied in written format and in the context of writing assignments. Research exploring written feedback types and levels will be examined, as well as feedback within the writing process.

Assessment

Two main types of assessment are usually considered in school settings – summative and formative. Both types of assessment measure learning, but the measurement occurs for different purposes. Whereas summative assessment seeks to measure learning in order to identify the amount of learning that occurred, formative assessment seeks to identify where student learning can be supported. This is accomplished through a process-oriented approach to development, in which mistakes and corrections are critical to the learning process (Wiggins, 2012). Formative assessment implements assessment to *enhance* learning, rather than to *assess* learning (Hamp-Lyons, 2009).

**Formative assessment.** Formative assessment has been linked to student achievement and learning gains (Black, Harrison, Lee, Marshall, & William, 2004; Black & William, 1998). It is also a pedagogical tool that teachers can employ with varied groups of students.
Kingston and Nash’s (2011) meta-analysis examining the effect of formative assessment on learning practices in kindergarten to grade 12 settings revealed that the way in which formative assessment is applied can greatly influence its impact. The meta-analysis, which examined five formative assessment applications (professional development; curriculum-embedded assessment systems; use of a computer-based formative assessment system; providing students with feedback; and other types of formative assessment), considered the effects of content area, grade, and treatment type. Findings indicated that formative assessment was a feasible way to facilitate student learning, especially in the English Language Arts content area (reading, language arts, or writing), where the greatest effect sizes were seen. Kingston and Nash’s findings suggest that formative assessment is inherent to English Language Arts activities, particularly the writing process. This is further supported in a review of the literature by Black (1998), which suggested that formative assessment is a useful tool for supporting student learning and writing development.

Formative assessment can be delivered in numerous ways, with the effect varying based on the method of application (Boston, 2002). Applications may include but are not limited to assignments, quizzes, tests, discussion, and/or observations. Yet, “it is not the instrument that is formative; it is the use of the information gathered, by whatever means, to adjust teaching and learning, that merits the “formative” label” (Chappuis, 2009, p. 4). However, as researchers often do not provide sufficient detail to fully understand how the various formative assessment practices were implemented in their studies, there is a gap in the formative assessment literature (Hattie & Gan, 2011; Kingston & Nash, 2011). The current study aims to fill this gap by examining one particular type of formative assessment, that of teacher written feedback.
**Feedback**

In academic settings, feedback refers to a pedagogical strategy where information is given in order to provide a recipient or recipients with a better understanding of how to adjust their performance to achieve the desired goal (Hattie & Timperley, 2007; Wiggins, 2012). Feedback can be given in various modes, including oral feedback implemented through verbal responses to an action or task, face-to-face conferencing, or through written comments on student work, known as written feedback. The act of providing feedback allows teachers to engage individual students in thinking about specific aspects of their academic work and development in order to help them increase their learning (Shute, 2008), as well as reduce gaps between their current level of understanding or performance and the goals they are trying to reach (Hattie & Timperley, 2007). In this sense, feedback serves as a formative assessment tool, that is, as a tool used by teachers to help students improve their learning (Angelo & Cross, 1993; Kingston & Nash, 2011). As with other types of formative assessment, effectiveness of feedback varies based on the feedback type, feedback context (Kingston & Nash, 2011), the learner’s familiarity with the activity, the cognitive complexity of the task (Kluger & DeNisi, 1996), and the way in which the type of feedback is framed (Hattie & Timperley, 2007).

The current study explores teachers’ written feedback on student writing. As previously mentioned, not only is writing a natural extension of written feedback, but it is also an ELA activity, which have been linked to the greatest effect sizes for formative assessment practices (Kingston & Nash, 2011). Written feedback provides teachers with a means to address students’ individual needs, while also giving students a record of the information that they can save and go back to as needed. That is, written feedback provides students with a point of reference to which they can refer over time (Brookhart, 2008). There are, however, different types of written
feedback. Following, two written feedback types will be defined, and the research regarding their use in classrooms discussed.

**Written feedback types.** The two written feedback types investigated in the current study were form and content written feedback. Form written feedback, sometimes referred to as surface feedback (Underwood & Tregidgo, 2006),¹ is defined here as any written feedback directed toward the grammar, word usage, spelling, or punctuation of a student’s writing. In contrast, content written feedback is written feedback that addresses either the organization or the meaning of a student’s writing.

Much of the research to date explores written feedback types implemented with adults or students at the university level (Ashwell, 2000; Lipnevich & Smith, 2009; Olson & Raffeld, 1987). Olson & Raffeld (1987) examined whether form feedback is more effective than content feedback by looking at revisions made by 66 college students to a draft upon which they had received written feedback. Participants were education majors enrolled in two entry-level reading education classes. Each class was randomly assigned to a treatment or control group. The treatment group was then randomly split into two groups, those receiving content type comments, and those receiving form type comments. All groups, treatment and control, received a pre- and post-test, and a researcher-developed multiple choice test about the course material. Additionally, the treatment group participants engaged in five writing assignments. While control group participants were not exposed to the five assignments, they engaged in longer lectures and discussions about the same content. Olson and Raffeld (1987) reported that students receiving content written feedback did significantly better on their overall writing of the material, as evidenced by gains from the pre- to post-test, than students receiving form written feedback or

¹ Although certain researchers refer to form written feedback as “surface” feedback, the current study will use the term form written feedback.
no written feedback. Additionally, students in the content and control groups learned more course material than students in the form feedback group. Olson and Raffeld suggest that these findings may have occurred because the content type treatment group and control group engaged in similar kinds of cognitive activities although the delivery of the activities varied.

Along similar lines, Lipnevich and Smith (2009) explored the impact of detailed feedback on an examination essay written by university students enrolled in an introductory psychology class. Students received detailed feedback applied to the mechanics and content of the essay and were provided with opportunities to revise their essays. The authors found that “written, detailed feedback specific to individual work was strongly related to improvement” (Lipnevich & Smith, 2009, p. 329). Interestingly, the study also explored whether differences arose in students' revisions based on whether students perceived the feedback as coming from a computer or from the course professor. However, no significant differences were found related to the feedback source.

Ashwell (2000) also looked at form and content type feedback with university students, focusing specifically on the order of implementation of the various feedback types. Participants included 50 Japanese university students from two English writing courses. The research examined the impact of the order in which the two written feedback types were received on two drafts of a student writing assignment and the final paper. Subjects were assigned to one of four groups: 1) content then form; 2) form then content; 3) both content and form; or, 4) no written feedback. The three treatment groups evidenced similar results. Written feedback was linked to student improvement in accuracy and quality of the material. Descriptive results, however, indicated that group 3 (the group that received both types simultaneously) made the most gains on accuracy and content. However, even students in the control group showed gains just by
reworking their earlier drafts without receiving feedback. Additionally, it was found that students used more of the form written feedback teachers gave, and that students incorporated more of the earlier feedback than later feedback given. Students, however, made more content than form edits when they did not receive written feedback and worked alone to revise their previous draft.

Similar to Olson and Raffeld’s (1987) findings, Matsumura et al. (2002) reported that students receiving content written feedback did significantly better on their overall writing of the material, as evidenced by gains from the pre- to post-test, than students receiving form written feedback or no written feedback. Research conducted on the two types of feedback found that while teachers gave more form feedback, it was content feedback that was linked to the quality of student work (Matsumura, 2002; Patthey-Chavez, Matsumura, Valdés, 2004). Matsumura et al. (2002), examined form and content at the elementary school level, looking at the link between the quality of the writing assignment and the written feedback given by 29 third grade teachers from eight urban schools. Written feedback was examined for a teacher-designed writing assignment for which each student prepared three revisions and received written feedback on each. It was found that teachers gave much more form written feedback than content written feedback, and appeared more focused upon standardizing the form of the student work. While the teachers in their study gave very little content written feedback overall, Matsumura et al. (2002) found that the amount of content written feedback, as well as the quality and cognitive challenge of the assignment, predicted the quality of the student’s final draft. The cognitive challenge and quantity of form written feedback predicted the quality of the form of a student’s final draft. In contrast, the amount of content written feedback also predicted the quality of organization on a student’s final work.

Research into written feedback type was also conducted with older elementary school
students, specifically seventh graders. Patthey-Chavez, Matsumura, and Valdes (2004) examined how 11 teachers from urban middle schools provided written feedback to 64 seventh graders on Language Arts writing assignments. They explored the type (form and content) of feedback given, number of comments, and the quality of the students’ work on first and final drafts. As in Matsumura et al.’s (2002) study with younger elementary school students, it was found that nearly all written feedback was form focused (92%), with 58% of the feedback addressed to form feedback only and 34% of the feedback addressed to form and content feedback (eight percent of the work received no written feedback). Additionally, the majority of written feedback on earlier drafts was form focused, and results indicated that while students improved the form of their work, little improvement occurred in the content. When students did receive content feedback, however, results indicated that their content improved. Thus, students appeared to be attending to the feedback they received and making corresponding changes to their work.

In addition to the above studies, pilot study findings (Almendral, 2007) provided the foundational impetus to look more deeply into teacher feedback practices. An initial pilot study (Almendral 2007) examined the written feedback of a teacher who had over 10 years teaching experience, a novice teacher who had fewer than 5 years teaching experience, and a professor who was a content expert. As the study looked specifically at teacher grammatical subject matter knowledge, all three participants were asked to give form type written feedback on a sample of student work, and then highlight and rank in order of importance the five most important feedback issues they identified for the student. Only two issues overlapped and each was ranked differently by the various participants. In other words, little agreement was found in the written feedback that they identified as most important. Findings indicated that different teachers may provide different written feedback for the same writing task by the same student.
Other studies further demonstrate that teacher feedback practice is not always clear or even correct. Zamel (1985) conducted a study of 15 university ESL teachers’ responses to student work on 105 student texts, and found that the form type written feedback included confusing, random, and incomprehensible comments. Thus, teachers are implementing similar types of written feedback practices from elementary to university settings, although these comments are not necessarily delivered in the most effective ways. Almendral (2007) also found that individual teachers identified and addressed different issues in varied ways on the same sample of student writing. More information is needed about how elementary school teachers implement written feedback.

In addition to the number of studies that explore the varying effects of form and content written feedback, researchers have also examined the impact of delivering form written feedback in different ways. The next section considers the varied ways form written feedback may be implemented and findings related to these assorted ways of implementing form type feedback.

*Implementation of form written feedback.* Form written feedback itself has varying methods of implementation including focused and unfocused, and direct and indirect. Focused form feedback (sometimes called “selective”) identifies a language area or topic (e.g., articles, prepositions) and feedback is then provided only upon this topic. Alternately, unfocused written feedback provides feedback upon any language area or topic of the feedback provider’s choosing. The studies examining these two types of form written feedback implementation were conducted predominantly with university students in English Language Learning (ELL) settings, and evidenced varied findings.

Bitchener and Knock (2008), and Sheen, Wright, and Moldawa (2009) reported that students who received form focused written feedback evidenced greater accuracy that was
sustained over time than students receiving unfocused written feedback, although both outcomes performed control groups. Bitchener and Knock (2008) investigated the impact of focused written feedback on two targeted structures (“a” and “the”) delivered in different ways to 144 English as a Second Language (ESL) students in New Zealand. There were three treatment groups and a control group. The treatment groups received: 1) direct feedback with oral meta-linguistic feedback; 2) direct feedback with written meta-linguistic feedback; and 3) direct feedback only. The control group did not receive feedback. Student development related to accuracy of article use was measured on a pre-test, post-test, and delayed post-test. The treatment groups did significantly better than the control group on post- and delayed post-test measures. There were, however, no statistically significant differences between the treatment groups.

Sheen, Wright, and Moldawa (2009), also looked at focused written feedback. However, rather than look at different ways to implement focused written feedback, they examined the effects of focused versus unfocused form written feedback upon 80 intermediate adult ESL students divided into four groups: 1) direct-focused written feedback; 2) direct-unfocused written feedback; 3) writing practice group; and 4) control group. All treatment groups experienced gains, although the focused feedback group evidenced the greatest increase in accuracy, followed by the writing practice group and the unfocused feedback group.

In contrast, Ellis, Sheen, Murakami, and Takashima (2008) found that focused and unfocused implementation of form written feedback produced similar student benefits. In their study, 49 intermediate ESL students at a Japanese University were assigned to two treatment groups and a control group. The two treatment groups received: 1) focused written feedback on indefinite and definite articles, and 2) unfocused written feedback on indefinite and definite articles, and other errors that were found. The control group received no written feedback.
Correction was given over the course of three written narratives. It is unclear why Ellis et al. (2008), and Bitchener and Knock (2008) and Sheen, Wright, and Moldawa (2009) obtained different study results. It is possible, however, that the feedback was delivered in different ways (e.g., in Ellis’s study participants received direct form written feedback), was related to the different samples, or inconsistent tasks, and that these factors impacted the study results.

Other studies of form written feedback examined direct and indirect delivery. Direct delivery is defined as correcting all incorrect responses (e.g., writing the correct spelling of a misspelled word next to the misspelling), and links to task level feedback, which will be discussed further in subsequent sections. In contrast, indirect delivery is written feedback that indicates the location of an error without offering actual error correction (e.g., underlining a misspelled word, circling word usage that is confusing, underlining or circling and error and providing a metalinguistic code) and links to process-SR level feedback. These studies have also focused primarily on college-aged ELL students. Researchers looked at the impact of the written feedback on accuracy (Ashwell, 2000; Chandler, 2003; Fathman & Whalley, 1990; Robb, Ross, & Shortreed, 1986), fluency (Chandler, 2003; Robb, Ross, & Shortreed, 1986), and syntactic complexity (Robb, Ross, & Shortreed, 1986). Findings showed that direct written feedback was effective at getting students to improve writing on the immediate task (Chandler, 2003), while indirect form feedback was able to draw learner attention to the error, getting students to think about the underlying issues involved (Lalande, 1982). Chandler (2003) also found that both students and teachers preferred direct written feedback because of its expediency in leading to more accurate revisions on an immediate task.

In summary, studies examining form and content type written feedback showed that with college-aged students, indirect written feedback appeared more effective at facilitating student
writing improvement than direct written feedback, and content written feedback was more effective than form written feedback at improving student writing and the learning of course material. Moreover, students receiving focused written feedback were able to make immediate gains in writing development, sustain those gains over time, and perform better than students receiving unfocused written feedback, while students receiving direct written feedback were able to improve their writing on the immediate task. In contrast to the research at the college level, there was a dearth of studies at the elementary school level, making it difficult to draw conclusions about the effectiveness of the different types of written feedback (Matsumura et al., 2002; Patthey-Chavez, Matsumura, & Valdés, 2004). The current study sought to fill this gap in the literature.

**Written feedback levels.** In addition to different types of written feedback, there are also distinctions made as to the level at which written feedback is delivered. Hattie and Timperley (2007) proposed a feedback model aimed at decreasing differences between a student’s current level of learning and the learning goal. The model proposed that this discrepancy can be diminished by attending to three questions: “Where am I going?” “How am I going?” and “Where to next?” (Hattie & Timperley, 2007, p.86). According to the model, there are four levels at which these questions may be answered, that is, at which feedback can be provided or framed: the task level, the process level, self-regulation level, and the self as a person level. In their meta-analysis of 500 studies related to student achievement, Hattie and Timperley (2007) further found that though the feedback effect size evidenced considerable variation, feedback was most effective through forms that provided learners with information about the task (e.g., accomplishment, strategies for future use).
Feedback at the task level relates to a student’s understanding or performance of a task, while feedback at the process level links to the processes and underlying relationships a student would need to perform or understand to complete a task. Feedback at the self-regulation level is directed towards the student’s self-management and self-evaluation of the task being completed. In contrast, feedback at the self-level relates to a student’s views of him or herself. Feedback at the self level is not associated with any type of learning as there is no information upon which the student could build to move forward with the task, better understand the underlying processes, and/or develop new strategies or hone existing strategies. Conversely, the process and self-regulation levels have been linked to greatest student achievement because they facilitate the greatest transfer of learning. Task level feedback is also associated with improvement. However, this improvement does not extend past the current task because the feedback focuses exclusively on the current activity rather than process development, relationship understanding, or strategy development and improvement. Despite these limitations, Hattie and Timperley (2007) report that feedback is most frequently implemented at the task level.

Although they distinguish between the process and self-regulation levels, Hattie and Timperley (2007) note that it is often difficult to distinguish between them in written feedback. These two levels are closely linked and the boundaries between them are often unclear. In order to address this issue, the current study combined these two levels. The blended level includes process and self-regulation feedback and henceforth is referred to as the process-SR level. Using this composite level permits a more clear-cut comparison between the feedback levels linked to transfer of learning and the feedback level linked to improvement on the task at hand.

Although Hattie and Timperley (2007) present a valuable model for considering the effectiveness of feedback given, no research has been done to date that examines the levels at
which elementary school teachers implement written feedback. However, studies exploring
direct versus indirect feedback could fall under the feedback level umbrella. As previously
discussed, direct written feedback is comparable to task level written feedback. Direct written
feedback, like task level feedback, appears to improve student work on an immediate task but
does not facilitate transfer of learning. In contrast, indirect written feedback links to the process-
SR feedback level, as it engages students in thinking about the processes underlying the issue at
hand.

Chandler (2003) investigated the impact of direct and indirect written feedback on the
writing of 31 intermediate to advanced ESL students at an American conservatory. Chandler
contended that, while students may prefer direct written feedback because they could see
immediate improvements on their work, it is indirect written feedback (e.g., underlining) that
facilitates student thinking about the underlying processes. In fact, Chandler (2003) found that
both direct and indirect written feedback lead to error correction. Students, however, felt that the
indirect written feedback was most helpful for them.

Chandler (2003) reported that students and teachers preferred task level written feedback
because students quickly improved their writing on the current activity. These findings
underscore Hattie and Timperley’s (2007) report that while task level written feedback can be
used to improve student work on the current activity, students will not be able to transfer the
information to other settings. Yet, aside from a small pilot study (Almendral, 2012), no research
has been done to look specifically at the way teachers deliver the different written feedback types
at the various written feedback levels. The current study addresses this gap by exploring how
often written feedback is given at the task and process-SR levels.
Almendral (2012) examined the way 33 elementary school teachers gave both form and content written feedback on a student writing sample. Teachers were given a model of written feedback as an example. After providing written feedback on the writing sample, teachers were then asked to answer a series of questions about their written feedback beliefs and practices. Each written feedback comment given was coded by feedback type and level. It was found that although teachers reported that they believed both form and content issues should be addressed, the majority of feedback addressed form type issues at the task level. This indicates that there was some disconnect both between the written feedback elementary school teachers gave and research findings about the most effective ways to implement written feedback to enhance student learning and development, as well as between teacher beliefs about written feedback principles and their written feedback practice (Almendral, 2012). Participants were exposed to a model of written feedback prior to providing students with written feedback on the writing sample; however, since there was no control group in the study, it was impossible to determine the extent to which their written feedback had been influenced by the model. To help in this determination, the current study included a control group that was not exposed to any teacher feedback model but was asked to provide written feedback on a writing assignment.

**Written feedback types within feedback levels.** As previously mentioned, there are different types of written feedback that may occur at each feedback level. However, while there is extant literature that examines different written feedback types, no research has been found that documents the feedback levels at which teachers give comments, and the feedback types that occur within these levels. For example, form type written feedback could occur at the task level, the process-SR level, or even at the self-level, and likewise with content written feedback. It is important to know which types of written feedback are occurring at which feedback levels in
order to gain a better understanding of how teachers are implementing the various elements of written. The current study will therefore examine not only the type of written feedback teachers give and the levels at which teachers give written feedback, but also the types of written feedback that occur at the various feedback levels given by teachers on a student writing assignment.

**Feedback and the Writing Process**

Writing is an important academic skill in a variety of classroom settings across a number of different age groups. Those who have mastered the art of translating what they know and think into written text reap the benefits of effectively communicating their content. In contrast, students who struggle to communicate their thoughts in written form are at a significant disadvantage when faced with completing written assignments (e.g., reports, portfolio work, descriptive statements, letters, narrative and persuasive essays, journals, etc.) and even taking notes. Research has found that poorer writers tend to construct papers that are not well organized, are shorter overall than stronger writers, have numerous form errors, and often contain information that is not germane to the topic at hand (Troia, Lin, Monroe, & Cohen, 2010).

Getting reader feedback on a written work is a critical component of the writing process. One of the ways to differentiate between expert and novice writers is to explore their willingness and ability to incorporate outside reader review and feedback of a written work (Arndt, 1993). Expert writers are often more open to outside reader feedback and more adept at incorporating this feedback. This is particularly important, as once the writer receives feedback, he/she must be able to incorporate the feedback in a way that improves and develops the written work. As noted earlier, feedback serves as a model of formative assessment in that the information received from
the outside reader, or in the current study, from the elementary school teachers, is critical to the learning process and is used to enhance student learning.

A meta-analysis of feedback studies found that the content area in which feedback is delivered (e.g., science, ELA) impacts the effect of the feedback given (Kingston & Nash, 2011). Strongest effect sizes were found for feedback that occurred in ELA settings. Kingston and Nash (2011) hypothesized that feedback delivered in ELA settings may generate the greatest effect sizes as these kinds of tasks (e.g., reading, writing) are activities familiar to students. They based these hypotheses on Kluger and DeNisi’s (1996) meta-analytic work, which reported that feedback is better received when an activity is familiar to the learner and less cognitively complex. Based upon findings that formative assessment is most effective in ELA contexts (Kingston & Nash, 2011), the current study explored feedback as a formative assessment tool used to help students improve their writing.

Models of writing. Feedback is a natural fit within the writing process as it is inherent to revision, an element that is incorporated in nearly all models of writing. Most process models of writing incorporate a number of steps, including but not limited to prewriting, drafting, revising, and publishing (Donohue, 2009). For example, some process models of writing suggest beginning with feelings, moving to journals, and ending with public communication, while others invoke a formal five-step model to writing of prewriting, drafting, revising, editing, and publishing (Bratcher, 1997).

In contrast to process models, in sociocultural models of writing, students and teachers collaborate. From this perspective, writing models are both process and product oriented. Teachers guide instruction and provide information about each student’s development. The
teacher in this setting, needs to match instruction and guidance to the learner’s needs and abilities (Baker, Dube, & Wilhelm, 2001).

**Sociocultural models of writing.** Sociocultural views of writing build on the work of Vygotsky (1987) who claimed that people do not evolve into social creatures, but develop into the individuals they become because of the social experiences that they encounter. Through a sociocultural lens, writing is an act of co-constructed meaning. Writing models viewed through a sociocultural lens should then be explored in the setting where the writing occurs, (e.g., classroom) since this is where the meaning is being co-constructed (Englert, Mariage, & Dunsmore, 2006).

Writing instruction in sociocultural settings involves teachers scaffolding learning within a students’ zone of proximal development and providing students with models from which they can learn. Scaffolding involves teachers modeling tasks for students and eventually shifting responsibility from the teacher to the student. The models and teacher support provide a structure upon which students can build and learn. Eventually, students move towards task completion with fewer, and subsequently, no supports. The scaffolds occur within a learner’s zone of proximal development. This zone encompasses the range between what a student can do on his or her own, and what a student can do with support (Vygotsky, 1987).

**Feedback within sociocultural models of writing.** Feedback in sociocultural writing models involves a reciprocal process between teachers and students. That is, feedback provides a means through which teachers and students jointly construct meaning through social interactions and experiences (Hattie & Gan, 2011). It is imperative therefore, that the feedback be provided in ways that the student can understand, and provide the student with information that helps him or her develop the evolving meaning construction that is occurring. Hattie and Timperley’s (2007)
feedback levels provide a means through which the feedback delivered can be framed to share very specific information with a learner. Feedback needs to do more than simply confirm or negate specific task achievement. It needs to provide information about the processes involved and self-regulatory techniques that would support the successful implementation of these processes. Despite the importance of applying systematic, well-structured written feedback, very little research exists that documents the way teachers provide written feedback in classroom settings, nor their written feedback beliefs and practices.

**Teacher Written Feedback Beliefs and Practice**

Beliefs about feedback have been explored through the lens of students (Enginarlar, 1993); students and teachers (Montgomery & Baker, 2007; Norouzian & Farahani, 2012); and teachers only (Lee, 2009). Beliefs are often measured through self-reports that represent the perceptions, feelings or emotions of participants (Bieg, Goetz, & Lipnevich, 2014). While research indicates that what students believe they feel at times varies from what they actually feel (Bieg, Goetz, & Lipnevich, 2014), findings indicate that, as with students, teacher perceptions may vary from what is actually occurring (Lee, 2009; Montgomery & Baker, 2007; Norouzian & Farahani, 2012).

Studies exploring student perceptions of written feedback have considered both student perceptions of feedback usefulness and written feedback preferences (Enginarlar, 1993; Goldstein, 2001). Research shows that students, in fact, value getting written feedback and have strong feelings about the way written feedback should be implemented (Hyland, 1998). There is little, however, research that has taken place exploring teacher perceptions of their written feedback in order to help teachers enhance their practice. Rather the focus to date has been exploring student and teacher perceptions of written feedback practices for the purposes of
facilitating student writing development (Montgomery & Baker, 2007).

The few studies that have looked at teacher beliefs and practice surrounding written feedback and their own written feedback practices show that teacher practice does not necessarily reflect teacher beliefs (Lee, 2009; Norouzian & Farahani, 2012). Lee (2009) examined how the written feedback beliefs of English language teachers in secondary and university settings in China linked to their actual written feedback practices. Findings indicated that teachers gave fewer content comments than form comments (Lee, 2009), yet teachers believed that both form and content written feedback are valuable. Matsumura et al. (2002), also found that teachers (of third grade students in the U.S.) gave more form than content type written feedback, even though content type feedback has been linked to student achievement in elementary school settings (Matsumura et al., 2002). Additionally, a pilot study (Almendral, 2012) exploring the written feedback of 33 elementary school teachers on a sample of student writing found that teachers believed it was important to provide both form and content type written feedback, but gave mostly form type feedback on a sample of student writing. Studies have shown that both higher education teachers (Connors & Lunsford, 1993) and primary school teachers (Black, 1998; Matsumura et al., 2002) focus most of their written feedback on mechanical or form issues rather than meaning or content related issues.

Norouzian and Farahani (2012) built off Lee’s (2009) work, and examined student and teacher perceptions of teacher written feedback in Tehran University beginner to advanced writing courses. It was found that, as in Lee’s 2009 study, teachers beliefs at times varied from their actual practice. Norouzian and Farahani (2012), however, also considered how teacher beliefs and actual teacher practice also aligned with student perceptions. Findings indicated that not only did teacher beliefs at times vary from teacher practice (e.g., teachers reported they
marked all errors but actually provided selective written feedback), but teacher practice often varied from student perceptions of preferable written feedback methodologies (e.g., students preferred teachers mark all errors, but teachers actually provided selective written feedback).

Interestingly, much of the research exploring the alignment between teacher beliefs and their actual practices has occurred outside of the U.S., in English Language Learner classrooms, and/or at the secondary or university level (Lee, 2009; Norouzian & Farahani, 2012). These studies indicated that there appears to be a disconnect or lack of alignment between teachers’ beliefs about the written feedback principles, their written feedback practice, and the actual written feedback they give their students. The current study seeks to further examine the relationship between teacher beliefs and their actual written feedback practices at the elementary school level, and in the United States.

**Current Study**

The purpose of the current study was to examine the written feedback types and feedback levels that teachers provide to students on written assignments, as well as consider teacher beliefs about the usefulness of this written feedback. In addition, the study assessed the effectiveness of a treatment provided to teachers that attempted to increase their use of feedback techniques considered most successful for facilitating student development.

The study built upon prior research (Almendral, 2012) by increasing the number of participants recruited, honing the definition of “teacher,” collecting demographic information, exposing participants to different written feedback models, and including a control group. The following research questions and hypotheses were examined in the current study.
Research Questions and Hypotheses

Research Question 1. What types and levels of written feedback do elementary school teachers provide in this heterogeneous convenience sample?

• Hypothesis 1a: Teachers will provide more form feedback than content feedback on a student writing assignment.

• Hypothesis 1b: Teachers will provide more task feedback than process-SR feedback on a student writing assignment.

• Hypothesis 1c: The majority of comments teachers provide will be form comments at the task level and the fewest comments will be content comments at the process-SR level.

Research Question 2. To what extent do elementary school teachers’ beliefs about written feedback and their written feedback practice match the actual written feedback teachers provide?

• Hypothesis 2a: There will be no match between teacher beliefs about their form and content written feedback practice and the actual form and content feedback teachers provided.

• Hypothesis 2b: There will be no match between teacher beliefs about feedback principles linked to feedback levels and the actual level of feedback teachers provided.

Research Question 3. To what extent does exposure to a model of written feedback influence teacher written feedback practice?

• Hypothesis 3a: Teachers who participated in different forms of the treatment will provide significantly more written feedback in the treatment type and level than control group teachers.
• **Hypothesis 3b:** Teachers who participated in different forms of the treatment will provide significantly more written feedback in the treatment type and level if they rated their model more highly.
Chapter 3: Methods

This chapter describes the methodology that was used to explore three core questions about elementary school teacher written feedback: 1) What types and levels of written feedback do elementary school teachers provide; 2) To what extent do elementary school teachers’ beliefs about written feedback and their own written feedback practice match the actual written feedback teachers provide; and 3) To what extent does exposure to a model of written feedback influence teacher written feedback practice. This chapter first describes the participating sample, followed by the measures used, and then details the procedure used in the implementation of the study.

Participants

After receiving approval from the Institutional Review Board, participants were recruited from Master of Science in Education (MSED) courses in literacy, research, and child development. Specifically, all courses relevant to student writing development, teacher pedagogical improvement, research, and child development were identified. Course instructors were then approached by the Principal Investigator (PI) for permission to implement the study as part of a professional development experience for the elementary school and pre-service teachers enrolled in the instructors’ courses that would supplement their current course work. Instructors who agreed to have the study implemented in their courses were asked to sign a general Letter of Support indicating their agreement. As the above-described process was slow to enroll participants who met the study criteria, participants were subsequently also recruited via convenience sampling using word of mouth, emails, and Facebook.

Inclusion and exclusion criteria. In order to be included in the current study, participants needed to be considered elementary school teachers. The current study defined “elementary school teacher” as anyone currently employed as a Pre-Kindergarten (Pre-K) –
grade 6 classroom teacher, teacher’s aide, paraprofessional, or substitute teacher, as each of these
instructors is in a position to provide students with written feedback in a teaching capacity. Due
to recent fiscally-related teacher layoffs, this definition was expanded to include those who had
previously taught students in grades Pre-K – 6 in one of the aforementioned capacities for one or
more years even if they were not employed in a teaching capacity at the time the study was
conducted. Since pre-school teachers are certified to work with students from birth to grade 2,
and would be expected to know and may potentially work with elementary aged students and
elementary school material, they were also included in the sample. Student teachers, however,
were excluded from participation as they were still operating in a training capacity. Of the
current sample ($n = 188$), the majority of participants ($n = 184$) were currently teaching in an
elementary school setting, two participants had worked in elementary school settings previously
but were currently teaching in grades 7 – 12, and two participants had taught in an elementary
school setting for more than a year but were not teaching at the time of data collection.

Fulfillment of the inclusion criterion was determined by participant responses to the first
two questions of the Demographic Survey (described further in the Measures section). These
questions asked participants to: 1) indicate if they were currently employed as a teacher, literacy
specialist, ESL/ELL/Bilingual education teacher, teacher’s aide, substitute teacher, or in some
other teaching position, or 2) had ever been employed for one or more years in an elementary
school setting as a: teacher, literacy specialist, ESL/ELL/Bilingual education teacher, teacher’s
aide, substitute teacher, or in some other teaching position (see Appendix C).

A total of 165 teachers participated in the professional development recruitment process,
filling out the measures and taking part in the discussion of written feedback as part of their
course experience. Of these, seven teachers chose not to have their responses used for the study,
68 participants did not meet the criteria as they were not currently teaching and had never taught in an elementary school setting, and 12 participants did not provide written feedback on the Written Task despite responding to the Teacher Questionnaire and Demographic Survey. In total, 78 participants recruited using this method completed the study. Using convenience sampling and the snowball method of recruitment, 135 teachers sent back surveys. Of these, 24 responded to the Teacher Questionnaire and Demographic Survey but did not give written feedback on the Written Task, and one opted out of the study. Thus, a total of 110 participants using this method completed the study. Based on both methods of recruitment, 188 participants completed the study.

**Descriptive Statistics.** The majority of participants in the current study were female (83.5%), as shown in Table 1. Participants were fairly evenly distributed by age (51.1% 20 – 30 years of age, and 45.2% 31 and above), and by highest degree attained (47.3% Bachelor of Arts/Science (B.A./B.S.) and 52.1% Master of Arts/Science (M.A./M.S.) degrees). Most participants were classroom teachers (70.7%), although the sample also included teacher aides (TAs), paraprofessionals, and substitute teachers (29.3%). Participants were fairly evenly represented by grades taught, with 35.6% of participants working with pre-K to grade 2 students, 28.7% in grades 3 to 6, and 26.6% working with multiple grades. Additionally, just over half the participants (52.1%) had taught fewer than 5 years.
Table 1

Participant Background and Educational Information (N=188)

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<th>Category</th>
<th>Sub-Category</th>
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<td>Male</td>
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<td></td>
<td>31 and above</td>
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<td>45.2%</td>
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<td>Certifications</td>
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<td>35.1%</td>
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<tr>
<td>Received</td>
<td>Additional (e.g., ESL, Bilingual, Special Education, Students with Disabilities)</td>
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<td>25.0%</td>
</tr>
<tr>
<td>Highest Degree</td>
<td>B.A./B.S.</td>
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<td>47.3%</td>
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<td>M.A./M.S.</td>
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<td>52.1%</td>
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<td>Position</td>
<td>Classroom teachers (grade/ESL/ELL/Literacy)</td>
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<td>70.7%</td>
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<td></td>
<td>Other teachers (TA/Paraprofessional/Sub)</td>
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<td>29.3%</td>
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<td>67</td>
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<td></td>
<td>Grade 3 – grade 6</td>
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<td>5 or more years</td>
<td>81</td>
<td>43.1%</td>
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</table>

*aNumbers reflect percentages of the total sample. Not all participants answered each question; percentages may therefore be less than 100%.

**Group assignment.** In order to examine the impact of exposure to a feedback model on teachers’ written feedback, participants were spirally assigned to one of five groups – four treatment groups and one control group -- based on the distribution of packets described below. This method ensured that the desired proportion of participants would be present in each group by distributing survey packets in a predetermined order (Messick, Beaton, & Lord, 1983). The treatment groups varied by type of feedback and level of feedback as follows: Group 1 – form and task, Group 2 – form and process-SR, Group 3 – content and task, Group 4 – content and process-SR (See Table 2).
While the study was designed to yield a minimum of 30 participants per group in order to allow for the necessary statistical power to run the targeted inferential analyses (McMillan, 2012), a greater number of control group packets was distributed and collected in order to allow for a more robust exploration of how elementary school teachers who were not exposed to treatment provide written feedback. Packets were therefore distributed in the following sequence: group 1, group 2, group 3, group 4, group 5, and group 5, with group 5 representing the control group. Packets continued to be distributed in this order until all participants had been recruited to the study. However, once the study had been closed to recruitment and data analysis begun, it was found that many control group participants \((n = 23)\) failed to provide written feedback. An examination of control group participants not giving written feedback yielded inconsistent responses as to why they did not provide the written feedback. It could not be determined if participants chose to skip the question, did not fully understand the directions, do not usually give written feedback to their students, or another reason entirely. Consequently, participants giving no written feedback in both treatment \((n = 13)\) and control groups \((n = 23)\) were excluded from further analysis.

In total, 188 participants who gave written feedback were distributed between the five study groups (four treatment groups, and one control group). As can be seen in Table 2, the sample was nearly evenly divided between those exposed to form or content feedback, and those who were exposed to task or process-SR level feedback. Additionally, 30.3% of the sample was not exposed to a written feedback model.
Table 2

*Participant Group Distribution by Feedback Type and Level (N=188)*

<table>
<thead>
<tr>
<th>Group</th>
<th>Feedback Type</th>
<th>Feedback Level</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>Form</td>
<td>Task</td>
<td>35 (18.6%)</td>
</tr>
<tr>
<td>Group 2</td>
<td>Form</td>
<td>Process-SR</td>
<td>32 (17.0%)</td>
</tr>
<tr>
<td>Group 3</td>
<td>Content</td>
<td>Task</td>
<td>33 (17.6%)</td>
</tr>
<tr>
<td>Group 4</td>
<td>Content</td>
<td>Process-SR</td>
<td>31 (16.5%)</td>
</tr>
<tr>
<td>Group 5</td>
<td>None – Control</td>
<td>None – Control</td>
<td>57 (30.3%)</td>
</tr>
</tbody>
</table>

**Measures**

The following three measures were used in the current study: 1) Written Task, 2) Teacher Questionnaire, and 3) Demographic Survey. The Written Task (Part II only) and Teacher Questionnaire were piloted in earlier research (Almendral, 2012) and modified for the current study (e.g., the addition of Part 1 of the Written Task, and revised Teacher Questionnaire items). The Demographic Survey, in contrast, was created for the current study.

**Written Task.** This researcher-developed measure was created to document the types and levels of written feedback that elementary school teachers provide. The measure was unique to this study since no other measure of both feedback type and level currently exists. The measure consisted of two sections, one that exposed participants to written feedback models and the other for collecting participant written feedback. Corresponding to the five participant groups, there were five versions of the Written Task that varied based on the included model of written feedback for the four treatment groups.

Each of the four treatment groups first received a model of written feedback followed by questions about the feedback model, and then the written sample upon which they were asked to
provide their own written feedback. Control group participants received only the sample of student work upon which they were asked to provide written feedback (detailed below) and no model of written feedback. They also did not receive the questions relating to the feedback model’s helpfulness, usefulness, etc. All versions of the Written Task can be found in Appendix A.

**Part I: Feedback models.** This portion of the Written Task measure served as a vehicle for exposing treatment group teachers to a model of written feedback. The models all consisted of written feedback provided on an essay response by an actual 5th grade student to a 5th grade social studies practice question about the Revolutionary War. The writing sample used to construct the models contained six lines and 113 words.

The control group did not receive Part 1 since they were not exposed to a model of written feedback. The four feedback models represented a 2 x 2 matrix of feedback types (form/content) and feedback levels (task/process-SR). Each model implemented one of the four following combinations: 1) form feedback at the task level, 2) form feedback at the process-SR level, 3) content feedback at the task level, or 4) content feedback at the process-SR level. After viewing the feedback model, participants were asked to rate on a five-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree), their level of agreement with five statements related to the written feedback model’s helpfulness, effectiveness, developmental appropriateness, usefulness, and motivational value.

**Part II: Participant written feedback.** All five groups were given a student essay response to a 5th grade social studies practice question about the Revolutionary War. The essay response to the practice question was downloaded from the New York State Education
Department (NYSED) website. The essay contained seven lines and 123 words and was thus similar in design to the student writing sample used in the feedback models in Part I of the task.

Participants were asked to read the student’s essay and provide the student with the written feedback that they believed would be most helpful to the student for improving his or her writing. Participants were then asked to rate the student’s work on a scale of 1 (poor) to 10 (excellent), identify the most important writing concern in the essay, and indicate if they generally gave this type of written feedback to their students. Finally, participants were provided with an opportunity to list comments and suggestions (see Appendix A).

**Teacher Questionnaire.** This measure explored teacher beliefs and practices about written feedback. The survey was adapted from Lee’s (2009) study of Hong Kong secondary school teacher written feedback beliefs and practices. Lee’s questionnaire contained one open-ended question about the main purpose of providing written feedback on students’ writing, four categorical multiple-choice questions, and three Likert-type questions with varying numbers of sub-questions. The multiple choice questions asked participants if their schools prescribed written feedback practices, how effective they considered their written feedback, how often they gave writing assignments, and how often they gave students feedback on their writing assignments. The first set of questions asked teachers to rate the frequency with which they engage in various written feedback practices using a five-point scale ranging from 1 (never) to 5 (always). The second set of questions asked teachers to rate their level of agreement with a series of statements about written feedback principles using a four-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). The third group of questions asked teachers to rate the frequency with which they engage in other written feedback practices using a five-point scale ranging from
1 (never) to 5 (always). Lastly, participants were provided with the opportunity to give comments.

The Teacher Questionnaire used in the current study modified Lee’s (2009) original questionnaire by removing terms pilot participants found challenging (e.g., marking code) and instead, framing questions more broadly. Additionally, the current version of the questionnaire asked about the frequency with which teachers gave written feedback to their students, as well as the frequency with which teachers asked their students to act upon the written feedback. Other questions specific to teacher classroom use of written feedback were also included, as well as a question about the frequency with which teachers think about the best way to provide students with written feedback on their writing assignments. See Appendix B for the Teacher Questionnaire.

**Demographic Survey.** This researcher-designed measure contained 16 items -- 14 multiple-choice questions and 2 open-ended questions. Survey questions were used to ensure potential participants met the selection criterion (currently teaching, or not currently teaching but having taught more than a year in a Pre-K – grade 6 setting), and to gather demographic information about the sample. The survey included questions soliciting teacher background data (e.g., gender, age, education), and teaching experience (e.g., position, years teaching, grades taught). See Appendix C for the Demographic Survey.

**Procedure**

As mentioned previously, this study was implemented during a regular classroom meeting of a graduate level course given to students in university MSED courses. This was based upon the rationale that written feedback is a strategy that teachers implement in all content areas and is applicable to all elementary school teachers. The following procedure was followed in
each classroom. Each course instructor first introduced the PI to class attendees. Survey packets were then spirally distributed, thus assigning participants to group based upon the Written Task version contained in the survey packet they received. Each participant received a survey packet containing the following items in this order: 1) Cover Letter, 2) Written Task (one of five possible versions), 3) Teacher Questionnaire, and 4) Demographic Survey, accompanied by an extra Cover Letter not attached to the survey packet that each participant was instructed to keep for his/her records.

The Cover Letter contained information about the research study, risks and benefits involved in the research, and important contact information. The Cover Letter informed participants that their participation was completely voluntary, that they had the option of choosing not to participate at any time, and that their participation was entirely anonymous. In addition, participants were asked to indicate their agreement to participate or decision to opt out of participating in the study by checking a box at the end of the Cover Letter (see Appendix D). No signatures were collected, as this would have enabled participants to be identified.

Following distribution of the packets, the PI briefly introduced the study and explained each item in the packet to participants. While attendees had the option of not participating in the study, all course attendees were required to complete the activity (i.e., complete the survey packet and participate in the following discussion). The activity was required as the study was implemented in courses where instructors considered the activity content a component of participants’ coursework and important for the development of their teaching practice. However, the data of anyone opting out of the study was discarded and not included in the analyses. It was highlighted to participants that use of their data for the research was completely voluntary and anonymous, and they could choose to opt out of having their data used for the study. Seven
teachers participating in the professional development experience opted out of having their data used for the study.

Participants were given 45 minutes to complete the packet; all participants were able to complete the packet within this time. Upon the class’ completion of the packets, the PI led a discussion about written feedback, during which the PI spoke with the class about written feedback research, answered any questions participants had related to the research activities and written feedback, and engaged in a discussion about teacher written feedback practices and research.

Recruitment using the above described professional development experience did not provide a large enough sample for the current study. Consequently, participants were also recruited using word-of-mouth, email, and Facebook. Teachers recruited via these means did not engage in the professional development experience, although they were told that they could contact the PI at any time for more information about the study and/or written feedback research.

With the exception of the PI-led discussion, the procedure followed with teachers recruited using the non-classroom method proceeded similarly to the within-classroom method detailed above. Participants were given the same packet of measures and an extra Cover Letter to keep, along with a pre-stamped and addressed envelope that participants were instructed to use to anonymously return the survey to the PI. These teachers were also spirally assigned to treatment group based upon the version of the Written Task that they received in their survey packet.

Data Analysis

All data were first coded using the following coding scheme. After coding was completed statistical analyses were conducted.
**Coding scheme for written feedback.** Two scorers coded and analyzed the written feedback that teachers provided on Part II of the Written Task using a Coding Rubric (see Appendix E). The rubric contained general rules for written feedback points, how to identify comments, and how to divide lengthy comments into smaller comments that could then be coded for feedback type and level. This rubric, formerly known as the Feedback Level Rubric, was originally created for Almendral’s (2012) pilot study by adapting Hattie and Timperley’s (2007) four feedback levels and terminology. Levels were framed in question format and accompanied by a list of key words. The rubric was then adapted for the current study to reflect the aggregation of process and self-regulation feedback levels. Combining these levels allowed data to be explored via those feedback levels considered most effective for student transfer of learning, and made it possible to avoid issues that would have arisen due to the unclear boundaries between the two levels (Almendral, 2012; Hattie & Timperley, 2007). The rubric, therefore, enabled scorers to document three feedback levels: 1) task, 2) process-SR, and 3) self.²

The rubric also contained detailed descriptions of positive and corrective written feedback³, and form and content type feedback. Feedback type, (form and content) were both described in detail. These feedback types were at the heart of the current study analyses, and the coding rubric enabled scorers to identify both in any given comment.

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² Although level 4 (self as a person) feedback was not manipulated or analyzed in the current study, it was expected that teachers would still implement written feedback at this level and future research may look at these response levels.

³ Positive written feedback encompasses work done well, and general statements about elements that are liked or considered correct. In contrast, corrective written feedback addresses incorrect items or items in need of improvement. Although positive and corrective written feedback were not included in the current study analyses, it was anticipated that participants would deliver feedback in these ways and that the information should be documented should related questions arise.
Inter-rater reliability. The PI and a research assistant scored the teacher written feedback provided on Part II of the Written Task. To establish inter-rater reliability, a trained research assistant with a background in elementary education was recruited to score 20% of the surveys randomly selected from each group. An initial reliability procedure was conducted as follows. Scorers randomly selected five surveys and then used the Coding Rubric (Appendix E) to identify the different types of written feedback (form/content), levels of written feedback (task/process-SR), and the overall number of written feedback points that occurred in the Written Task for each survey. Disagreements were discussed until consensus was reached, creating decision rules for moving forward. Each coder then scored the remaining 20% of the participant surveys.

Cohen's κ demonstrated very good agreement (Landis & Koch, 1977) between coders for the total number of content comments ($\kappa = .811, p < .001$). There was good agreement between coders for the total number of comments overall ($\kappa = .719, p < .001$), total number of form comments ($\kappa = .732, p < .001$), total number of task comments ($\kappa = .796, p < .001$), and total number of process-SR comments ($\kappa = .728, p < .001$).

Statistical analyses. Analyses were directed towards the three core study questions: 1) What types and levels of written feedback do elementary school teachers provide; 2) To what extent do elementary school teacher beliefs about written feedback and their own written feedback practice match the actual written feedback teachers provide; and 3) To what extent does exposure to a model of written feedback influence teacher written feedback practice? The following sections detail the analyses conducted to answer these questions.

Research Question 1. What types and levels of written feedback do elementary school teachers provide? Only data from the heterogeneous control group convenience sample
were used for this analysis as this group had not been exposed to feedback models and the data were most representative of how teachers would normally provide feedback. Using the data of control group teachers giving written feedback, means and standard deviations were determined for the feedback types (form and content) and levels (task and process-SR). A chi-square analysis was conducted to examine the relationship between each written feedback type at each feedback level. Independent samples t-tests were run to determine if outcome variables differed by demographic characteristics (gender, age certifications received, highest degree) or teaching experience (position, grade taught, and years teaching).

**Research Question 2. To what extent do elementary school teachers’ beliefs about written feedback and their own written feedback practice match the actual written feedback teachers provide?** Control group data were considered in order to assess the “match” between teacher beliefs and teacher written feedback. Only these data were considered as control group participants had not been exposed to written feedback models and are therefore representative of the beliefs and feedback of a typical teacher. Spearman rank order correlations were conducted to examine this “match” as they allow for examination of the relationship between ordinal and continuous variables (Mujis, 2011). Two sets of correlations were examined as follows: The relationship between teachers’ beliefs about the written feedback they provide and their actual written feedback on the Written Task; and, teachers’ beliefs about feedback principles and their actual written feedback on the Written Task.

The first analysis explored the relationship between teacher beliefs about the types of written feedback participants provide, assessed via items 2c (*I provide form written feedback* (e.g., *I address grammatical or mechanical issues like spelling and word usage*) and 2d (*I provide content written feedback* (e.g., *I address the meaning or organization of the work*) of the
Teacher Questionnaire, and the total number of form or content comments they gave on the Written Task.

The second set of correlations examined the relationship between teacher beliefs about feedback principles related to feedback levels and the levels of feedback they actually gave on the Written Task. Specifically, teacher beliefs about task level feedback, assessed in item 5c (*It is the teacher’s job to locate errors and provide corrections for students.*) were compared to the amount of task level feedback teachers provided on the Written Task. Additionally, teacher beliefs about process-SR level feedback, assessed by items 5e (*Students should learn to locate their own errors.*), and 5f (*Students should learn to analyze their own errors.*) were compared to the amount of process-SR type feedback teachers provided on the Written Task.

**Research Question 3. To what extent does exposure to a model of written feedback influence teacher written feedback practice?** To examine whether exposure to a specific model of written feedback influences teacher feedback practice, a multivariate analysis of covariance (MANCOVA) was conducted with a 5-group independent variable (group 1, group 2, group 3, group 4, group 5) to look for group differences in the dependent variables (total amount of feedback types and levels) between the control group and each of the four intervention groups, controlling for age. MANCOVA analyses allow for the examination of differences between multiple groups on a variety of outcomes (Warner, 2008). An analysis of variance (ANOVA) was then conducted to determine if there were significant group differences for each dependent variable (type, and level).

Finally, to examine if teachers were more influenced by models that they rated highly, a composite score was created by combining participant responses to a series of four questions about how 1) helpful, 2) effective, 3) developmentally appropriate, and 4) encouraging the model
is for students. Means, standard deviations, and score ranges were computed for each group, and a one-way ANOVA was conducted to examine if teacher model ratings impacted their written feedback. Hierarchical linear regressions controlling for age were then used to determine whether teacher model ratings predicted the amount of comments, and written feedback types and levels provided on the Written Task. The results of these analyses are presented in Chapter 4.
Chapter 4: Results

Preliminary Analyses

Preliminary analyses were conducted to evaluate primary outcome variables, including total number of comments provided by participants, as well as the total number of form comments, content comments, task comments, and process-SR comments. These variables were calculated for the treatment and control groups using the feedback provided by teachers on Part II of the Written Task that was coded as detailed in Chapter 3. As can be seen in Table 3, participants provided nearly ten times more form comments ($M = 11.23$, $SD = 5.89$) than content comments ($M = 1.66$, $SD = 2.45$). In addition, participants gave more task comments ($M = 7.79$, $SD = 6.43$) overall than process-SR comments ($M = 5.02$, $SD = 4.36$).

Using independent samples t-tests, preliminary analyses were conducted only with control group ($n = 57$) data to examine whether outcome variables significantly differed based upon teacher demographic characteristics. Results showed that outcome variables did not significantly differ based upon gender, grade taught, teaching role (i.e. primary classroom teachers vs. teaching assistant, paraprofessional, substitute teacher), type of certification,
pursuance of certification, or years of teaching experience (Non-significant t-test results can be seen in Appendix F).

There were, however, statistically significant as well as trend level differences in comments on the Written Task based upon teacher age. Overall, there was a trend toward older teachers (31 and older) providing more written comments than younger (ages 20-30) teachers ($t = 1.73, p < .10$). While number of content comments and process-SR comments did not differ by teacher age ($t = 0.52$ and $0.08, p = ns$, respectively), older teachers did provide significantly more form comments ($t = 2.12, p < .05$) and significantly more task-level comments ($t = 2.20, p < .05$) than younger teachers. Consequently, subsequent analyses controlled for age. Results further showed that teachers who taught multiple grades provided significantly fewer task-level comments than teachers who only taught one grade ($t = 2.54, p < .05$). However, neither the type of comments ($t = 0.96$ and $0.70, p = ns$ for form and content respectively) nor the process-SR-level comments differed ($t = 0.68, p = ns$) between these two groups. Subsequent analyses were conducted to answer the specific research questions of the study as detailed below.

**Research Question 1: What types and levels of written feedback do elementary school teachers provide?**

To evaluate the feedback that an elementary school teacher would normally provide, data from the control group, who had not been exposed to models of written feedback, were explored. Whereas control group participants ($n = 57$) used form comments ($M = 12.46, SD = 5.43$) nearly ten times more frequently than content comments ($M = 1.61, SD = 2.15$), the frequency with which they used task ($M = 6.42, SD = 5.61$) and process-SR ($M = 5.49, SD = 4.46$) level comments was similar. These participants did, however, implement task level feedback more frequently than process-SR level written feedback (see Table 4).
Table 4

*Descriptive Statistics for Control Group Feedback Comments, Types, and Levels (n=57)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of comments</td>
<td>12.46</td>
<td>5.43</td>
<td>3 – 32</td>
</tr>
<tr>
<td>Total number of form comments</td>
<td>10.68</td>
<td>5.18</td>
<td>0 – 25</td>
</tr>
<tr>
<td>Total number of content comments</td>
<td>1.61</td>
<td>2.15</td>
<td>0 – 10</td>
</tr>
<tr>
<td>Total number of task comments</td>
<td>6.42</td>
<td>5.61</td>
<td>0 – 18</td>
</tr>
<tr>
<td>Total number of process-SR comments</td>
<td>5.49</td>
<td>4.46</td>
<td>0 – 15</td>
</tr>
</tbody>
</table>

Paired sample t-tests were conducted with control group data to examine whether significant differences existed between the number of (a) form and content comments, and (b) task and process-SR comments. Results indicated that the difference between the number of form and content comments was statistically significant \(t = 11.76, p < .001\), but the difference between the number of task and process-SR comments was not significant \(t = 0.82, p = ns\).

To further examine these data, a chi-square analysis was conducted to examine the relationship between the type of feedback comment and the level at which feedback was given. This analysis indicated that there was a significant difference in the types of comments provided by the particular levels of these comments \(\chi^2 = 20.20, p < .001\). Specifically, among the form comments, 51.2% were at the task level and 48.8% were at the process-SR level, while among the content comments, 71.0% were at the task level and only 28.0% were at the process-SR level. Although this difference was significant, it is important to note that the number of form comments \(n = 623\) was significantly greater than the number of content comments \(n = 93\), so these results must be interpreted with some caution. Overall, the majority of form and content comments appeared to occur at the task level.
Research Question 2: To what extent do elementary school teachers’ beliefs about written feedback and their written feedback practice match the actual written feedback teachers provide?

Teacher beliefs about their written feedback practice. Using control group data only, Spearman rank-order correlations were conducted to ascertain the relationship between (a) the amount of form feedback teachers believe they give to students and the actual amount of form feedback they provided on the Written Task, and (b) the amount of content feedback teachers believe they give and the actual amount of content written feedback they provided on the Written Task. A two-tailed test of significance indicated that there was a trend level association between teachers’ beliefs that they give form written feedback to their students and the number of form feedback comments that they gave on the Written Task (\(r_s(54) = .251, p = .062\)). That is, teachers who believed that they provided form written feedback more frequently provided more form written feedback on the Written Task. In contrast, no significant relationship was found between teacher beliefs regarding the frequency that they give content written feedback and the actual amount of content written feedback they gave (\(r_s(53) = -.040, p = .769\)).

Teacher beliefs about written feedback principles. Spearman rank-order correlations were again run for control group data to examine the relationship between (a) teacher beliefs about task level feedback and the amount of task level feedback teachers provided on the Written Task, and (b) teacher beliefs about process-SR level feedback and the amount of process-SR type feedback teachers provided on the Written Task. Results from a two-tailed test of significance between teacher beliefs that “It is the teacher's job to locate errors and provide corrections for students” and the amount of task level written feedback teachers gave on the Written Task were not significant (\(r_s(55) = -.226, p = .091\)). Additionally, while a two-tailed test of significance
indicated that there was a strong positive correlation (Ferguson, 2009) between teacher beliefs that “Students should learn to locate their own errors” and “Students should learn to analyze their own errors,” ($r_s(55) = .785$, $p < .001$), there was no significant relationship between these variables and the amount of process-SR level feedback teachers gave on the Written Task ($r_s(55) = -.025$, $p = .852$).

**Research Question 3: To what extent does exposure to a model of written feedback influence teacher written feedback practice?**

The primary outcome variables of feedback type (form and content) and feedback level (task and process-SR) were examined by group. Initial analyses showed that overall, participants exposed to a treatment model gave considerably more form than content feedback, and more task than process-SR level feedback. Additionally, when looking descriptively at the average number of comment types by level, each treatment group evidenced the highest number of the combination that matched the model to which their group was exposed (see Table 5).
Table 5.

Average Number of Type, Level, and Type-Level Comments by Group

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>M (SD)</strong></td>
<td><strong>M (SD)</strong></td>
<td><strong>M (SD)</strong></td>
<td><strong>M (SD)</strong></td>
<td><strong>M (SD)</strong></td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td>12.69 (6.00)</td>
<td>11.25 (5.58)</td>
<td>10.61 (5.83)</td>
<td>11.23 (7.32)</td>
<td>10.68 (5.18)</td>
</tr>
<tr>
<td><strong>Content</strong></td>
<td>1.23 (2.91)</td>
<td>1.19 (2.82)</td>
<td>2.06 (2.28)</td>
<td>2.32 (2.07)</td>
<td>1.61 (2.15)</td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Task</strong></td>
<td>10.29 (6.68)</td>
<td>5.59 (6.03)</td>
<td>8.91 (5.06)</td>
<td>8.58 (8.08)</td>
<td>6.42 (5.59)</td>
</tr>
<tr>
<td><strong>Process-SR</strong></td>
<td>3.80 (4.11)</td>
<td>6.78 (4.51)</td>
<td>3.49 (4.19)</td>
<td>5.00 (3.95)</td>
<td>5.49 (4.46)</td>
</tr>
<tr>
<td><strong>Combined</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Form/Task</strong></td>
<td>9.43 (7.04)</td>
<td>5.22 (5.83)</td>
<td>6.88 (5.28)</td>
<td>7.29 (7.55)</td>
<td>5.60 (5.67)</td>
</tr>
<tr>
<td><strong>Form/Process-SR</strong></td>
<td>3.31 (3.93)</td>
<td>6.44 (4.41)</td>
<td>3.45 (3.96)</td>
<td>3.94 (3.79)</td>
<td>5.33 (4.43)</td>
</tr>
<tr>
<td><strong>Content/Task</strong></td>
<td>1.03 (2.75)</td>
<td>0.47 (1.14)</td>
<td>1.61 (1.82)</td>
<td>1.26 (1.51)</td>
<td>1.16 (1.96)</td>
</tr>
<tr>
<td><strong>Content/Process-SR</strong></td>
<td>0.20 (0.58)</td>
<td>0.31 (0.69)</td>
<td>0.58 (0.90)</td>
<td>0.94 (1.48)</td>
<td>0.46 (0.97)</td>
</tr>
</tbody>
</table>
To examine whether exposure to a specific model of written feedback influences teacher feedback practice, each of the four intervention groups was compared to the control group (which did not receive a model of written feedback) using a multivariate analysis of covariance (MANCOVA). MANCOVA allows for an examination of group differences within a set of dependent variables - in this case, type and level of written feedback - while controlling for covariates. Given that previous analyses suggested that there was a significant difference in the use of both form comments and task comments between younger and older teachers, age was included as a covariate in this analysis. An initial analysis confirmed that assumptions of homogeneity of variance-covariance and homogeneity of regression slopes were met (Mertler & Vannatta, 2013).

Results of the 5-group (4 treatment, 1 control) independent variable MANCOVA revealed that group had a significant impact on the combined dependent variable (total number of form comments, total number of content comments, total number of task comments, and total number of process-SR comments) (Wilks’ Λ = 0.84, \( F(16, 526) = 1.96, p < .05 \), multivariate \( \eta^2 = .04 \)). Age, included as a covariate, did not significantly influence the combined dependent variable (Wilks’ Λ = 0.98, \( F(4, 172) = 0.96, p = ns \), multivariate \( \eta^2 = .02 \)). Given that multivariate significance was identified, univariate analysis of variance (ANOVA) was then conducted to determine significant group differences for each dependent variable (total number of form comments, total number of content comments, total number of task comments, and total number of process-SR comments). Results of these analyses indicated that there were significant group differences for both task (\( F(4, 183) = 3.44, p < .05 \)) and process-SR (\( F(4, 183) = 2.86, p < .05 \)) feedback levels. Scheffe post hoc tests indicated that there was a trend-level difference between Group 1 (form and task) and Group 2 (form and process-SR), as well as between Group
1 and the control group, with Group 1 providing more task comments than either Group 2 ($\Delta = 4.69, p < .10$) or the control group, ($\Delta = 3.86, p < .10$). There was also a trend-level difference between Groups 1 and 2 on process-SR comments, with Group 2 providing more of these comments than Group 1 ($\Delta = 2.98, p < .10$).

An examination of whether teachers were more influenced by models that they rated highly was assessed via a composite variable created from the answers to four questions on Part 1 of the Written Task. Only the teachers in the intervention groups answered these questions immediately after they were exposed to the model of written feedback. Higher scores indicated higher model ratings. Overall, teacher ratings were neutral, falling in the mid-range ($M = 11.82, SD = 4.12$, range = 4 – 20), with model 3 (content and task) receiving the highest rating followed by model 4 (content and process-SR). In contrast, teachers rated model 2 (form and process-SR) least highly.

A one-way ANOVA was conducted to examine whether differences in teacher model ratings varied based on intervention group. Results indicated that there were no significant differences between the groups (see Table 6; $F(3, 132) = 1.60, p = ns$).

<table>
<thead>
<tr>
<th>Intervention Group</th>
<th>n</th>
<th>M (SD)</th>
<th>Score Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 (Form &amp; Task)</td>
<td>32</td>
<td>11.28 (4.45)</td>
<td>4 – 20</td>
</tr>
<tr>
<td>Group 2 (Form &amp; Process-SR)</td>
<td>35</td>
<td>10.94 (4.20)</td>
<td>6 – 20</td>
</tr>
<tr>
<td>Group 3 (Content &amp; Task)</td>
<td>34</td>
<td>12.91 (3.67)</td>
<td>4 – 20</td>
</tr>
<tr>
<td>Group 4 (Content &amp; Process-SR)</td>
<td>35</td>
<td>12.14 (4.02)</td>
<td>4 – 20</td>
</tr>
</tbody>
</table>

Hierarchical linear regression was used to determine if teacher ratings predicted the written feedback type, level, and total number of comments teachers gave on the Written Task, controlling for teacher age. Results were only significant by level. Compared to teachers who
gave lower model ratings, teachers who rated their model more highly provided more task comments ($R^2 = .04; B = 0.30, t = 2.03, p < .05$) and fewer process-SR comments ($R^2 = .04; B = -0.21, t = 2.16, p < .05$).
Chapter 5: Discussion

The current study examined the ways that elementary school teachers implement feedback as a formative assessment practice. Specifically, the study examined the types (form and content) and the levels (task and process-SR) of feedback comments teachers provided. Teacher feedback beliefs were also explored and compared to their actual feedback practice. Lastly, teachers were exposed to different written feedback models in order to see if exposure to the models impacted the actual feedback they gave. Findings are discussed in relation to the research questions that guided the study. Limitations and educational implications are then considered. Table 7 presents an overview of the research questions, hypotheses, and findings.
Table 7

*Research Questions, Hypotheses, and Findings*

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Hypothesis</th>
<th>Hypothesis Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What types and levels of written feedback do elementary school teachers provide?</td>
<td>a. Teachers will provide more form feedback than content feedback on a student writing assignment.</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>b. Teachers will provide more task feedback than process-SR feedback on a student writing assignment.</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>c. The majority of comments teachers provide will be form comments at the task level and the fewest comments will be content comments at the process-SR level.</td>
<td>Supported</td>
</tr>
<tr>
<td>2. To what extent do elementary school teachers’ beliefs about written feedback and their written feedback practice match the actual written feedback teachers provide?</td>
<td>a. There will be no match between teacher beliefs about their form and content written feedback practice and the actual form and content feedback teachers provided.</td>
<td>Partially Supported</td>
</tr>
<tr>
<td></td>
<td>b. There will be no match between teacher beliefs about feedback principles linked to feedback levels and the actual level of feedback teachers provided.</td>
<td>Supported</td>
</tr>
<tr>
<td>3. To what extent does exposure to a model of written feedback influence teacher written feedback practice?</td>
<td>a. Teachers who participated in different forms of the treatment will provide significantly more written feedback in the treatment type and level than control group teachers.</td>
<td>Partially Supported</td>
</tr>
<tr>
<td></td>
<td>b. Teachers who participated in different forms of the treatment will provide significantly more written feedback in the treatment type and level if they rated their model more highly.</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>
Research Question 1: What types (form or content) and levels (task or process-SR) of written feedback do elementary school teachers provide?

To date, most of the research on teachers’ use of feedback has been conducted with teachers at the university level (Ashwell, 2000; Olson & Raffeld, 1987), with very little focus on teachers at other levels. Consequently, this study aimed to gain a better understanding of how elementary school teachers use this formative assessment practice. Results showed that, overall, teachers provided an average of 12.46 comments, with the number of comments ranging from 3 – 32, on a seven-line, 123-word student writing assignment. Older teachers were more likely to provide a greater number of total comments, form type comments, and task level feedback than younger teachers. Additionally, teachers who taught only one grade gave more task comments than teachers who taught multiple grades.

Previous literature showed that teachers tended to provide form type comments (Lee, 2009; Matsumura et al., 2002) and task-level feedback more frequently (Hattie, 2007). It was therefore hypothesized that the majority of comments teachers provided on the Written Task would be form comments at the task level and that the fewest comments would be content comments at the process-SR level. Indeed, results confirmed that participating teachers provided significantly more form feedback than content feedback on a student writing assignment. Similarly, although not statistically significant, results showed that teachers tended to provide more feedback at the task level than at the process-SR level.

There are a number of reasons why teachers are more likely to give form type feedback than content type feedback. Form related issues are particularly salient in student writing and can often be quickly and relatively clearly addressed. At the simplest level, there are often more form issues to address because each word in a paragraph presents the possibility of an error through
spelling or usage and each sentence can present a grammatical issue. In contrast, content type feedback requires knowledge about the content, as well as time to consider the best way for the content to be presented and organized. By definition, content feedback applies across writing elements, in terms of organization and coherence. There are, therefore, fewer opportunities in a given text or writing sample to apply content versus form written feedback. Moreover, it is more time consuming and labor intensive for teachers to address content factors than form factors, making it more likely that teachers will address the form factors.

Similarly, teachers may be more likely to provide feedback at the task-level than the process-SR level because the identification of strategies and/or getting students to consider underlying processes and relationships (i.e. process-SR level) is more time consuming and thought provoking than simply correcting a student’s work, or telling a student what to do to address the current issues (i.e. task-level). This is particularly important as teachers are challenged by the large numbers of students to whom they need to return timely individualized feedback (Lipnevich, McCallen, Miles, and Smith, 2013). Additionally, students receiving task level feedback generally show improvement on the next draft, since the feedback was task specific. Task level feedback is therefore a quick and feasible strategy that might be implemented to improve student writing on the current task. Due to the simpler, faster, and less labor-intensive nature of form type comments and task-level feedback, as well as the more immediate results that come from its implementation, teachers may be more likely to utilize feedback of this type and level, as was evident in the current findings.

Results showed significant differences between the way older teachers provided feedback compared to younger teachers, with older teachers providing more overall feedback, more form type comments and more task level feedback. Older teachers may have recognized the
importance of addressing form issues over time, or have more responsibilities and less time to consider providing content type and process level feedback in written form. Alternately, these teachers may prefer conferencing or other feedback tools for providing this content feedback at the process level. Future research examining age-based teacher differences in providing written feedback may shed greater light into the factors behind these findings.

Results also showed that teachers who taught multiple grades gave fewer task level comments compared to teachers who taught only one grade. Closer examination into teachers who taught multiple grades \( (n = 13) \) revealed that all were female and most were substitute teachers \( (n = 7) \). Additionally most had taught fewer than 5 years \( (n = 10) \). It seems that since teachers who taught multiple grades were more likely to be younger, and age was shown to significantly impact teacher implementation of written feedback, the teachers’ age could be influencing the level of feedback given. Additionally, because most of the teachers who taught multiple grades were substitute teachers and therefore not responsible for lesson plans, overall class structure, delivery choices, or differentiation of instruction, these teachers may have had more time and inclination to give process-SR level feedback.

Findings from the current study are in line with Matsumura’s (2002) findings that elementary school teachers give more form type feedback than content type feedback, and Hattie’s (2007) findings that formative assessment practices are often implemented at the task level. They are, however, somewhat varied from pilot study findings (Almendral, 2012). Pilot study teachers were asked to provide written feedback on the same student writing sample as teachers in the current study. While both the pilot study (treatment group teachers only) and the current study (treatment and control group teachers) found that teachers gave more form type feedback at the task level, participants in the pilot study, all of whom were exposed to a model of
written feedback, gave more of these form type-task level comment combinations than either the treatment or control group teachers in the current study. Additionally, in the current study, treatment group teachers gave more form feedback at the process-SR level and more content feedback at the process-SR level than was seen with the feedback of pilot study participants. Control group teachers also gave more form and content feedback at the process-SR level than was found with the pilot study participants. The control group teachers, however, were more closely aligned with pilot study participants in the percentage of content feedback applied at the process-SR level than with the percentage of form feedback they gave at the process-SR level, which was much greater.

Differences between the two studies may be linked to updates in the scoring rubric. In the pilot study, metalinguistic feedback was considered task level feedback (e.g., circling a form error and indicating the type of error with no further information). However, a review of the metalinguistic feedback given in the pilot study and the literature on metalinguistic feedback indicated that metalinguistic feedback engages students in thinking about the underlying processes involved (Swain & Lapkin, 1995). As such, the decision was made to consider both metalinguistic feedback as well as comments given by circling or underlining items in question without specific cues or words attached as content-level feedback. These types of feedback were determined to involve the student in consideration of the process underlying the item in question.

The current study thus adds to the literature on teacher feedback by generating baseline information about how elementary school teachers implement written feedback. In line with teachers of other grade levels (Lee, 2009), elementary school teachers tend to provide more form feedback over content feedback. In addition, feedback tends to be provided at the task level rather than the process-SR level. These findings, however, must be considered in light of the
sample used for the study, as well as the task used. That is, a limited population of elementary school teachers was used, consisting of a variety of types of teachers, some of whom were not teaching elementary school students at the time data was collected. Additionally, the task in the current study asked teachers to spontaneously provide feedback on a writing assignment they had not designed and did not know. Teachers also did not know the student for whom they were providing feedback. Keeping these limitations in mind, however, the current study does contribute to the literature on feedback as a formative assessment tool, and results extend the knowledge of how teachers provide written feedback types and levels.

**Research Question 2: To what extent do elementary school teachers’ beliefs about written feedback and their written feedback practice match the actual written feedback teachers provide?**

Based on Lee’s (2009) findings that teacher practice is not always reflective of their beliefs, the current study hypothesized that the written feedback teachers provided on the Written Task would not match their beliefs about their written feedback practice. This hypothesis was partially supported. A trend within the data showed that teachers who believed that they provided form feedback with greater frequency, did in fact provide more form written feedback on the Written Task. In contrast, there was a negative relationship between teacher beliefs about the content written feedback they give and the actual content written feedback they provided on the task. That is, teachers who believed that they provided content written feedback more frequently actually gave less content written feedback on the Written Task.

In addition, the current study explored teachers’ level of agreement with general written feedback principles related to feedback level. Again a mismatch was observed between teacher beliefs about the principles and the actual written feedback they gave on the Written Task. In
fact, teachers who reported that, “It is the teacher’s job to locate errors and provide corrections for students,” a statement that relates to the implementation of task level feedback, actually gave less task level feedback. Likewise, although a significant relationship was observed between teacher beliefs about two statements related to process level feedback (“Students should learn to locate their own errors”; and “Students should learn to analyze their own errors”), the relationship between each statement and the actual amount of process-SR level feedback teacher’s gave on the written task was not significant.

These findings are partially in line with Lee’s (2009) findings that what teachers think they do and believe is good practice is not always reflected in the written feedback they implement on student written work. While teacher beliefs about their form written feedback practice were related to the actual number of form written feedback comments they gave, teacher beliefs about their content written feedback practice, and task and process-SR feedback principles were either negatively correlated or not significantly related. As previously mentioned, however, teachers in the current study had more opportunities to provide form written feedback than content written feedback. This disconnect, therefore, may not only be reflective of the “mismatch” between beliefs and practice but also limitations in the measure.

In sum, a disconnect, or “mismatch” as Lee (2009) terms it, was found between teacher beliefs about their written feedback practices and general written feedback principles, and the actual written feedback teachers provided on the Written Task. It is important that teachers become aware that differences exist between their beliefs and their practice. This would enable them to bring their practice more in line with their beliefs about “best practices” for providing written feedback. It also highlights the need to provide teachers with ways to implement written feedback more systematically.
Research Question 3: To what extent does exposure to a model of written feedback influence teacher written feedback practice?

The current research question addressed the influence of the written feedback model on the actual written feedback teachers provided. This aspect of the research was innovative in that no other research study had previously attempted to influence teacher written feedback types and levels. Earlier pilot study findings (Almendral, 2012) had suggested that teacher written feedback might be shaped by exposure to written feedback models. The current study sought to ascertain the extent to which exposure to a particular written feedback model would lead to increased use of the type and level of written feedback in the model viewed. Teachers in the four treatment groups were therefore exposed to various feedback models and a number of hypotheses related to this question were explored.

It was hypothesized that teachers in the treatment groups who were exposed to models of written feedback would provide significantly more written feedback in the treatment type and level than control group teachers. These models were expected to draw teacher attention and provide them with feasible examples of effective ways to deliver different feedback types and levels, which teachers could then approximate in their own feedback. It was hypothesized that teachers’ written feedback would reflect the specific model to which they were exposed. For instance, it was expected that teachers who were exposed to a model containing more content comments would also use more content comments in their own written feedback on the Written Task compared to teachers in groups who received a model using task type comments. This hypothesis was partially supported. No differences were found between the groups relating to the content comments provided, at either of the two levels. However, results revealed differences at both the task and process-SR levels between Group 1 (form feedback at the task level) and
Group 2 (form feedback at the process-SR level), and between Group 1 and the control group. Group 1 provided more task level comments than either of the other two groups, and Group 2 provided more process-SR comments than Group 1.

Research indicates that teachers are already predisposed to provide more form (Matsumura et al., 2002) and task (Hattie & Timperley, 2007) level feedback. It stands to reason that exposure to models would reinforce these tendencies. Findings from the current study seem to support this reasoning. In contrast, the content models did not produce the same results. This may have been due to the lack of saliency in the content models with task and process-SR level written feedback being difficult to separate. Future research should work on refining these models so that the differences are more tangible and the models more highly rated by teachers.

Finally, it was hypothesized that teachers would be more likely to be influenced by the model they viewed if they rated the model highly. While mean ratings were highest for content type feedback at the task level, overall, participants’ model ratings of the models they viewed were similar, with means falling in the mid-level range. Future research should work to use models teachers rate as more helpful. This might be accomplished by engaging teachers in the discussion of how these various feedback types and levels can be delivered in ways that would be rated more highly.

Limitations

The current study contributes to the literature on the use of written feedback as a formative assessment practice, particularly at the elementary school level. However, a number of limitations exist relating to the methodology of the study. The first limitation relates to the construction of the written feedback models used in Part I of the Written Task. In these models, the differentiation between task and process-SR level feedback was not robust and was
operationalized more clearly in the form type models. Future research should focus on developing stronger, more salient, and differentiated models of content type feedback at the task and process-SR levels to more clearly evaluate the differences in the impact of these models.

A second limitation relates to the selection of a social studies essay for the Written Task. It was not possible to ascertain the extent to which teacher comfort or familiarity with the content area impacted the feedback they gave. It is possible that participants were not knowledgeable enough about the content area to provide content type feedback at the process-SR level. Future research should examine teacher written feedback across curriculum areas and evaluate different uses of content type feedback at the process-SR level by teachers who are content experts.

Additionally, the study examined the alignment between teachers’ beliefs about written feedback principles and their written feedback practice, and the actual written feedback teachers provided. Overall, only a trend level association was found between teacher beliefs about the frequency with which they gave form written feedback and the amount of form written feedback they actually provided. In order to assess the alignment of beliefs to actual practice, however, few items were used and the items used were ambiguous. It is impossible to ascertain if the lack of association was due to poor item construction or an actual lack of alignment between teacher beliefs and their actual written feedback practices. Future research, as per Bieg, Goetz, and Lipnevich’s (2014) recommendations, “should pay attention to the different formulation of items and investigate how this perhaps results in different outcomes” (p. 8).

Similarly, the content models require development and improvement. The level distinction for the content models was not salient, and teachers may not have possessed the knowledge to give content comments if they were unfamiliar with the social studies content. Future research should include content materials that teachers can use to construct these content
comments. Additionally teachers working with students in grades 3 to 5 should be targeted for this type of work. Prior to implementation, however, content experts should be recruited and asked to identify the most important and developmentally appropriate content comments that should be targeted, as well as the ways these content type comments should be delivered at the various levels.

Finally, results should be considered in light of the current sample and related to the demographic information and thick description presented. Overgeneralization should be avoided as the participants in the current study consisted of a convenience sample of teachers and were not representative of all teachers. Similarly, the task consisted of teachers providing written feedback on an isolated sample of work by a student whom the teachers did not know, and cannot necessarily be generalized to classroom-based feedback that teachers provide to their students with whom they are much more familiar.

**Educational Implications and Future Research**

Results from the current study provide a window into the use of feedback as a formative assessment tool by elementary school teachers. Teachers were found to provide more form feedback, primarily at the task level. While feedback of this sort can be expected to make the overall shape of a student’s current work look better, these improvements cannot be expected to extend to other tasks. To further students’ writing development, teachers need to increase their content written feedback and feedback given at the process-SR level. To facilitate this, teachers need support and information about written feedback, which can help them develop more systematic written feedback practices aligned with current research about written feedback types and levels.
Results from the current study indicate that modeling may be a feasible way to provide teachers with an awareness of good feedback practices, particularly for form feedback. More work is needed to develop stronger models in content areas at the various feedback levels. Future research should address building models that more clearly operationalize the various feedback levels. Additionally, exemplars of comments at the various levels should be documented and categorized, so that teachers have more information to help them understand the direction their practice should take. This could lead to more systematic use and improvement of their written feedback practices.

The current research examined the alignment between teachers’ self-rated behavior and beliefs and actual behaviors. As in Lee’s (2009) study, current results showed discrepancies between participants’ self-reported beliefs about their written feedback behaviors and general feedback principles and their actual written feedback practices. While this research indicates that more work should be done to explore the alignment between teachers’ beliefs and actual practices, as previously discussed, the disconnect could also be due to limitations in the measure and construction of the items used to explore the disconnect. Additional use of the Teacher Questionnaire in future studies is needed to further explore the validity of this tool. More work should be done to improve the various items implemented in the measure.

Based on the “mismatch” found between teacher beliefs and practice, both in the current study and in Lee’s (2009) study, it would appear that teachers need to be made more aware of their beliefs in light of their actual practices. Study results suggest that teachers might benefit from support that increases their awareness of written feedback research and best practices. By implementing the feedback types and levels most likely to produce the desired outcomes in student writing development, teachers can develop their own practice so that it becomes more
systematic and strategic. Future research can explore the links between teacher beliefs and the written feedback they give to their actual students on different writing assignments, or across drafts of the same writing assignment. Future research might also examine teacher responses to different samples of student work.

Lastly, the current study examined written feedback using a convenience sample of teachers on an isolated task by a student whom the teachers did not know. The teaching community would benefit from further research exploring written feedback on authentic student work in classroom settings, as well as looking at authentic practice linked to student achievement and improvement on written activities in various content areas and at various grade levels.

Conclusions

In summary, the current study found that elementary school teachers in this convenience sample gave more form type written feedback, and feedback at the task level, than content type written feedback, or process-SR level written feedback. Moreover, it was found that older teachers were predisposed to giving form type and task level feedback, indicating that these teachers may have been interested in generating quick student improvement in feasible ways.

Additionally, teacher beliefs about their written feedback practice and written feedback principles did not align with the feedback they actually provided on a student writing task. While the disconnect may be linked to limitations in the measure used, it also may be attributed to teachers needing increased awareness of and support in strategically systematizing their written feedback practice. The validity of the measure should be further explored in future research, and teachers provided with professional development experiences that expose them to written feedback research, help them identify their actual written feedback practices, and work with them to bridge any differences that exist between the two.
Models were found to impact the level at which teachers provided form written feedback. These results, however, were not found with the content written feedback models. Additionally, exposure to models of varying feedback type did not appear to influence teacher practice. These findings were attributed to the need to refine the content feedback models as well as to teacher predisposition for applying form written feedback.

Finally, this study contributes to the literature by presenting the first foray into exploring elementary school teachers’ use of written feedback types within levels, as well as by attempting to influence teacher practice by type and level through exposure to written feedback models. While much more research needs to be done to refine the models, validate the measures, and explore teacher written feedback in authentic settings, this study provides future researchers with an innovative way to examine teacher written feedback.
Appendix A

Written Task

(All Groups)
Group 1: Form (Type) & Task (Level)

Written Task

**DIRECTIONS:** Following is an authentic piece of social studies writing by an elementary school student (grade 5) asked to write about New York's role in the American Revolution. Written feedback has been provided for the student. Please...

a) Read the written feedback in the example.  
b) Consider the model of written feedback and answer the following questions.  
c) List any comments you have.

---

**MODEL:**

The **Essay about what I am writing about is the New York State's role in the American Revolutionary War. Before France gave American rebels money and supplies but stayed neutral. The French King did not want to make a commitment unless he is sure Americans will win. After victory proves that Americans can win, (France became an ally) France declared war on Britain. The *victory* by Americans troops at the Battle of Saratoga in upstate New York (1777) was a major turning point during the Revolutionary War. By 1778, the Americans had four forts located on or near the Hudson River.

---

Please rate your level of agreement with the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>Strongly Agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This kind of written feedback is helpful for students.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>This kind of written feedback is effective for improving student writing.</td>
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<td></td>
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</tr>
<tr>
<td>This kind of written feedback is developmentally appropriate for a 5th grade student.</td>
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<td></td>
</tr>
<tr>
<td>Students find this kind of written feedback encouraging.</td>
<td></td>
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</tbody>
</table>

Please list any comments here.

*Please turn to the next page*
Written Task

**DIRECTIONS:** Following is an authentic piece of social studies writing by an elementary school student (grade 5) asked to write about New York's role in the American Revolution. Please...

a) Give written feedback to the following student. Be sure to give written feedback that you believe would be most helpful to the student for improving his or her writing.

b) Write your feedback directly on the student writing sample below.

---

**Student Writing Sample:**

The importants of New York's role before and during the American Revolution was one of importants. One of the things was that it had an excellent harbor which gave them French supplies. New York also had very large industrious cities so many supplies could be made. Many battles took place, such as the battle of Seaside Heights, but none more important than the battle of Saratoga which was the turning point in the war. It showed that America could win this war and it also showed the French they could win which convinced the French to become allys and greatly improved America's chance of winning the war and America's chance of liberty, freedom and the persuit of happiness and independence from Great Britian.

---

1. Rate the student work in the writing sample by circling one of the following numbers.

   1 (poor)  2  3  4  5  6  7  8  9  10 (excellent)

   Please explain your response.

2. What is the most important concern to address in the essay above?

3. Do you generally give this type of written feedback to your students?   ____ Yes   ____ No

   Please explain your response.

4. Please list any comments and suggestions here.

   Thank you!
Group 2: Form (Type) & Process-SR (Level)

Written Task

**DIRECTIONS:** Following is an authentic piece of social studies writing by an elementary school student (grade 5) asked to write about New York's role in the American Revolution. Written feedback has been provided for the student. Please...

a) Read the written feedback in the example.
b) Consider the model of written feedback and answer the following questions.
c) List any comments you have.

**MODEL:**
The (Essay of what I am writing about is the New York State role in the American Revolutionary War. Be for the French gives American rebels money and supplies but stays neutral. The French King does not want to make commitment unless he is sure Americans will win. After victory proves that Americans can win, The French becomes official of the United States. France gives military and naval support, France declares war on Britain.

The victory of American troops at the Battle of Saratoga in upstate New York (1777) was a major turning point during the Revolutionary War. By 1778, the Americans had Four Forts located on or near the Hudson River.

Please rate your level of agreement with the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>(1)</th>
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<th>(3)</th>
<th>(4)</th>
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<th>(5)</th>
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</tbody>
</table>

Please list any comments here.

*Please turn to the next page*
Written Task

DIRECTIONS: Following is an authentic piece of social studies writing by an elementary school student (grade 5) asked to write about New York’s role in the American Revolution. Please...

a) Give written feedback to the following student. Be sure to give written feedback that you believe would be most helpful to the student for improving his or her writing.

b) Write your feedback directly on the student writing sample below.

Student Writing Sample:

The importants of New York’s role before and during the American Revolution was one of importants. One of the things was that it had an excellent harbor which gave them French supplies. New York also had very large industrious cities so many supplies could be made. Many battles took place, such as the battle of Seaside Heights, but none more important than the battle of Saratoga which was the turning point in the war. It showed that America could win this war and it also showed the French they could win which convinced the French to become allies and greatly improved America’s chance of winning the war and America’s chance of liberty, freedom and the pursuit of happiness and independece from Great Britian.

1. Rate the student work in the writing sample by circling one of the following numbers.

1 (poor) 2 3 4 5 6 7 8 9 10 (excellent)

Please explain your response.

2. What is the most important concern to address in the essay above?

3. Do you generally give this type of written feedback to your students? ___ Yes ___ No

Please explain your response.

4. Please list any comments and suggestions here.

Thank you!
Group 3: Content (Type) & Task (Level)

Written Task

**DIRECTIONS:** Following is an authentic piece of social studies writing by an elementary school student (grade 5) asked to write about New York's role in the American Revolution. Written feedback has been provided for the student. Please...

a) Read the written feedback in the example.
b) Consider the model of written feedback and answer the following questions.
c) List any comments you have.

---

**MODEL:**

The essay of what I am writing about is the New York State's role in the American Revolutionary War. I need to write about the way France gives American rebels money and supplies but stays neutral. The French King does not want to make a commitment unless he is sure Americans will win. After victory proves that Americans can win, the French becomes official of the United States. France gives military and naval support, France declares war on Britain. The victory by American troops at the Battle of Saratoga in upstate New York (1777) was a major turning point during the Revolutionary War. By 1778, the Americans had Four Forts located on or near the Hudson River.

---

**Please rate your level of agreement with the following statements.**

<table>
<thead>
<tr>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree (1)</td>
</tr>
<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td>This kind of written feedback is helpful for students.</td>
</tr>
<tr>
<td>This kind of written feedback is effective for improving student writing.</td>
</tr>
<tr>
<td>This kind of written feedback is developmentally appropriate for a 5th grade student.</td>
</tr>
<tr>
<td>Students find this kind of written feedback encouraging.</td>
</tr>
</tbody>
</table>

Please list any comments here.

*Please turn to the next page*
Written Task

**DIRECTIONS:** Following is an authentic piece of social studies writing by an elementary school student (grade 5) asked to write about New York's role in the American Revolution. Please...

a) **Give written feedback to the following student.** Be sure to give written feedback that you believe would be most helpful to the student for improving his or her writing.

b) **Write your feedback directly on the student writing sample below.**

---

**Student Writing Sample:**

The importants of New York's role before and during the American Revolution was one of importants. One of the things was that it had an excellent harbor which gave them french supplies. New York also had very large industrious cities so many supplies could be made. Many battles took place, such as the battle of Seaside Hights, but none more important than the battle of Saratoga which was the turning point in the war. It showed that America could win this war and it also showed the French they could win which convinced the French to become allies and greatly improved America’s chance of winning the war and America’s chance of liberty, freedom and the persuade of happiness and independence from Great Britian.

---

1. **Rate the student work in the writing sample by circling one of the following numbers.**

   1 (poor) 2 3 4 5 6 7 8 9 10 (excellent)

   Please explain your response.

2. What is the most important concern to address in the essay above?

3. Do you generally give this type of written feedback to your students? ____ Yes ____ No

   Please explain your response.

4. Please list any comments and suggestions here.

   Thank you!
Group 4: Content (Type) & Process-SR (Level)

Written Task

**DIRECTIONS:** Following is an authentic piece of social studies writing by an elementary school student (grade 5) asked to write about New York’s role in the American Revolution. Written feedback has been provided for the student. Please...

a) Read the written feedback in the example.
b) Consider the model of written feedback and answer the following questions.
c) List any comments you have.

**MODEL:**

The Essay of what I am writing about is the New York States role in the American Revolutionary War. Be for the France gives American rebels money and supplies but stays neutral. The French King does not want to make commitment unless he is sure Americans will win. After victory proves that Americans can win. The France becomes official of the United States. France gives military and naval support, France declares war on Britain. The victory by Americans troops at the Battle of Saratoga in upstate New York (1777) was a major turning point during the Revolutionary War. By 1778, the Americans had Four Forts located on or near the Hudson River, 

Please rate your level of agreement with the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>This kind of written feedback is helpful for students.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This kind of written feedback is effective for improving student writing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This kind of written feedback is developmentally appropriate for a 5th grade student.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students find this kind of written feedback encouraging.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please list any comments here.

*Please turn to the next page*
Written Task

DIRECTIONS: Following is an authentic piece of social studies writing by an elementary school student (grade 5) asked to write about New York's role in the American Revolution. Please...

a) Give written feedback to the following student. Be sure to give written feedback that you believe would be most helpful to the student for improving his or her writing.

b) Write your feedback directly on the student writing sample below.

Student Writing Sample:

The importance of New York’s role before and during the American Revolution was one of importants. One of the things was that it had an excellent harbor which gave them French supplies. New York also had very large industrious cities so many supplies could be made. Many battles took place, such as the battle of Seaside Heights, but none more important than the battle of Saratoga which was the turning point in the war. It showed that America could win this war and it also showed the French they could win which convinced the French to become allies and greatly improved America’s chance of winning the war and America’s chance of liberty, freedom and the persue of happiness and independence from Great Britain.

1. Rate the student work in the writing sample by circling one of the following numbers.

1 (poor) 2 3 4 5 6 7 8 9 10 (excellent)

Please explain your response.

2. What is the most important concern to address in the essay above?

3. Do you generally give this type of written feedback to your students? Yes ___ No ___

Please explain your response.

4. Please list any comments and suggestions here.

Thank you!
Group 5: Control

Written Task

**DIRECTIONS:** Following is an authentic piece of social studies writing by an elementary school student (grade 5) asked to write about New York’s role in the American Revolution. Please...

a) Give written feedback to the following student. Be sure to give written feedback that you believe would be most helpful to the student for improving his or her writing.

b) Write your feedback directly on the student writing sample below.

**Student Writing Sample:**

The importance of New York’s role before and during the American Revolution was one of importants. One of the things was that it had an excellent harbor which gave them French supplies. New York also had very large industrious cities so many supplies could be made. Many battles took place, such as the battle of Seaside Heights, but none more important than the battle of Saratoga which was the turning point in the war. It showed that America could win this war and it also showed the French they could win which convinced the French to become allies and greatly improved America’s chance of winning the war and America’s chance of liberty, freedom and the pursuit of happiness and independence from Great Britian.

1. **Rate the student work in the writing sample by circling one of the following numbers.**

   1 (poor) 2 3 4 5 6 7 8 9 10 (excellent)

   *Please explain your response.*

2. **What is the most important concern to address in the essay above?**

3. **Do you generally give this type of written feedback to your students?**

   ____ Yes  ____ No

   *Please explain your response.*

4. **Please list any comments and suggestions here.**

   *Thank you!*
Appendix B

Teacher Questionnaire
Teacher Questionnaire (Adapted from Lee, 2009)

The following questions will be used to help understand how educators think about Written Feedback. Please do not write your name on the survey. All responses are anonymous.

1. In your opinion, what is the main purpose of providing feedback on students’ writing?

2. Rate the frequency with which you use each of the following feedback techniques according to the scale below. Please circle the appropriate number.

<table>
<thead>
<tr>
<th>How often do you use the following feedback techniques?</th>
<th>Never (1)</th>
<th>Rarely (2)</th>
<th>Sometimes (3)</th>
<th>Often (4)</th>
<th>Always (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. I provide positive written feedback (e.g., I tell students what they have done correctly or well).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. I provide corrective written feedback (e.g., I indicate student errors and/or tell students what they have done incorrectly).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. I provide form written feedback (e.g., I address grammatical or mechanical issues like spelling and word usage).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. I provide content written feedback (e.g., I address the meaning or organization of the work.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. I give students a grade for their written work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. I mark ALL students’ errors.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Does your school prescribe your written feedback technique(s)?  _____ Yes  _____ No
   If yes, please explain.

4. How would you evaluate the overall effectiveness of your existing feedback practice on student progress in writing at the end of one academic year? Please check the most appropriate selection.
   _____ A. Good progress  _____ B. Some progress  _____ C. Little progress  _____ D. No progress
   Please explain your response.

5. Indicate the extent to which you agree with the following statements according to the scale below. Please circle the most appropriate box for each statement.

<table>
<thead>
<tr>
<th>To what extent do you agree with the following statements?</th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Agree (3)</th>
<th>Strongly Agree (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. There is no need for teachers to provide feedback on student errors in writing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Teachers should provide feedback on student errors selectively.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To what extent do you agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. It is the teacher’s job to locate errors and provide corrections for students.</td>
<td>(1) (2) (3) (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Teachers should vary their error feedback techniques according to the type of error.</td>
<td>(1) (2) (3) (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Students should learn to locate their own errors.</td>
<td>(1) (2) (3) (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Students should learn to analyze their own errors.</td>
<td>(1) (2) (3) (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Students need positive written feedback to point out what they did well.</td>
<td>(1) (2) (3) (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. How often do you give written assignments?

- ____ Every Day
- ____ 2 – 4 times a week
- ____ Once a week
- ____ Bi-weekly
- ____ At the end of the marking period
- ____ Other (specify)

7. How often do you give written feedback on student writing?

- ____ Every Day
- ____ 2 – 4 times a week
- ____ Once a week
- ____ Bi-weekly
- ____ At the end of the marking period
- ____ Other (specify)

8. Please put a check in the box that best answers each question.

<table>
<thead>
<tr>
<th>How often do you do the following?</th>
<th>Never (1)</th>
<th>Rarely (2)</th>
<th>Sometimes (3)</th>
<th>Often (4)</th>
<th>Always (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. When you give written feedback, how often are students required to act upon your written feedback?</td>
<td>(1) (2) (3) (4) (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. How often do you meet with students to explain your written feedback?</td>
<td>(1) (2) (3) (4) (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. How often do you think about the best way to provide students with written feedback on their written assignments?</td>
<td>(1) (2) (3) (4) (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Please add any additional thoughts or comments here.

Thank you!
Appendix C

Demographic Survey
Demographic Survey

1. Are you currently employed as any of the following in an elementary school setting?

A. Teacher __ Yes (Specify grade(s): ________) ____ No
B. Literacy Specialist __ Yes (Specify grade(s): ________) ____ No
C. ESL/ELL/Bilingual Education Teacher __ Yes (Specify grade(s): ________) ____ No
D. Teacher’s Aide __ Yes (Specify grade(s): ________) ____ No
E. Other teaching position (please explain) ________________________________________________

2. Have you taught elementary aged students (birth – grade 5) for more than one year? (This does NOT include time student teaching.) ____ Yes ____ No

3. Gender: ____ Male ____ Female


5. How many languages do you speak? ________
   A. Please list language(s). ____________________________________________________________
   B. What is your first language? ______________________________________________________

Educational Experience and Background

6. Please circle ALL educational degrees you hold, specify your major(s), and list all professional certifications.

A. Bachelor Degree _____ Major(s):_____________________________________________________
B. Master Degree _____ Major(s):_____________________________________________________
C. Ed.D. _____ Major(s):_____________________________________________________________
D. Ph.D. _____ Major(s):_____________________________________________________________
E. Other: (Specify) _____ Major(s):_____________________________________________________
F. Certification(s) ____________________________________________________________
   _____________________________________________________________________________
   _____________________________________________________________________________

7. Are you currently pursuing any degrees or certifications? ____ Yes ____ No
   A. If yes, please specify degree(s), major(s), and/or certification(s).

8. Have you ever received any training regarding the implementation of written feedback on student writing (e.g., in a course, professional development workshop). ____ Yes ____ No
   A. If yes, please explain.

9. Have you ever had an experience related to giving students written feedback on their writing that you found particularly meaningful? ____ Yes ____ No
   A. If yes, please explain.

Please turn over
Teaching Experience

10. How many years have you been teaching? (Please circle.)
   Less than 1  1  2  3  4  5  6  7  8  9  10  More than 10

11. Please write the number of years you have taught each grade level on the line next to each grade. If a grade does not apply, leave it blank.
   Grade 1: _____ Grade 2: _____ Grade 3: _____ Grade 4: _____ Grade 5: _____
   Grade 6: _____ Grade 7: _____ Grade 8: _____ Grade 9: _____ Grade 10: _____
   Grade 11: _____ Grade 12: _____ Adult: _____

12. Please check ALL the boxes that apply.

<table>
<thead>
<tr>
<th>Rural Settings</th>
<th>Suburban Settings</th>
<th>Urban Settings</th>
</tr>
</thead>
</table>
   Where have you taught?            |
   Where are you currently teaching? |

13. What subject area(s) do you most enjoy teaching? (Please list and explain why.)

14. What subject area(s) do you find most challenging to teach? (Please list and explain why.)

15. Is there a writing program that your school requires you to use?  ____Yes  ____No
    If yes, please specify.

16. Please add any additional thoughts or comments here.

Thank you!
Appendix D

Cover Letter
Division of Education | Department of Elementary & Early Childhood Education

Written Feedback and Elementary School Teachers

My name is Caterina Almendral. I am a student in the Educational Psychology Ph.D. Program at The Graduate Center of the City University of New York (CUNY), and Principal Investigator of this project, titled “Written Feedback and Elementary School Teachers: Written Feedback Beliefs and Practices.” This study is being conducted under the supervision of Professor Helen Johnson of Queens College and The CUNY Graduate Center. It is a research study of elementary school teacher written feedback beliefs and practices, and is expected to provide some initial information about how elementary school teachers think about written feedback and the types of written feedback elementary school teachers provide for students. As part of my presentation, I am going to have you do some written work. It would be helpful if I could use your responses in my study. I would like your permission to do this, and have included two boxes below where you may give your permission for me to use your responses or decline. All surveys and participation will be anonymous. Your participation in this research project is completely voluntary and your administrators and/or instructors will not know if you have agreed or declined to participate.

The written work consists of a Written Task, Teacher Questionnaire, and Demographic Survey. The Written Task asks you to provide written feedback on the written work of an elementary school student. The questionnaire asks you to give some initial information about your written feedback beliefs and practices, and the Demographic Survey asks you to provide some information about your teaching background. After you have completed the written work, there will be a general discussion of teacher written feedback practices, and areas of the activities you found useful, confusing, and/or applicable to your own teaching. While I may take some notes about the discussion, any notes taken will only be used to revise the measures and will not be disseminated. Only the information from the written work may be written up, and I have requested your permission to use these items below. No identifying information will be collected.

There is no perceived risk to your participation in this study. In fact, the benefits of your participation are that it may supplement your knowledge of written feedback in elementary school settings. In addition, it will help provide a better understanding of teacher written feedback. There will be approximately 480 participants taking part in this study.

I may publish the results of the study taken from the written work only. I will not, however, be asking for your name, or any identifying characteristics and no names or identifying characteristics will be used in any of the publications. If you would like a copy of the study, please email me (calطة@gc.cuny.edu) and I will send you a copy in the future. If you have any questions about this research, you can contact me at 212.817.1833 or calطة@gc.cuny.edu, or my advisor Dr. Helen Johnson at 718 997-5312 or Helen.Johnson@gc.cuny.edu. If you have questions about your rights as a participant in this study, you can contact the Associate Director of Regulatory Compliance at Queens College (CUNY) at the following phone number: 718.997.5415. Thank you for your participation. Your input is greatly valued. Please keep this form to take home with you.

Please check one of the following.

☐ Yes, you may use my written responses.

☐ No, you may not use my written responses.

[Signatures and dates]

Caterina Almendral, P.I.

Dr. Helen Johnson, Faculty Supervisor

Queens College, CUNY | 85-30 Kissena Boulevard | Flushing, New York 11357-1597 | 718-997-5300 | Fax 718-997-5325
Appendix E

Coding Rubric
A written feedback point should be divided into one or more discrete written feedback comments if:

- It contains different levels.
- It contains both positive and corrective written feedback.
- It contains both form and content written feedback.

For example, the following written feedback comment should be divided into 3 discrete comments.

Original Comment: Great job! But, watch your spelling. You misspelled “which” frequently.

Original Comment divided into 3 discrete comments.

1. Great job! (Self level feedback, Positive written feedback, N/A – neither form nor content written feedback)
2. Watch your spelling. (Process-SR level feedback, Corrective written feedback, Form written feedback)
3. You misspelled “which” frequently. (Task level feedback, Corrective written feedback, Form written feedback)

Count the following as different written feedback comments: a comment linked to a number of discrete items by a line (e.g., a line drawn connecting three misspelled circled words with and “sp” at the center of the three lines).

For example: The following item should be considered three discrete written feedback comments.

If comments have been separated by a bullet point or line, then they should be considered different comments.

- Great point! (1)
- But, watch your spelling. (2)
- Reorganize your first sentence. (3)
- Use more sources of information. (4)
- Develop your material by using more examples. (5)
D. **Positive/Corrective.** Each item should be identified as positive (1) or corrective (2) written feedback, or not applicable (0).
   - Positive written feedback is anything that is positively framed, contains a positive adjective, or indicates work done well (e.g., Great job, good work, great effort, I like how...).
   - Corrective written feedback is anything that addresses something in need of improvement, development or an item that is incorrect.

E. **Form/Content.** Each item should be identified as form (1) or content (2) written feedback, or not applicable (0).
   - Form written feedback is anything that is aimed at the grammar, punctuation, spelling, or surface structure of the writing.
   - Content written feedback is anything that is aimed at the meaning or organization of the text, and/or the types of components included in the text.

F. **Level.** The item feedback level should be identified as task level (1), Process-SR level (23), self level (4), or not applicable (0).

The following provides guidance to differentiate if an item is level 1, 23, or 4.

**Level 1: Task level feedback (FT)**

The comment occurs at the task level if it addresses:
   - How well the task was accomplished
   - If the item is correct or incorrect
   - Getting more or different information
   - Building more surface knowledge

<table>
<thead>
<tr>
<th>Key Words:</th>
<th>Split up</th>
<th>Provide</th>
<th>Give examples</th>
<th>Tell me more about</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reword</td>
<td>Take out</td>
<td>Examples include...</td>
<td>This should be</td>
</tr>
</tbody>
</table>

**Level 2-3: Process-SR level feedback (FPSR)**

The comment occurs at the Process-SR level if it addresses:
   - Processes underlying tasks OR relating/extending tasks
   - Relationships
   - Cognitive processes
   - Transference
   - Monitoring actions toward learning and goal(s)
   - Directing actions toward learning and goal(s)
   - Regulating actions toward learning and goal(s)
   - Reviewing or evaluating

<table>
<thead>
<tr>
<th>Key Words:</th>
<th>How</th>
<th>Why</th>
<th>What could you do</th>
<th>Watch</th>
<th>Think about</th>
<th>Use a thesaurus</th>
<th>Pay attention</th>
<th>Check</th>
<th>Proofread</th>
<th>Reread</th>
<th>Review</th>
<th>See a dictionary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Think about</td>
<td>Use a thesaurus</td>
<td>Pay attention</td>
<td>Check</td>
<td>Proofread</td>
<td>Reread</td>
<td>Review</td>
<td>See a dictionary</td>
</tr>
</tbody>
</table>

**NOTE:** Items that have been circled or underlined and either are NOT accompanied by comments or codes, or are accompanied by codes that indicate but do not correct the error (e.g., “sp” for spelling) occur at the Process-SR level.
Level 4: Self as a Person level feedback (FS)
The comment occurs at the Self level if it addresses:
- Evaluations and affect (positive or negative) about the student’s:
  - Effort,
  - Engagement, or
  - Feelings of efficacy and/or understanding?

<table>
<thead>
<tr>
<th>Key Words:</th>
<th>Good job</th>
<th>Great effort</th>
</tr>
</thead>
</table>

G. **Total # Comments.** Tally the total number of comments for each teacher and enter the number here.

**Other Variables that Should Be Considered**

<table>
<thead>
<tr>
<th>wtpositive</th>
<th>wtaffective</th>
<th>wtform</th>
<th>wtcontent</th>
<th>wtlevel1</th>
<th>wtlevel23</th>
<th>wtlevel4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2.</td>
<td>3.</td>
<td>4.</td>
<td>5.</td>
<td>6.</td>
<td>7.</td>
</tr>
</tbody>
</table>

1. wtpositive: Total number of positive comments given on the written task
2. wtaffective: Total number of corrective comments given on the written task
3. wtform: Total number of form comments given on the written task
4. wtcontent: Total number of content comments given on the written task
5. wtlevel1: Total number of feedback comments given at Level 1 on the written task
6. wtlevel23: Total number of feedback comments given at Level 2-3 on the written task
7. wtlevel4: Total number of feedback comments given at Level 4 on the written task
Appendix F

Table F1. Table of Non-Significant Demographic Differences in the Dependent Variables for the Control Group
Table F1

*Non-Significant Demographic Differences in the Dependent Variables for the Control Group*

<table>
<thead>
<tr>
<th></th>
<th>Total Comments</th>
<th>Type of Written Feedback</th>
<th>Level of Written Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>t</td>
<td>M</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>12.71</td>
<td>0.14</td>
<td>10.14</td>
</tr>
<tr>
<td>Female</td>
<td>12.41</td>
<td>0.14</td>
<td>10.71</td>
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<tr>
<td><strong>Primary Teacher</strong></td>
<td></td>
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<tr>
<td>Yes</td>
<td>11.40</td>
<td>1.08</td>
<td>9.85</td>
</tr>
<tr>
<td>No</td>
<td>13.03</td>
<td>1.08</td>
<td>11.14</td>
</tr>
<tr>
<td><strong>Years Teaching</strong></td>
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</tr>
<tr>
<td>Less than 5 years</td>
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<td>0.49</td>
<td>10.71</td>
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<td>5 or more years</td>
<td>13.04</td>
<td>1.04</td>
<td>11.04</td>
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<tr>
<td><strong>Grade Teaching</strong></td>
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<tr>
<td>Pre-K – Grade 2</td>
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<td>0.25</td>
<td>10.87</td>
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<td>Grade 3 – Grade 6</td>
<td>13.18</td>
<td>0.25</td>
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<tr>
<td><strong>Certification</strong></td>
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<tr>
<td>Classroom only</td>
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<tr>
<td>Additional</td>
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<td><strong>Pursuing Certificate</strong></td>
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<tr>
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<td>13.21</td>
<td>0.24</td>
<td>11.50</td>
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<tr>
<td>No</td>
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<td>0.24</td>
<td>10.73</td>
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</table>

*Because the t values were non-significant no p-values were noted.*
References


Donohue, L. (2009). *The write beginning: Instruction that starts with the end in mind and guides students to become more effective writers*. Ontario, Canada: Pembroke Publishers.


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students. Baltimore: Brookes.


