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## Are Attitudes Toward Writing and Reading Separable Constructs? A Study With Primary Grade Children

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### Abstract

This study examined whether or not attitude towards writing is a unique and separable construct from attitude towards reading for young, beginning writers. Participants were 128 first-grade children (70 girls and 58 boys) and 113 third-grade students (57 girls and 56 boys). Each child was individually administered a 24 item attitude measure, which contained 12 items assessing attitude towards writing and 12 parallel items for reading. Students also wrote a narrative about a personal event in their life. A factor analysis of the 24 item attitude measure provided evidence that generally support the contention that writing and reading attitudes are separable constructs for young beginning writers, as it yielded three factors: a writing attitude factor with 9 items, a reading attitude factor with 9 parallel items, and an attitude about literacy interactions with others factor containing 4 items (2 items in writing and 2 parallel items in reading). Further validation that attitude towards writing is a separable construct from attitude towards reading was obtained at the third-grade level, where writing attitude made a unique and significant contribution, beyond the other two attitude measures, to the prediction of three measures of writing: quality, length, and longest correct word sequence. At the first-grade level, none of the 3 attitude measures predicted students' writing performance. Finally, girls had more positive attitudes concerning reading and writing than boys.

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Writing is an extremely complex skill. It is a goal directed and self-sustained cognitive activity requiring the skillful management of the writing environment; the constraints imposed by the writing topic; the intentions of the writer(s), and the processes, knowledge, and skills involved in composing (Zimmerman & Reisemberg, 1997). It is much more than this, however, as writing is a social activity involving a dialogue between writer(s) and reader(s). It is further shaped by the social context in which it occurs. For instance, sharing ideas via email with friends differs considerably from sharing ideas in a formal report (Nystrand, 2006). What and how people write is also influenced by the cultural, societal, institutional, political, and historical background in which they are situated (Schultz & Fecho, 2000).

Given this complexity, it is not surprising that there is currently no model or theory of writing that fully captures it. The two basic approaches for studying writing during the last 40 years are the cognitive (Scardamalia & Bereiter, 1986) and the social/contextual (Prior, 2006). With the former, the study of writing focuses mostly on the individual writer and

concentrates on understanding the cognitive, and more recently, the motivational processes involved in composing (Hayes, 1996; MacArthur, Graham, & Fitzgerald, 2006). In contrast, social/contextual theories of writing typically examine how factors such as community, culture, society, institution, politics, and history influence what and how students write (Russell, 1997). While motivation, the object of this study, is of potential interest in both theoretical orientations, it has almost exclusively been studied through a cognitive and quantitative lens. This has included the role of self-efficacy (Klassen, 2002; Pajares, 2003), topic interest (Albin, Benton, & Kiramtsova, 1996; Hidi & Boscolo, 2006), and attitudes towards writing (Graham, Berninger, & Fan, 2007) as both a contributor and outcome to writing development. As a result, this investigation which examines if beginning writers' attitudes toward writing is a unique construct, separable from attitudes toward reading, is situated within this tradition, building from prior experimental cognitively/motivationally oriented research and expanding it.

## Previous Research

In a recent review of the experimental literature, Graham (2006) examined the viability of the four following hypotheses concerning motivation and writing: (a) skilled writers are more motivated than less skilled writers, (b) developing writers become increasingly motivated with age and schooling, (c) individual differences in motivation predict writing performance, and (d) instructional procedures designed to improve motivation enhance writing performance. He argued that if these proposals were valid, they would support the proposition that motivation shapes writing development (Graham, 2006).

Graham (2006) concluded that the available research evidence provided tentative confirmation for the proposition that motivation is a catalyst in learning to write, as all four propositions received at least some degree of support. Although this initial confirmation was promising, much more research on motivation and writing is needed. First, the data base in this area is very thin. To illustrate, there was limited data for two of the proposals examined by Graham. Only a few studies examined whether or not there were motivational differences between more and less skilled writers (first hypothesis) or whether or not motivation instruction improved writing performance (fourth hypothesis). Second, the evidence for the proposition that motivation for writing increases with age and schooling (second hypothesis) was mixed. For instance, Pajares (2003) reported that self-efficacy for writing declined with age in some studies and increased in others, whereas other investigators have found that attitude towards writing grows more negative the longer students are in school (Knudson, 1991, 1992). Third, motivation is not a unitary construct, as it is composed of a variety of different elements, including self-efficacy, interests, apprehension (avoidance behaviors), attitude (continuum of positive to negative affect towards writing), attributions for success, and so forth (Graham et al., 2007). None of these constructs, as they relate to writing, have been adequately investigated.

## The Current Study

In this study, we focused on one of these motivational constructs, attitude towards writing. Attitude is "a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object" (Fishbein & Ajzen, 1975, p. 6). Our conceptualization of attitude was consistent with the perspective of earlier investigators who indicated that this construct forms a continuum, ranging from positive to negative extremes (Alexander & Filler; Kear, Coffman, McKenna, & Ambrosio, 2000). In our study, writing attitude was operationally defined as an affective disposition involving how the act of writing makes the writer feel, ranging from happy to unhappy.

Attitude can best be thought of as an affective motivational state (Anderman & Wolters, 2006). According to Rosenberg (1998), there are three levels of affect: (1) traits which are personality-like characteristics that make up a person's general temperament; (2) moods which are long lasting, but transitory, affective states; and (3) emotions which are short-lived, situationally specific, affective states (Anderman & Wolters, 2006). Affective states can occur as one contemplates doing a particular task, while one does the task, or retrospectively (Pekrun, Goetz, Titz, & Perry, 2002). Writing attitude in the present study did not represent a personality trait or a short-lived, situationally specific state. It was most closely aligned with mood. Accordingly, students' attitude towards writing are less stable and more subject to change than a personality trait, but more stable than a situationally driven and short-lived emotion.

Our study concentrated specifically on beginning writers in the primary grades. It is tacitly assumed in studies of writing attitude that this construct is unique and separable from attitudes toward literacy in general or reading specifically. For young children this may not be the case for at least two reasons. First, they may not readily discriminate between writing and reading activities (which is a necessary condition to form separable attitudes about writing and reading), as the distinction is not always clear (as activities may involve both writing and reading), teachers and parents may not clearly label (or do so infrequently) literacy activities as involving writing and reading, and young children may not be particularly adept at making this determination on their own. Second, children in the primary grade have much less experience with writing and reading than older children, providing them with a more restrictive base from which to develop separable and unique attitudes for different aspects of literacy.

In this investigation, we examined whether or not attitude towards writing is a separable construct from attitude towards reading for young, beginning writers (Grades 1 and 3). We approached this issue in two ways. First, we administered a 24 item measure to primary grade students that contained 12 writing attitude items and 12 parallel reading attitude items. If attitude towards writing is a unique and separable construct from reading attitude, then we hypothesized that a factor analysis of students' responses to the 24 item measure should yield two reliable factors, one that contained items assessing writing attitude and a second that contained a parallel set of reading attitude items.

Our second approach to examining the separability of writing and reading attitudes was to determine whether or not attitude towards writing made a unique contribution, beyond reading attitudes, to the prediction of writing performance. This approach was predicated on two assumptions. One, such an analysis was not possible if we did not obtain separate and reliable writing and reading factors for the 24 item attitude measure administered to the participating first and third grade students. Two, this analysis was based on the assumption that there is a relationship between young children's writing performance and writing attitudes (and possibly reading attitudes). Although there is evidence that attitude towards writing predicts writing performance (e.g., Knudson, 1995), this data is mostly for children in Grades 2 and higher. It is possible that this association may not exist for children at the start of the primary grades (i.e., Grade 1), as the opportunities for attitudes to influence performance or vice versa are limited by lack of experience. Consequently, we conducted separate analyses for Grades 1 and 3 to test our second hypotheses that writing attitude makes a unique contribution, beyond reading attitude, to the prediction of writing performance.

Finally, we examined if attitudes toward reading and writing were related to SES and gender. Both of these constructs were associated with reading and writing performance in previous studies (Lee, Grigg, & Donahue, 2007; Salahu-Din, Persky, & Miller, 2008;

Walberg & Ethington, 1991), but there is little evidence concerning the link between these two variables and young children's attitudes toward specific aspects of literacy, such as reading or writing (the work of McKenna, Kear, and Ellsworth, 1995 provide an example of such work).

Why is it important to determine if writing attitude is a separable construct from reading attitude? Teachers may assume that if a child is positive about reading, she or he is positive about writing or vice versa. This will only be the case, however, if writing and reading attitudes measure a single underlying construct. If they are separable, as we expect, then it is important to gauge children's attitudes about both skills. A child's attitude may influence subsequent writing development through its impact on factors, such as engagement and practice (McKeena et al., 1995). For instance, students with a less favorable attitude are likely to write less often and expend less effort when composing than students with a more favorable attitude (Graham et al. (2007). This may be especially important for boys and children from economically poor families, as they are at greater risk for writing difficulties (Graham, 2006).

## Methods

### Participants

The participants were 128 first grade and 113 third grade children attending schools in a large metropolitan school district in the Northwest. At first grade, 70 students were girls and 58 boys. At third grade, 57 students were girls and 56 boys. For all participants, 65% were White, 23% Asian, 8% Black, 1% Hispanic, and 1% Native American.

Participating students were part of a five-year long longitudinal study. These students were recruited to participate through a letter sent to all parents of children in the district who were entering first grade or third grade in the coming fall. Interested parents were asked to contact a research coordinator, who explained the study and obtained informed consent from those parents who decided to enroll their child and bring the child to a university setting to complete a series of assessments. Data for this study was collected during the first year of the longitudinal study, and all children who were consented participated. While a few children were from the same school, none of them were in the same classroom. According to parents, writing instruction occurred in each child's class, but we have no additional information on how writing was taught (children came from over 100 different classrooms, and consent was requested from parents and not teachers).

Father's and Mother's educational level were used as indices of socioeconomic status (cf. Greenbaum, Graham, & Scales, 1995; Wagner, Sprat, Gal, & Paris, 1989). Father's educational level was as follows: 1% completed less than high school, 9% completed high school, 11% completed high school plus some community college or vocational education, 38% attended college as an undergraduate, and 34% completed some postgraduate study (7% did not answer this question). Mother's educational level was as follows: .4% completed less than high school, 7% completed high school, 12% completed high school plus some community college or vocational education, 49% attended college as an undergraduate, and 32% completed some postgraduate study (2% did not answer this question).

The students' mean standard score for writing and reading as measured by the Wechsler Individual Achievement Test –2 (WIAT-2; The Psychological Corporation, 2002) was 104.2 ( $SD = 15.1$ ) and 111.8 ( $SD = 8.01$ ), respectively. The mean standard score for this test is 100, with a standard deviation of 15.

## Procedures

Each child completed a survey with items assessing their attitudes towards writing and reading. They also wrote a personal narrative about an event in their life. All testing took place in a quiet room, and was conducted individually with each child by trained research staff. The writing and reading attitude items were administered after the personal narrative writing task. Although it is possible that the administration order influenced students' responses on the writing and writing attitude survey, we think this is unlikely for two reasons. First, we provided a break between the administration of the writing task and the attitude items. Second, the items on the attitude survey did not directly refer to the writing task that students completed as part of the experiment. Instead, the items asked students how they felt about writing and reading in school and at home. The assessments are described below.

## Measures

**Writing and reading attitude items**—Students were asked to respond to 24 questions designed to measure their attitudes toward writing and reading. Each question began with the stem: “How do you feel.” There were 12 writing items that asked them how they felt: “about writing for fun at home”, “when you write in school during free time”, “when you start to write a new paper”, “about writing during summer vacation”, “about writing instead of playing”, “about writing different kinds of papers”, “about writing in school”, “when the teacher asks you questions about what you write”, “about spending free time writing”, “when it’s time for writing at school”, about the papers you write at school”, and “when you share your writing with others.” There were also 12 reading items that were identical to the writing items, except the word reading replaced writing, read replaced write, and book or books replaced paper and papers, respectively.

When administering the survey, the examiner read each item to the child and students indicated their attitude by marking one of 4 images of Garfield the Cat, ranging from very happy (score of 4) to very unhappy (score of 1). These items and the method of quantifying students' responses (the four images of Garfield) were adapted from scales for reading (*Elementary Reading Attitude Scale*; McKenna et al., 1995) and writing (*Elementary Writing Attitude Scale*; Kear, Coffman, McKenna, & Ambrosio, 2000).

Before administering the survey, the examiner told the student, “I am interested in how you and other kids feel about writing and reading. So, I am going to ask you some questions. This is not a test or anything that you need to worry about. Just try to answer my questions as honestly as you can.” Then, the examiner drew the student's attention to the 4 Garfields placed under a practice item and discussed how each Garfield was feeling, starting with the image that was very happy (score of 4) and preceding sequentially through the other Garfields, ending with the one that was very unhappy (score of 1). The students were next told that the examiner was going to ask them some questions, and that for each question they would “circle the Garfield that describes how you feel.” Each child completed two practice items: one asking about how you feel about eating spinach for breakfast, and the other asking about how you feel about playing with toys, before responding to the writing and reading items. None of the students experienced difficulty using the Garfield scale to answer the 2 practice items, and none of the examiners reported that students had difficulty understanding any of the 24 questions they were asked to answer.

**Writing performance**—Children typically compose more about topics on which they are knowledgeable and they are motivated to write about (Graham, Harris, & Mason, 2006; McCutchen, 1986). To address both of these issues, we asked participants to write about an event that happened at school, providing them with a choice of two events about which to

write. Students were asked to complete their choice in the following frame and then continue writing about the event: “One day at school a [choose “surprising” or “funny”] thing happened.” If a student was clearly off-task when the writing sample was collected, the child was encouraged to continue writing. It was seldom necessary to prompt students to do this. Students wrote for a period of 10 minutes.

Three measures were obtained for each student’s composition. The first measure was the total number of words written. Correctly and incorrectly spelled words were included in this count. We included this measure for four reasons. One, text generation is an important component of theoretical models describing how students compose (e.g., Bereiter & Scardamalia, 1987; Berninger & Swanson, 1994). Two, generating written content is a challenging task for most young developing writers (Scardamalia & Bereiter, 1986). Three, the available evidence indicates that number of words written is a valid measure of writing performance for young students, as it is sensitive to students’ growth over time and differentiates between the performance of good and poor writers as well as younger and older writers (Espin, Weissenburger, Benson, 2004). Four, we reasoned that writing attitude and amount of text generated would be correlated, as students with more positive attitudes versus those with a less positive attitude would be more likely to persist and extend effort when writing, producing more text. Likewise, students who produce more text are likely to view themselves as better writers, resulting in more positive attitudes toward writing. Two graduate students unfamiliar with the purpose and design of the study independently scored each composition counting the number of words written. Interrater reliability between the two scorers was .997.

The second measure was the longest correct word sequences. A correct word sequence was defined as any two adjacent, correctly spelled words that were semantically and syntactically acceptable within the context of the writing sample to a native speaker of English (Espin, De La Paz, Scierka, & Roelofs, 2005, p. 210). In addition, capitalization and punctuation were taken into account in scoring if a word sequence was correct. Correct word sequence, therefore, is a complex measure that takes into account meaning, syntax, spelling, punctuation, and capitalization. The measure used in this study, longest correct word sequence, represented the largest number of correct word sequences that occurred before an incorrect word sequence occurred in the student’s paper.

We choose correct word sequence as a measure of writing performance for two basic reasons. One, it assess a variety of writing features, including syntax, semantics, usage, and spelling, which are often very taxing for young writers (Scardamalia & Bereiter, 1986; Graham, 2006), and may color their attitude toward writing. Two, the available evidence demonstrates that this is a valid measure that is sensitive to young students’ growth in writing over time and differentiates between the performance of good and poor writers as well as younger and older writers (Espin, Weissenburger, Benson, 2004; McMaster & Espin, 2007). Two graduate students independently scored compositions for correct word sequence. One rater scored all of the papers, whereas the other scored 50% (randomly selected). Prior to scoring compositions, they practiced using this scoring procedure until they could score 15 papers consecutively with a reliability of .85. Next, they independently scored their respective compositions. Interrater reliability was .89.

Overall quality of compositions was the third measure. This was assessed using a traditional holistic rating scale (Cooper, 1977). Raters were asked to read each composition to obtain a general impression of writing quality. The paper was then scored on a 7-point Likert-type scale, with a score of 7 representing the highest quality of writing and a score of 1 representing the lowest quality. Raters were told that ideation, organization, grammar, sentence structure, and aptness of word choice should all be taken into account in forming a

single overall judgment about writing quality, and that no single factor should receive undue weight. Prior to scoring, all papers were typed; identifying information removed; and spelling, capitalization, and punctuation errors were corrected.

Raters were provided with a representative paper (or anchor point) for a low-, middle-, and high-score. These anchor points were developed from writing samples produced by over 200 first through third grade students. The anchor points were developed by having 3 former elementary school teachers select the poorest, average, and best quality papers on the basis of the scoring criteria described in the paragraph above.

Two raters who were former elementary teachers scored all compositions using the holistic scale and anchor points described above. They practiced applying the scale together until they assigned scores that differed by no more than 1 point on 10 consecutive papers. Once this criterion was met, they independently scored all compositions. Interrater reliability was .93.

## Results

### Are Attitudes Toward Writing and Reading Separate Constructs?

The primary question guiding this study is whether or not young children's attitude towards writing is separable from their attitude towards reading. If this is the case, then it is reasonable to expect that items designed to assess attitudes in each of these domains would represent separate constructs. To test this proposition, we first conducted a factor analyses with the 24 writing and reading attitude items. Twelve of these items assessed writing attitudes, and the other 12 items assessed reading attitudes (for each writing item there was a parallel reading item). We hypothesized that if writing and reading attitudes are separable constructs, then the factor analyses would yield two factors: one composed of writing items and the other composed of parallel reading items.

To analyze the underlying factor structure of the 24 writing and reading items, the responses of the participating first and third grade students were analyzed through exploratory factor analysis. Initially, an unconstrained principal factor analysis was used to generate the factor matrix with squared multiple correlations as initial communalities estimates. Prior to rotation, the unconstrained principal factor analysis produced 5 factors with eigenvalues greater than 1.0. The 6 factors accounted for 60% of the total test variance. Their respective eigenvalues were 8.21, 2.37, 1.81, 1.09, and 1.00. Based on a scree plot of eigenvalues, a three-factor solution was rotated by using the direct oblique solution (because we expected the resulting factors would be correlated).

Results for the forced three-factor solution revealed that the oblique rotation accounted for 52% of the total test score variance, with all three factors having an eigenvalue greater than 1.0. Items that exhibited factor structure loadings of .40 or greater were used to define a factor. Using this criterion, 9 of the writing items loaded exclusively on the first factor, the 9 parallel reading items loaded on the second factor, and 2 writing and their parallel reading items loaded on the third factor. One writing item (How do you feel about the papers you write at school?) and its parallel reading item ("How do you feel about the books you read at school?") loaded on more than one factor. Consequently, we reran the analysis with a forced three-factor oblique rotation, eliminating the two items that loaded on multiple factors.

The resulting forced three-factor solution accounted for 53% of the total test variance, with all 3 eigenvalues remaining above 1.0 (7.55, 2.3, and 1.7). The same pattern of factor loadings was obtained (see Table 1), resulting in a factor that contained 9 writing items, and another factor with 9 parallel reading items, and a third factor that consisted of 2 writing and

2 reading items that were parallel. For these analyses, all of the basic assumptions underlying factor analyses were met, as almost all correlations between items were statistically significant, extreme multicollinearity was not a problem, sampling was adequate, and the correlation matrix did not resemble an identity matrix.

The first factor, which we labeled Attitude Towards Writing, contained 9 items and accounted for 34% of the variance. Coefficient alpha for this factor was .86. The items on this factor assessed feeling about writing at home, in school, during free time, on vacation, when starting a new paper and different kinds of papers, and writing instead of playing (see Table 1). The second factor, labeled Attitude Towards Reading, accounted for 10% of the variance, with a coefficient alpha of .88. This factor was a mirror image in reading of the Attitude Towards Writing scale, as the 9 items assessed the exact same feelings about reading. The third factor, labeled Literacy Interactions With Others, accounted for 8% of the variance (coefficient alpha = .76), and assessed how students feel about sharing their writing and reading with others as well as answering teacher's questions about what they write and read.

Thus, these findings are generally consistent with the hypothesis that writing and reading are separable constructs, as the factor analyses yielded two reliable mirror-image attitude factors, one for writing and the other for reading. However, the analyses also yielded a third reliable factor, consisting of parallel items that assess students' feelings about interactions with others that involve their reading and writing. This finding suggests that not all aspects of writing and reading attitudes are separable. Nevertheless, the largest correlation between the 3 factors (obtained from the component correlation matrix for the factor analysis) was .40 (between the writing and reading factors), suggesting that all 3 factors measure different aspects of young students' attitudes.

### **Do Attitudes Toward Writing and Reading Each Make Unique Contributions to Predicting Writing Performance?**

We also reasoned that if attitudes toward writing and reading are separable constructs for primary grade students, then writing attitude should make a unique contribution, separate from reading attitude, in the prediction of writing performance. This hypothesis was predicated upon the assumption that there is a relationship between writing performance and writing attitudes (and possibly reading attitudes) with young writers. As noted earlier in the paper, this may not be the case for students who are the start of the primary grades, as they may have fewer opportunities for any of these constructs to influence the others. As a result, we analyzed the data separately for first and third-grade children, conducting a series of regression analyses, where a measure of writing performance was entered as the dependent variable and scores for the three attitude factors (Attitude Towards Writing, Attitude Towards Reading, and Attitude Towards Literacy Interactions With Others) were entered at the same time (as a block) as predictors. This allowed us to look at the overall contribution of the 3 attitudinal variables in predicting writing performance and, more importantly, the unique variance accounted for by each attitudinal variable when variance for the other two measures of attitude were taken into account. A separate regression analysis was conducted at each grade level for quality of students' writing, length of compositions, and longest correct word sequence.

The scores for each of the attitude measures (e.g., Attitude Towards Writing) were the average score for all items on that factor. Means and standard deviations for each attitude and writing performance measure are presented by grade in Table 2.

**Grade 1**—At Grade 1, none of the regression analyses were statistically significant. Thus, the three attitude measures (Attitude Towards Writing, Attitude Towards Reading, and



Attitude Towards Literacy Interactions With Others) when taken together did not predict the quality of students' writing, the length of their compositions, or the longest correct word sequence in their papers. The three attitudinal variables when combined accounted for no more than 6% of the variability for any of the 3 writing measures. Thus, at first grade, it was not possible to test the hypotheses that writing attitudes makes a unique contribution beyond reading attitudes to the prediction of writing performance, as the basic assumption underlying this hypothesis was not met; namely, attitudinal variables predict how well students' wrote.

**Grade 3**—At Grade 3, all three of the regression analyses yielded statistically significant results (all  $p$ 's < .002). Together, the 3 attitudinal variables accounted for 18% of the variance in the quality of students' writing, 14% of the variance in how much they wrote, and 14% in the longest correct word sequence in their papers. More importantly, when we analyzed the standardized coefficients for beta for each analysis, we found that writing attitude made a unique contribution, beyond the other 2 attitudinal variables, in the prediction of writing quality ( $p = .003$ ), length ( $p = .017$ ), and longest correct word sequence ( $p = .037$ ). This was also the case for reading attitude for 2 of the writing performance variables, writing quality ( $p = .033$ ) and longest correct word sequence ( $p = .026$ ). The attitudinal measure, assessing feelings about literacy interactions with others, did not make a statistically significant contribution, beyond the other 2 attitudinal variables, to the prediction of any of the writing performance measures. Thus, at Grade 3, the findings are consistent with the hypotheses that writing and reading attitudes are separable constructs.

### **Is There a Relationship Between Writing and Reading Attitudes and Students' SES and Gender?**

First, we examined if SES, as measured by Mother and Father's educational level, was significantly correlated with the three attitude factors (Attitude Towards Writing, Attitude Towards Reading, and Attitude Towards Literacy Interactions With Others). There were no statistically significant correlations between either of the SES measures and any of the attitude measures (correlations ranged between  $-.07$  and  $.18$ ).

Next, using chi-square analysis we examined if there was a statistically significant relationship between student gender and the three attitude factors. For each factor, girls had more positive attitude than boys (all  $p < .02$ ).

### **Summary of Results**

The factor analysis yielded three reliable factors: attitude toward writing, attitude towards reading, and attitude towards literacy interactions with others. Subsequent regression analysis demonstrated that at the third-grade level, attitude towards writing made a statistically significant and unique contribution (above beyond the other two attitude measures) to the prediction of all three writing performance variables, whereas attitude towards reading yielded a similar finding for two of the writing performance variables: quality and longest correct word sequence. The attitude measures did not predict writing performance at the first-grade level. Finally, our measures of SES (Mother's and Father's educational level) were not related to any of the three attitude measures. However, girls had statistically more positive attitude towards reading and writing than boys.

### **Discussion**

Do young children form favorable or unfavorable attitudes about writing? Or are their attitudes toward writing merely a reflection of their favorable or unfavorable attitudes towards reading? The present study examined this issue by determining whether or not

attitude towards writing is a unique construct, separable from attitude towards reading, with young writers in Grades 1 and 3.

The findings from this study were generally consistent with the hypothesis that primary grade children form reliable attitudes about writing that are separable from their attitudes about reading. A factor analysis of a 24 item scale, containing 12 items measuring writing attitudes and an equal number of parallel items measuring reading attitudes, yielded 3 reliable factors. The factor that accounted for the largest proportion of variance in students' scores (34%) contained 9 items assessing writing attitudes. The factor that accounted for the next largest percentage of variance (10%) directly mirrored this first factor by including the same 9 items, but all written from the reading instead of the writing perspective. These two factors provide evidence that students' attitudes can be separated into two unique constructs: one assessing writing attitude and the other reading attitude.

It does not appear that attitudes towards writing and reading are completely separable for primary grade children, however, as the factor analysis yielded a third factor (accounting for 8% of the variance in students' scores) that contained parallel writing and reading attitude items. These items asked children to indicate how they felt: (a) when the teacher asks you questions about what you write (read)? and (b) when sharing your writing (reading) with others? These were the only items on the instrument that focused on students' attitude towards literacy interactions. Consequently, it is possible that primary grade children do not form unique and separable attitudes for writing and reading when it involves talking about or sharing writing/reading with others. Additional research is needed to confirm this finding and determine whether or not it applies to older students as well.

Additional support that attitude towards writing are more than a reflection of young children's attitude towards reading was obtained when we examined the relationship between the 3 scales (attitude towards writing, attitude towards reading, and attitude towards literacy interactions with others) described above and 3 measures of writing performance: quality, length, and longest correct word sequence in a personal narrative written by the participating students. At the third-grade level, the 3 attitudinal measures together accounted for a statistically significant proportion of the variance in students' scores for the 3 writing measures. More importantly, attitude towards writing made a statistically significant and unique contribution to the prediction for all 3 writing measures, once the variance due to the other 2 attitudinal measures were controlled.

We did not, however, obtain such confirmation at the first-grade level. Taken together, the 3 attitude scales did not significantly predict students' performance on any of the 3 writing measures (amount of variance accounted for was 6% or less). Thus, there was no opportunity for attitude towards writing, or the other 2 attitudinal measures, to make a unique or separate contribution in predicting writing performance. Why were such relationships not observed at the first-grade level? First, it is possible that such relationships do not exist because students have limited writing and reading experience at this age. Second, it is also possible that first grade children are not especially adept at distinguishing between reading and writing (and correspondingly receive little assistance in doing so from adults). It is further possible, that there was a psychometric explanation for our finding. If scores for one or more measures used in calculating a correlation are close to the floor or ceiling or possess little variability, then the resulting coefficient is likely to be attenuated. This may well have been the case in the present investigation, as floor effects were evident for the writing measures. First-grade students' average scores for quality were at the bottom of the scale (1.49 on a 1 to 7 point scale), and they produced compositions with few words (18 words on average), restricting both the length and longest correct word sequence

measure. Additional research is needed to determine if these findings at the first-grade level are replicable and, if so, to isolate the factors responsible for these results.

It is also important to note that at the third-grade level attitude towards reading made a unique contribution, beyond the other 2 attitudinal variables, to the prediction of 2 of the writing measures, writing quality and longest correct word sequence. Thus, although writing and reading attitudes appear to be separable and unique constructs at the third grade level, it is important to consider both when thinking about these children's writing development. Of course, it must be remembered that the observed relationships in this study do not speak to the issue of causality; they only involve predictability. In order to determine whether or not writing attitudes (or reading attitudes for that matter) impact writing performance or vice versa additional research is needed.

We did not find a relationship between SES and attitudes toward writing and reading. This finding is inconsistent with results from a small body of earlier studies, showing that motivation for literacy is related to SES (e.g., McKenna et al., 1995; Pajares, 2003). These differences may be due to how SES was defined in this and earlier studies (the earlier studies did not use Mother's or Father's educational level as a proxy for SES). Additional research is needed to determine more precisely how SES and literacy attitudes are related.

Similar to previous research (e.g., McKenna et al., 1995; Pajares, 2003), however, we did find that girls were more positive about writing and reading than boys. More research is needed to replicate this finding as well as untangle the mechanisms responsible for these differences.

Additional research is also needed to replicate the primary findings from this study, showing that at least some aspects of young students' attitudes toward writing and reading are separable. Given the importance of motivation to literacy development, future research needs to examine how writing and reading attitudes develop, change, and possibly intertwine as students move from the primary into the intermediate grades and beyond. Such study is especially needed for youngsters who struggle to master these two critical skills.

The findings from this study have important implications for the teaching of writing and reading. Attitudes toward writing and reading can be measured reliably and they are generally separate constructs. Assessments such as the one employed in this study can be useful for teachers, as they provide them with a tool for determining how students' feel about writing and reading. Teachers should reinforce and support students' positive attitudes, as students with greater motivation are likely to expend more effort when writing and write more frequently. For students whose attitudes are not positive, it is important to determine why this is the case and seek to rectify the situation, as poor motivation may have negative consequences for literacy development. There are a variety of reasons why a child may be negative about writing or reading. This can range from not having the reading and writing skills needed to be successful to a reading or writing program that is viewed by the child as uninteresting, boring, too easy, or all of these. Knowledge about students' attitudes and reflection on their source and consequence provides teachers with important information for improving their literacy instruction. Some care must be taken in the interpretation of such evidence, however, as previous studies indicate that attitude towards writing does not normally improve with schooling (Knudson, 1991, 1992, 1993). Finally, teachers should consider particularly how they can make writing and reading more motivating for boys, since they have less positive attitudes about literacy than girls.

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**Table 1**

Items, and Factor Structure Loadings for the Three Attitudinal Measures.

Items	Factor Structure Loadings		
	Writing	Reading	Interactions With Others
1. How do you feel about writing for fun at home?	<b>.71</b>	-.19	.21
2. How do you feel when you write at school during free time?	<b>.76</b>	-.32	.24
3. How do you feel when you start to write a new paper?	<b>.54</b>	-.29	.39
4. How do you feel about writing during summer vacation?	<b>.66</b>	-.29	-.04
5. How do you feel about writing instead of playing?	<b>.71</b>	-.34	.16
6. How do you feel about writing different kinds of papers?	<b>.55</b>	-.32	.38
7. How do you feel about writing in school?	<b>.75</b>	-.29	.35
8. How do you feel about spending free time writing?	<b>.69</b>	-.37	.33
9. How do you feel when it is time for writing in school?	<b>.74</b>	-.39	.39
10. How do you feel about reading for fun at home?	.22	<b>-.74</b>	.12
11. How do you feel when you read at school during free time?	.30	<b>-.80</b>	.23
12. How do you feel when you start to read a new book?	.15	<b>-.52</b>	.35
13. How do you feel about reading during summer vacation?	.37	<b>-.74</b>	.02
14. How do you feel about reading instead of playing?	.33	<b>-.72</b>	.10
15. How do you feel about reading different kinds of books?	.36	<b>-.59</b>	.34
16. How do you feel about reading in school?	.33	<b>-.73</b>	.32
17. How do you feel about spending free time reading?	.35	<b>-.83</b>	.20
18. How do you feel when it is time for reading in school?	.37	<b>-.68</b>	.37
19. How do you feel when the teacher asks you questions about what you write?	.39	-.23	<b>.71</b>
20. How do you feel when you share your writing with others?	.27	-.15	<b>.75</b>
21. How do you feel when the teacher asks you questions about what you read?	.37	-.39	<b>.77</b>
22. How do you feel when you share what you read with others?	.22	-.29	<b>.62</b>

Note: Factor structure loadings of .40 or greater were used to define a factor and are bolded when this occurred.

**Table 2**

## Means and Standard Deviations for Attitude and Writing Measures

<b>Measure</b>	<b>Mean</b>	<b>Standard Deviation</b>
Attitude Towards Writing		
Grade 1	2.71	.72
Grade 3	2.60	.75
Attitude Towards Reading		
Grade 1	3.11	.73
Grade 3	3.30	.69
Attitude Towards Literacy		
Interactions With Others		
Grade 1	3.06	.78
Grade 3	2.87	.74
Writing Quality		
Grade 1	1.49	.80
Grade 3	3.42	1.65
Writing Length		
Grade 1	18.11	17.23
Grade 3	61.82	49.53
Longest Correct Word Sequence		
Grade 1	7.40	11.87
Grade 3	50.34	47.17

Note: Attitude measure scores range from 1 to 4; writing quality scores range from 1 to 7.