How Teachers Would Spend Their Time Teaching Language Arts

The Mismatch Between Self-Reported and Best Practices

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As teacher quality becomes a central issue in discussions of children's literacy, both researchers and policy makers alike express increasing concern with how teachers structure and allocate their lesson time for literacy-related activities as well as with what they know about reading development, processes, and pedagogy. The authors examined the beliefs, literacy knowledge, and proposed instructional practices of 121 first-grade teachers. Through teacher self-reports concerning the amount of instructional time they would prefer to devote to a variety of language arts activities, the authors investigated the structure of teachers' implicit beliefs about reading instruction and explored relationships between those beliefs, expertise with general or special education students, years of experience, disciplinary knowledge, and self-reported distribution of an array of instructional practices. They found that teachers' implicit beliefs were not significantly associated with their status as a regular or special education teacher, the number of years they had been teaching, or their disciplinary knowledge. However, it was observed that subgroups of teachers who highly valued particular approaches to reading instruction allocated their time to instructional activities associated with other approaches in vastly different ways. It is notable that the practices of teachers who privileged reading literature over other activities were not in keeping with current research and policy recommendations. Implications and considerations for further research are discussed.

Keywords: teacher beliefs; teacher knowledge; reading instruction; education policy

After several decades of rigorous study and fervent debates, researchers who study reading acquisition increasingly find themselves in agreement on the empirically supported best practices that teachers should use to best help all students become successful readers. The widely cited and disseminated National Reading Panel (NRP; 2001) report concluded that explicit instruction in phonemic awareness, phonics, fluency, vocabulary, and comprehension strategies are all essential elements of high quality elementary reading instruction. Federal initiatives provide evidence that education policy has also identified teacher quality as an essential determinant of student success in the domain of reading (e.g., No Child Left Behind Act of 2001 [NCLB]; U.S. Department of Education, 2002). Although such initiatives tend to focus broadly on increasing the number of highly qualified teachers in schools, current reading research more specifically demonstrates that the most effective literacy instruction requires a multifaceted approach, which requires teachers to possess multiple knowledge bases (e.g., McCutchen, Abbott, et al., 2002; McCutchen, Green, Abbott, & Sanders, 2009; Moats, 2004; Moats & Lyon, 1996). Moreover, to engage in explicit and systematic reading instruction as well as to accurately and flexibly respond to student errors throughout all stages of reading development, elementary school teachers require deep knowledge and understanding of the English language, including phonemic awareness, phonics, and vocabulary.

However, a growing body of research demonstrates that most elementary school teachers lack knowledge of the linguistic structures and pedagogical practices required to effectively help students acquire the basic literacy skills of phonemic awareness and sound-symbol correspondence (e.g., Bos, Mather, Dickson, Podhajski, & Chard, 2001; Cunningham, Perry, Stanovich, & Stanovich, 2004; McCutchen, Harry, et al., 2002; Moats, 1995; Moats & Foorman, 2003; Pearson, 1996; Spear-Swerling & Brucker, 2003, 2004). This consistent finding is unsettling given that burgeoning research also reveals that teacher knowledge and practice are significantly related to student outcomes (e.g., McCutchen, Abbott, et al., 2002; McCutchen, Green, et al., 2009; Spear-Swerling & Brucker, 2004). Without rich subject matter knowledge, teachers cannot follow the NRP recommendations, nor can they effectively teach many of their students, who require systematic and explicit instruction to break the alphabetic code and become independent readers (Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998). More promising, however, is that this same research base also indicates that even short-term professional development programs focused on increasing teachers' understanding of language structures lead to knowledge gains for both teachers and their students (Brady et al., 2009; McCutchen, Green, et al., 2009; Spear-Swerling & Brucker, 2003, 2004). Although such meaningful research and programs should undoubtedly continue, the research indicating teachers' lack of important disciplinary knowledge has prompted us to explore other teacher characteristics that may contribute to the use of particular instructional practices.

Beyond the potentially primary role that teachers' knowledge of reading development and instruction plays in the capacity to effectively teach reading (McCutchen, Abbott, et al., 2002; 2009; McCutchen, Green, et al., 2009; Moats & Lyon, 1996), teachers' beliefs present an additional construct that may affect the alignment of instruction with best practices (Fang, 1996; Richardson, 1996). In fact, exploring the relationship between teachers' beliefs and their instructional practices is particularly important given that research findings and policy initiatives have yet to influence either discussions in teacher training programs concerning what is known about reading acquisition or most teacher educators' understanding of the structure of the English language and its links to reading instruction in an alphabetic orthography (Joshi, Binks, Hougen, et al., 2009 [this issue]). Joshi and colleagues demonstrated that teacher educators are unlikely to recognize the importance of using phonics instruction to assist struggling elementary readers. In addition, the results of this study indicate that preservice teacher educators at universities across the country perform poorly on tests of phonological awareness and morphology, key elements of effective phonics instruction. The belief held by these teacher educators—that phonics instruction is not an important component of reading instruction—is likely associated with their lack of knowledge in this domain. Thus, it stands to reason that the beliefs of elementary school teachers are concordant with those of their instructors, reflecting the beliefs of their training programs rather than findings supported by current research.

Although current research (e.g., NRP, 2001) and policy (e.g., U.S. Department of Education, 2002) have yet to influence the orientation of most teacher training programs toward reading instruction (Joshi, Binks, Hougen, et al., 2009), research that clarifies the relationships between teachers' beliefs, knowledge, and practices may provide fodder for a restructuring of the objectives of such programs. It is unfortunate that at this point we know very little about how teachers' beliefs about the teaching of literacy are related to actual instructional practices and student learning. Furthermore, we do not yet have strong data addressing whether or how teacher beliefs get enacted in practice. Although common sense suggests that a bidirectional relationship between beliefs and knowledge in this domain must exist, the few existing studies on this topic offer mixed and controversial findings.

In one of the few empirical studies to address this issue, McCutchen, Harry, et al (2002) investigated the relationships between teachers' philosophical orientation toward language arts instruction, their disciplinary knowledge, and their classroom practices. Correlational analyses revealed little relationship between teachers' instructional philosophy and their disciplinary knowledge or instructional practices, which may have been a result of their moderate philosophical beliefs. Although the data collected on teachers' instructional beliefs "provided a portrait of teachers far less polarized between whole language and phonics orientations than suggested by the rhetoric in many popular debates" (McCutchen, Harry, et al., 2002, p. 221), this study did find a direct relationship between teachers' disciplinary knowledge and their use of explicit instruction in the alphabetic principle. McCutchen, Harry, et al. suggest that rather than focusing on theoretical debates, teacher education programs should instead concentrate on the disciplinary knowledge that is essential to teach reading. This suggestion is consistent with the recent but increasing body of research demonstrating that professional development focusing on the structure of the English language increases teacher effectiveness and

student literacy outcomes (e.g., Brady et al., 2009; McCutchen, Green, et al., 2009; Spear-Swerling & Brucker, 2003, 2004).

Extending this line of research, Bos et al. (2001) found that teachers' beliefs concerning the importance of teaching phonics were not associated with their basic knowledge in this domain. Similarly, McCutchen, Abbott, et al. (2002) reported that when teachers increased disciplinary knowledge through professional development and consultation, they began engaging in more explicit instructional practices, indicating that their beliefs about the pedagogical approach most effective for their students had shifted along with their practices. Based on this handful of studies, we can deduce that teachers' beliefs may influence their choice of instructional practices without disciplinary knowledge necessarily playing a mediating role. This possibility is particularly concerning in light of the well-replicated finding that many elementary school teachers do not have an adequate understanding of phonemic awareness or phonics. In the absence of knowledge concerning component skills essential to reading instruction, teachers must base instructional decisions merely on their personal beliefs, which were likely formed during their own educational experiences (Bruner, 1996; Richardson, 1996) and potentially as the result of their preservice training programs (Joshi, Binks, Hougen, et al., 2009).

The reported inconsistencies between teachers' beliefs, disciplinary knowledge, and actual instructional practices in the existing research may potentially be attributed to some of the strategies that have been used to measure teacher beliefs. For example, the most common measure of philosophical orientation is the Likert-type scale (e.g., as used in DeFord, 1985; McCutchen, Harry, et al., 2002), which consists of various statements representing different philosophies for which the participant rates his or her agreement. The participant's dominant philosophy is presumably reflected by responses to these questions. This method has several drawbacks. First, participants are often forced to agree or disagree with extreme statements without an opportunity to qualify, or elaborate on, their responses (Fang, 1996). Second, participants can respond carelessly without fully reading or comprehending each sentence. Finally, and perhaps most important, there may be a strong tendency for people to respond in what they perceive to be a socially desirable manner. This problem may be exacerbated when relatively educated individuals are being asked about a socially valued activity such as the teaching of reading (see Helmes & Holden, 2002, for a brief review of the social desirability literature; Crowne & Marlowe, 1964). In the study by Bos et al.

(2001), teachers generally agreed with a wide variety of items, even when these items reflected very different philosophies. Responses on such measures may reflect teachers' awareness of current trends toward incorporating both skills- and literature-based activities when teaching reading rather than their actual endorsement of a balanced approach to reading instruction. Furthermore, the tendency of teachers to endorse all items similarly can result in low reliability estimates for these types of measures (e.g., Bos et al., 2001). It is clear that assessments of teachers' orientations to literacy instruction should continue to be refined.

To establish a more precise indicator of teachers' implicit beliefs about effective reading instruction, our study attempted to address previous methodological challenges by using teachers' self-reports of how they would choose to spend their instructional time if given the opportunity to independently structure that time. By freeing teachers to report how they would spend their time during a hypothetical 2-hour literacy block, rather than asking them to report the details of a lesson they had already carried out, we were also able to avoid gathering data that measured how teachers were mandated to facilitate literacy instruction in the classroom. Teachers' autonomy in engaging in particular instructional practices is, in part, dependent on their environment. School districts often adopt particular curricula or endorse specific instructional approaches to the teaching of reading, but there are many reasons for which teachers choose to comply with district policies. It should not be assumed that all teachers endorse the approach that they are supposed to implement. For that reason, we believe that this self-report method is a more reliable measure of teachers' beliefs than either Likert-type scales or cursory observations of instructional practices. Nevertheless, in coding teachers' self-report data, we used the dichotomized characterization of teacher beliefs about reading instruction that was generated by past studies (DeFord, 1985; Mather, Bos, & Babur, 2001).

Thus, we explored the relationships between various teacher quality factors and beliefs favoring explicit, code-based instruction and those favoring meaning-based or holistic instruction. Although it is important to continue conceptualizing teachers' orientations to literacy instruction more specifically, this broad dichotomy between teachers who favor code-based instruction and those who favor holistic instruction still maintains some utility. In fact, researchers who have gone beyond this binary characterization to provide a more nuanced description of the type of instructional practices used in first-grade classrooms found that only two of four observed instructional

approaches, teacher-managed explicit instruction and child-managed implicit instruction, were predictive of student decoding gains in the classrooms they studied (Connor, Morrison, & Katch, 2004). Therefore, for our purposes, categorizing self-reported instructional practices as either code- or meaning-based can adequately differentiate between teachers' preferred activities.

In this study, we included data on teachers' type of expertise (i.e., general education vs. special education) and years of experience because these variables are often hypothesized to be associated with teacher knowledge. Teaching credential programs in special education typically provide greater focus on the individual difficulties that children can experience when learning to read, as well as the need for differentiated instructional practices, and thus, we hypothesized that these teachers might emphasize a more analytic approach to teaching reading. Past research has also suggested that after the initial induction period of 3 years, significant changes in teacher knowledge and practice can be observed (e.g., Nye, Konstantopoulos, & Hedges, 2004). Overall, the aims of this study were to (a) examine relationships between teachers' self-reported preferred allocation of instructional time as a measure of their implicit beliefs about effective literacy instruction and type of expertise, years of experience, and disciplinary knowledge and (b) examine whether teachers' preferred allocation of instructional time reflects evidence-based instructional practice for beginning reading instruction. We hypothesized that teachers' implicit beliefs would relate to various teacher characteristics and that these factors would influence how teachers chose to apportion their time within these categories. We further hypothesized that teachers who favored an explicit, code-focused approach to the teaching of reading would perform well on phonics knowledge measures, whereas teachers who favored meaning-based, holistic instruction would perform well on literature measures.

Method

Participants

The 121 participants were first-grade teachers from 37 elementary schools in a large, urban school district in the western United States. This district had recently adopted a structured, comprehensive core language arts program that required a considerable portion of a daily 150-minute literacy block to be devoted to explicit, systematic instruction in phonemic awareness, phonics, and decoding skills.

Assessment took place prior to the beginning of a year-long program of professional development associated with this curriculum and pedagogical approach to the teaching of reading; all first-grade teachers in the district were required to attend this professional development program and our sample included those teachers who did attend. A wide range of teaching experience was represented among this sample of teachers (M = 10 years, range = 0–44 years). In terms of their educational background, 63% held a bachelor's degree, 3% had completed some graduate work, 30% held a master's degree, 1% held a doctoral degree or equivalent, and 3% of the sample did not report their educational background. The majority of teachers (76%) held a full teaching credential. Among those teachers who were not fully credentialed, 22% were working toward their teaching credential and 2% did not report their credential status.

Belief Measure and Procedures

Language Arts Activity Grid. To assess the underlying pedagogical beliefs guiding classroom reading instruction, we asked teachers to report the instructional practices they would use during a 2-hour language arts block. We felt that this would provide a more accurate assessment of their implicit beliefs than asking them to simply agree or disagree with statements reflecting different instructional orientations. By using this type of open-ended measure, we hypothesized that teachers would be less likely to fabricate or misrepresent their classroom practices due to carelessness or social desirability. As the teachers in this study were aware that the professional training they would be receiving centered on a comprehensive reading program that emphasized explicit instruction in phonics, their responses to multiple-choice questions might have been skewed toward an explicit, code-focused philosophy because of an attempt to provide "correct" responses.

Instead, teachers were presented with a *Language Arts Activity Grid* and asked to list the specific activities they would use when teaching reading as well as to indicate the proportion of time they would spend on each activity. Given that this measure required teachers to detail their instructional strategies in such depth, misrepresentation became less likely. Across psychological disciplines, and for several decades, it has been observed that recall measures are more sensitive than recognition measures (e.g., Bahrick, Bahrick, & Wittlinger, 1975; Singh, Rothschild, & Churchill, 1988). Although teachers may be able to recognize the socially desirable

answer when it is presented to them, it is less likely that they will provide it on their own without prompting. Thus, the *Language Arts Activity Grid* was developed to provide an efficient and reliable tool to measure teachers' implicit beliefs. The instructions for completing the grid were as follows:

> Please indicate what kinds of activities you would engage in when teaching language arts (which would include your reading instruction). What proportion of a two-hour Language Arts instruction block would be spent on each activity? On the left of the grid list the Language Arts activities, and on the right, list the percentage of your Language Arts instructional time you would allocate to these activities. Please be as detailed and specific as possible in the teaching activities that you generate. For example, do not just say "reading," but explain exactly the type/format of activities used during this time. Please make sure that your percentages add up to 100.

This measure was used both to detail proposed classroom practice and to characterize teachers' implicit beliefs about reading instruction. The administration of this measure took approximately 20 minutes.

Rather than grouping the activities into a priori theoretically derived categories, we implemented a data-driven strategy whereby the actual activities listed by teachers were used to generate 13 different categories of instructional practice. Sixty protocols were randomly selected and studied independently by two raters who each made judgments concerning the type of instruction that each listed activity represented (interrater agreement = .89). The teachers in our sample generated more than 500 differently worded responses to this prompt. Through extensive discussion, the two raters iteratively grouped these responses into increasingly broader activity bundles. For instance, responses such as "answering reading questions," "asking prediction questions," and "comprehension questions" were eventually grouped together with responses such as "semantic web," and "graphic organizers" to make up a broader category of Reading Comprehension. After differentiating among activities in this way, the raters brought their data-driven instructional categories to an expert panel of five reading researchers, who subsequently helped the raters finalize their categorizations. The 13 instructional categories generated were teacher-managed reading, writing, independent reading, phonics, oral language, grammar and spelling, reading comprehension, phonemic awareness, literature, sight words, letters/sounds/concepts of print (COP), vocabulary, and assessment. One final category,

entitled "not codable," was used for activities that did not appear to represent any clear instructional focus relevant to reading (e.g., finger plays, block building, craft study, cut and paste, mystery box) and, thus, were not analyzed further. Examples of activities associated with each instructional category are included in the appendix.

The percentage of instructional time spent in these 13 instructional categories was used in our initial analysis (see Table 1). Because teachers, on average, preferred to spend less than 1% of their instructional time (i.e., less than 2 minutes per day) doing assessment-related activities, this category was not used in further analyses. However, as teachers are increasingly expected to engage in data-driven progress monitoring of their students, it is notable that teachers in our sample allocated such an insignificant amount of class time to engaging in literacy activities with a built-in assessment component. The assessment activities that teachers named included running records, prereading assessments, evaluation, and testing. Although the curriculum that the teachers implemented throughout the school year offered frequent opportunities for assessment (and thus, teachers likely engaged in this activity to some degree regardless of whether they valued it), it is important to recognize that when teachers were given the chance to report how they would prefer to spend their time, assessment was mentioned very infrequently.

Knowledge Measures

Phonics knowledge. Two tasks, validated in an earlier study of teacher knowledge (Cunningham et al., 2004), were used to assess teachers' knowledge of phonics. First, teachers were asked to identify words that contained regular and irregular spelling patterns. This task was designed to capture teachers' implicit knowledge of sound-symbol correspondences and their relation to English orthography—a core knowledge component for teachers of reading. Teachers were asked to identify 11 words that contained irregular spelling patterns (e.g., the, done, said, pint, yacht) from a total of 26 words (e.g., make, chunk, but, rebate) that children are commonly taught to read in kindergarten through second grade. Their score on this task was the number of irregular words identified out of 11 ($M = 6.67$, $SD = 3.27$; range = 1–11). This measure displayed adequate reliability (Cronbach's alpha = .77) and took approximately 5 minutes to complete.

The second task was designed to assess teachers' explicit knowledge of the rules and conventions of the English language and its orthography (e.g., Does the word *think* contain a consonant digraph? Does the

first contain a consonant blend?). Teachers were asked to respond to seven multiple-choice questions that represented core knowledge content of the structure of the English language at the level of both words and sounds. The score on this task was the number of correct items out of 7 (*M* = 2.66, *SD* = 1.59; range = 0–7). This measure displayed good reliability (Cronbach's alpha = .80) and took approximately 5 minutes to complete.

Children's literature. Teachers' knowledge of children's literature was assessed using the *Title Recognition Test* (TRT), a measure analogous to those used in previous studies of reading volume and engagement (e.g., Cunningham & Stanovich, 1990, 1991; Stanovich & West, 1989). The TRT is a proxy measure of reading activity or print exposure. Research that speaks to the validity of the TRT has demonstrated strong correlations with actual time spent on literacy activities and with adult and children's knowledge of literature (e.g., Allen, Cipielewski, & Stanovich, 1992; West, Stanovich, & Mitchell, 1993).

A new version of the TRT was developed for this investigation. The titles were chosen from common and popular children's literature. The present version of the TRT included 35 children's fiction book titles and 15 false book titles or foils. The real book titles included on this measure were selected using several databases (e.g., *New York Times* Best Sellers lists) that provided us with current information on the most popular literature for children in the kindergarten to third-grade age range. We also interviewed a group of more than 25 K–3 teachers not in the study sample. The pilot teachers were asked to review our list of books, comment on the appropriateness of the titles, and suggest other titles that should be on the list. Teacher responses were incorporated when a third of the sample suggested that a title should be added or deleted. Teachers were instructed to put a check mark next to those book titles they recognized. To take into account possible differential thresholds for guessing, a corrected score was calculated by subtracting the number of foils checked from the number of correct titles checked. On average, teachers correctly identified one third of the titles listed (*M* = 11.9, *SD* = 5.6; range = 0–24). This task displayed strong reliability (Cronbach's alpha = .86) and took approximately 5 minutes to administer.

Results

Table 1 displays the average percentage of time that teachers reported wanting to spend in each of the 13

instructional categories. Teachers apportioned the largest amount of their 2-hour language arts block to teacher-managed reading activities (19.1%), followed by independent writing and reading activities (16.4% and 14.3%, respectively). Phonics instruction was apportioned 11.5% of instructional time, whereas the remaining categories received far less coverage. Even a casual glance at these average time allocations illustrates that teachers' preferred practices allow for considerably more time to be spent on child-managed, meaning-based activities than current research and policy recommendations suggest is necessary for teaching first graders to read (NRP, 2001). It is notable that individual teachers apportioned up to 60% of their time to one particular instructional category, precluding their ability to engage in balanced literacy instruction.

Teacher Factors Associated With Allocation of Instructional Time in Reading

To test the hypothesis that teachers' implicit beliefs, as reflected in self-reported patterns of activity use, would relate to various teacher characteristics, we examined whether the type of teaching expertise (i.e., training as a regular or special education teacher), amount of teaching experience, or level of disciplinary knowledge in reading interacted with our variable of interest—how teachers would choose to spend their time teaching language arts.

Does type of expertise influence how teachers spend their time? We compared two subgroups of teachers to examine how expertise in special education might influence teachers' implicit beliefs about teaching reading. One group was made up of teachers who possessed special education certification (*n* = 12) and the second group included all other teachers in our sample (*n* = 109). We hypothesized that special education teachers might be more likely to apply scientifically based principles when choosing the most effective instructional activities for teaching language arts to first-grade children. We employed independent samples *t* tests to compare the amount of time these two subgroups of teachers reported wanting to spend in each of the 12 instructional categories that remained in our analyses after removing the assessment category. Teachers with special education credentials preferred spending significantly more time teaching letters, sounds, and COP than teachers with only general education experience (5.0% vs. 1.4%; *t* = 2.17; *p* < .05) and significantly less time on independent reading (7.1% vs. 15.1%; *t* = –2.18, *p* < .05). No other significant differences were found between teachers with

Table 1
Average Percentage of Time Teachers Would Prefer to Allocate to Different Language Arts Activities (*N* = 121)

Activity	*M*	*SD*	Range (min–max)
Teacher-managed reading	19.09	14.86	0–60
Writing	16.37	13.18	0–50
Independent reading	14.31	12.29	0–50
Phonics	11.54	11.56	0–50
Oral language	6.20	8.21	0–30
Grammar and spelling	5.88	9.05	0–40
Reading comprehension	5.01	9.98	0–50
Phonemic awareness	4.30	8.19	0–40
Literature	2.89	6.85	0–37.5
Sight words	2.49	5.34	0–30
Letters, sounds, and concepts of print	1.72	5.60	0–25
Vocabulary	1.62	4.43	0–30
Assessment[a]	0.56	2.49	0–20

a. Because teachers, on average, allocated less than 1% of their instructional time (i.e., less than 2 minutes per day) to assessment-related activities, this category was not used in further analyses.

and without expertise in special education. Our hypothesis that special education teachers would display a wholly different approach to the teaching of reading and language arts was thus falsified. However, it is notable that these special education teachers preferred to spend more time on basic skill development and less time on unstructured activities than general education teachers.

Does experience influence how teachers spend their time? We further identified two subgroups of teachers based on years of teaching experience. One group represented teachers who were in their initial 3 years of teaching (*n* = 36), whereas the second group had 4 or more years of experience (*n* = 78). Independent samples *t* tests were again employed to compare how these two groups apportioned their language arts time. Teachers in their initial years of teaching chose to allocate significantly more time to teacher-managed reading activities than teachers who had more experience (25.7% vs. 16.6%; *t* = 3.14, *p* < .01). We observed no other significant differences between the two groups.

Does disciplinary knowledge influence how teachers spend their time? Next, we investigated how teachers' disciplinary knowledge in two different domains of reading pedagogy (i.e., phonics and children's literature) might influence how they chose to apportion their language arts block.

Based on the average level of phonics knowledge evidenced by the entire sample (for recognition of irregular words, *M* = 6.67; for recognition of phonics rules, *M* = 2.67), we identified two subgroups of teachers. One group of teachers (*n* = 65) successfully identified 7 or more of the 11 irregular words or four or more of the seven phonic rules; this group of teachers was labeled "high phonics knowledge." A second group (*n* = 50) identified 6 or fewer of the 11 irregular words and three or fewer of the seven phonics rules; this group of teachers was labeled "low phonics knowledge." Six teachers did not fully complete the phonics measure and, thus, were excluded from analyses. We used *t* tests to compare the amount of time that these two subgroups reported spending in each of the 12 instructional categories. It is surprising that we found no significant differences between teachers with high and low phonics knowledge on the basis of our measures. However, there were noteworthy trends in the data. Teachers who were less knowledgeable about phonics preferred to allocate twice as much time to literature activities than those who were more knowledgeable (4.2% vs. 1.8%; *t* = –1.965, *p* = .052). In contrast, teachers who were more knowledgeable about phonics preferred to allocate almost three times as much time to instruction focused on letters, sounds, and COP than those who were less knowledgeable (2.8% vs. 1.0%; *t* = –1.687, *p* = .094). When a stricter criterion—scores above the mean on both measures—was used to label those teachers who had high phonics knowledge, no significant differences were found between this smaller group of teachers (*n* = 22) and those teachers with low phonics knowledge.

Two additional subgroups of teachers were identified based on their knowledge of children's literature (based on a median split of the correct score, as the majority of teachers had difficulty identifying many of the included titles). The group that performed more successfully on this instrument (*n* = 64) represented those teachers who correctly identified one third or more of the correct titles on the TRT. On average, this subgroup correctly identified approximately 44% of the correct book titles and was labeled "high literature knowledge." The group with the low scores on the corrected TRT (*n* = 38) represented teachers who identified less than one third of the correct titles. On average, this group correctly identified 18% of the correct book titles and was labeled "low literature knowledge." Independent samples *t* tests demonstrated that teachers with low literature knowledge chose to allocate twice as much time to reading comprehension than those teachers with high literature knowledge (7.9% vs. 3.6%; *t* = 2.10, *p* < .05). There were no other significant differences in self-reported allocation of instructional time between teachers with high and low literature knowledge. Particularly in light of the difficulty that most teachers experienced while

Table 2
Relationships Between the Percentage of Time Teachers Would Prefer
to Allocate to Different Language Arts Activities

Activity	1	2	3	4	5	6	7	8	9	10	11	12
1. Teacher-managed reading	—											
2. Writing	−.12	—										
3. Independent reading	.18*	−.08	—									
4. Phonics	−.14	−.25**	−.11	—								
5. Oral language	−.12	.04	−.05	−.03	—							
6. Grammar and spelling	−.34**	.07	−.18*	.00	.13	—						
7. Reading comprehension	−.27**	−.16	−.29**	.10	−.27**	.16	—					
8. Phonemic awareness	−.10	−.18	−.12	−.03	−.03	−.09	.03	—				
9. Literature	−.05	−.02	−.13	−.27**	−.04	−.11	−.06	−.09	—			
10. Sight words	.07	−.06	−.04	−.08	−.02	−.10	.01	−.04	−.11	—		
11. Letters, sounds, and concepts of print	−.11	−.15	−.07	−.12	.01	−.10	−.04	.17	.17	−.08	—	
12. Vocabulary	−.07	−.20*	−.15	−.15	−.09	.10	.39**	−.04	.09	−.05	−.06	—

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

completing this instrument, their knowledge of children's literature does not appear to be meaningfully associated with their implicit beliefs about teaching reading.

In sum, teachers' knowledge of phonics or children's literature did not significantly influence either their choice of instructional activities or the amount of time they preferred to allocate to the various categories of reading instruction. However, the trends noted earlier—teachers without a strong phonics knowledge base prefer to allocate more of their time to literature instruction than those teachers with more advanced phonics knowledge, and those teachers with more knowledge in this domain chose to allocate a greater amount of time to instruction focusing on letters, sounds, and COP—should be explored further.

Relationships Between Time Allocation in Different Types of Activities

Table 2 displays the correlations among the 12 activity categories. A number of significant relationships were observed. First, teachers who preferred to allocate more time to teacher-managed reading activities spent less time working with their students on grammar and spelling ($r = −.34, p < .01$) and less time teaching reading comprehension strategies ($r = −.27, p < .01$). Second, teachers who allocated more time to literature allocated less time to phonics activities ($r = .27, p < .01$). Teachers who spent more time on independent reading, as well as oral language, spent correspondingly less time focused on reading comprehension skills ($r = −.29, p < .01; r = −.26,$

$p < .01$). In contrast, teachers who spent more time on reading comprehension also spent more time teaching vocabulary ($r = .39, p < .01$). These correlations help illustrate the overall approach to instruction likely to be used by different subgroups of teachers.

Different patterns of activity use. We subsequently examined the data by analyzing subgroups of teachers who, based on their self-reports, appeared to support an extreme instructional emphasis. Toward this end, we identified two subgroups of teachers. One group, comprising 27% of our sample of teachers ($n = 33$), included all teachers who reported spending more than 20% of their time on phonics instruction, thus allocating substantially more time to this activity than the majority of teachers. The second group, comprising 21% of our sample of teachers ($n = 26$), included all teachers who reported spending more than 5% of their time on literature activities such as reader's theater or book share. It is important to note that this literature category did not include teacher-managed reading and independent reading activities, categories to which all teachers allocated considerable time. Nevertheless, the second subgroup of teachers spent considerably more time than the rest of the sample engaging in literature time above and beyond those activities associated with teacher-managed and independent reading. We chose to focus on teachers who demonstrated a clear preference for one of these approaches because we hypothesized that the choice to allocate a considerable amount of time to phonics or literature activities would be associated with different

Figure 1
Mean Amount of Instructional Time That All Teachers (*N* = 121) and Those With an Extreme Instructional Emphasis (literature emphasis, *n* = 22; phonics emphasis, *n* = 33) Would Prefer to Allocate to Different Language Arts Activities
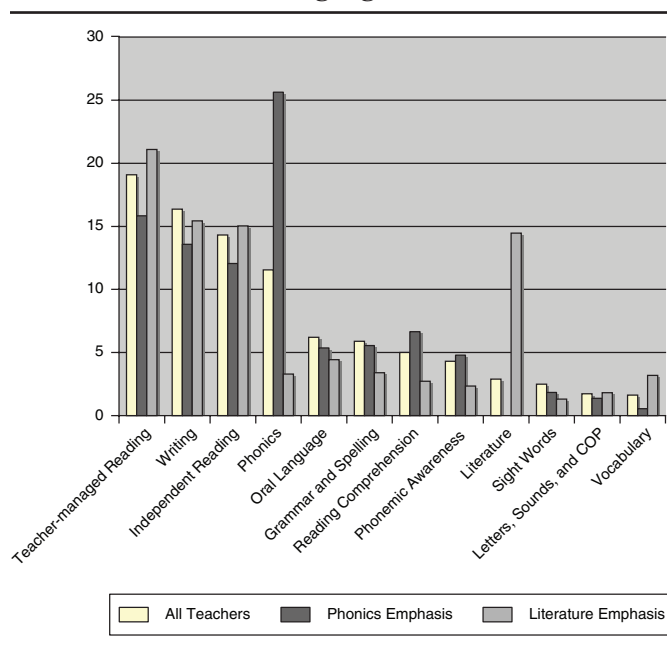
choices in other dimensions of reading instruction. By highlighting only those teachers who unmistakably privileged one approach over the other, we were better able to examine how these distinct groups differed. The two participants who were part of both groups were not included in the analyses.

As an anchor and to provide a comparison from which to judge variations in patterns of activity use, Figure 1 displays the average amount of time spent, in descending order, in each of the 12 instructional activity categories for the entire sample (*N* = 121). Within this sample, the greatest amount of instructional time was dedicated to teacher-managed reading (19.1%), and the smallest amount of instructional time was dedicated to vocabulary instruction (1.6%). The average amount of time spent on phonics instruction (11.5%) was greater than the average amount of time spent on literature instruction (2.9%). An interesting pattern of results was observed between the two subgroups of teachers who held a phonics versus literature emphasis. Although teachers with a phonics emphasis reported spending more than twice as much instructional time on phonics than the larger group (25.6% as compared with 11.5%), their use of other language arts activities was similar to the larger group. That is, teachers with a phonics emphasis chose to take some

time away from all instructional categories but did not take substantial time away from any one category other than literature instruction, to which they allocated no time and to which the whole sample allocated less than 4 minutes a day (see Figure 1; $t = 9.14$, $p < .001$). Even with this increased focus on phonics instruction, these teachers preferred to allocate approximately 19 minutes a day to teacher-managed reading and 15 minutes a day to independent reading.

In contrast, teachers with a literature emphasis spent more than four times as much time as the larger group engaged in literature activities (14.5% as compared with 2.9%), but their use of other language arts activities showed a different pattern of results. In comparison with the rest of the sample, these teachers revealed a pattern of targeted displacement of time from code-based to more literature-based activities. That is, rather than taking some time away from all activities equally, they chose to take a significant proportion of time away from phonics to meet their instructional goals in literature (see Figure 1; $t = -10.34$, $p < .001$), proposing to spend less than 4 minutes a day on phonics instruction as compared with the 14 minutes preferred by the whole sample. These teachers who privileged literature instruction also spent less time than other teachers on phonemic awareness, grammar and spelling, and reading comprehension and more time on both teacher-managed and independent reading activities.

Discussion

By asking teachers to self-report their preferred allocation of language arts instructional time, this study examined teachers' implicit beliefs about beginning reading development and instruction, as well as the association between these beliefs and teachers' expertise with general or special education, experience, disciplinary knowledge, and preferred practices. The subsequent findings capture many of the ways in which teachers' beliefs about the teaching of literacy guide their reported actions. In most current theories of learning, prior beliefs acquired through personal life experiences and teachers' own experiences as learners are thought to play a role in how and what one learns, as well as how that knowledge is activated (e.g., Bruner, 1996; Richardson, 1996; for a recent review of this topic, see Rimm-Kaufman, Storm, Sawyer, Pianta, & LaParo, 2006).

Although we observed that beliefs about teaching literacy—as represented in preferred allocation of time and choice of activity—were not significantly related to one's knowledge in this domain, we also found that teachers who performed well on both administered

phonics tasks tended to prefer allocating more time to explicit and systematic instructional practices and less time to unstructured literature activities. This nonsignificant trend, which should be explored further in future studies, indicates that prior knowledge can play a role in a teacher's choice of instructional activities, suggesting the necessity for additional phonics instruction in both teaching credential programs and in-service professional development. We also found that special education teachers, who are more likely to work with struggling readers, preferred to allocate more time to explicit instruction geared at basic reading skills and to dedicate less time to independent reading. Increasingly, federal policies (e.g., U.S. Department of Education, 2002) and teacher licensure standards (e.g., California's updated Reading Instruction Competence Assessment content specifications) acknowledge the importance of systematic and explicit reading instruction, particularly to support struggling readers. However, teachers must both acquire and activate this level of knowledge in order for policy to affect child literacy outcomes.

Implicit belief structures are often resistant to change (Richardson, 1996), and thus, even acquiring disciplinary knowledge may not lead to a shift in teachers' choice of instructional practices. In addition, the majority of teachers sampled in this study may not have possessed the level of prerequisite knowledge needed to align beliefs and practices. In a recent study that explored changes in teacher knowledge and attitude over the course of a year-long professional development program, it was found that teachers who endorsed a teaching approach focused on reading literature to the exclusion of any systematic and explicit code instruction reported being unenthusiastic and disengaged in professional development at program onset but not at program completion (Brady et al., 2009). This finding indicates that as teachers became more knowledgeable about recent research in this field, their beliefs were able to shift as well.

The teachers in our study who chose to emphasize literature in their language arts block could have reapportioned their time in many different ways. To ensure that they engaged in a balanced approach, they might have reduced the amount of time spent on other activities that focus primarily on text engagement (such as the independent reading category) or alternatively from every category across the board, yet these teachers chose to curtail only phonics instruction. Moreover, almost one in five teachers we sampled believed that literature-based instruction in the relative absence of phonics instruction is pedagogically appropriate for first-grade students. In these teachers' classrooms, children may have received more literature experiences, but it was at the expense of phonics instruction, which research has demonstrated to be central for beginning reading success in first grade (Foorman, Breier, & Fletcher, 2003; NRP, 2001; Raynor, Foorman, Perfetti, Pesetsky, & Seidenberg, 2001). In contrast, we observed that teachers who chose to emphasize phonics in their language arts block took time incrementally away from other instructional activities and still allocated more than 30 minutes of their literacy block to teacher-managed and independent reading. In these classrooms, children received a relatively balanced collection of literature- and skills-based instructional experiences. The contrast between these two groups' apportionment of time demonstrates that beliefs may get enacted in practice in spite of disciplinary knowledge or perhaps because disciplinary knowledge is lacking.

It is interesting that it appears that a philosophical orientation toward literature-based instruction tends to be more exclusive of other instructional approaches, whereas an orientation toward more skills-based instruction leads to greater incorporation of many different aspects of reading instruction. The balanced array of instructional practices used by teachers oriented toward skills-based instruction is more reflective of current policy and research recommendations with regard to evidence-based practice than is the exclusive focus on literature activities by teachers oriented toward holistic instruction. In many classrooms, there may be a mismatch between teachers' preferred practices and current research and policy.

The overall results of this study suggest that recent research findings, as summarized in national reports (NRP, 2001; Snow, Burns, & Griffin, 1998), have not been communicated effectively to either beginning or more experienced teachers. When the teachers in our sample planned their hypothetical 2-hour language arts block, they—on average—proposed spending approximately 5 minutes on phonemic awareness activities, 3 minutes on sight word instruction, and 2 minutes each on COP and vocabulary instruction. Even including the 14 minutes they proposed spending on phonics instruction, this means that these teachers planned to spend less than 30 minutes of their language arts block (i.e., 25% of their allotted language arts time) providing first-grade students with the explicit and systematic instruction that they need in order to gain decoding fluency and begin comprehending text. The subgroup of teachers who favored phonics instruction spent more than 40 minutes of their time engaging in explicit and systematic instruction, whereas teachers who privileged literature spent less than 20 minutes engaging in such practices.

Although these descriptive findings highlight the mismatch between policy and practice, it is important to acknowledge the many limitations in this study. The relatively small sample size and rudimentary statistical procedures used in our analyses reduce the power and generalizability of the reported findings. Measurement precision may have been compromised because of this relatively new approach to capturing implicit beliefs through a self-report of preferred instructional practices. Also, because the coding system devised for categorizing the self-reported instructional practices may have been insensitive to nuances of particular practices or to practices that could have been included in more than one category, items may have been coded erroneously. Finally, for a variety of reasons, teachers' preferred practices as reported here may not correlate with the actual practices they engage in during the school day. These cautions should be kept in mind when interpreting the presented data, whereas future studies, using larger samples and more sophisticated statistical methods, should attempt to replicate these findings and provide additional support for this self-report measure of implicit beliefs. These limitations notwithstanding, the results of this study indicate that many teachers prefer to allocate their language arts time to instructional practices in ways that are not concordant with current research or policy.

Recent policy initiatives (e.g., U.S. Department of Education's Reading Excellence Program and Act, Reading First, state-specific teacher licensure standards) have attempted to address the competencies of teachers who are directly responsible for teaching children how to read. The results of this study suggest that the coordination of large-scale professional development efforts, the use of structured core reading programs, stronger preservice training in the area of reading development, and licensure tests that are aligned with state standards seem appropriate in light of the instructional practices reported by a significant portion of our teachers. In light of such efforts, it is notable that we did not find many associations between teachers' years of experience, their type of expertise, and their implicit beliefs about the teaching of reading. As it has been previously demonstrated that teacher experience is not a significant factor in explaining variance in classroom literacy practices (e.g., Cusumano, Armstrong, Cohen, & Todd, 2006; Dickinson & Caswell, 2007; Justice, Mashburn, Hamre, & Pianta, 2008; Maxwell, McWilliam, Hemmeter, Ault, & Schuster, 2001), research suggests that teachers cannot be expected to independently acquire the skills and knowledge necessary to engage in best practices. However, recent studies assessing the knowledge base of teacher educators (Joshi, Binks, Hougen, et al., 2009; Moats, 2007) and the quality of textbooks used in teacher preparation programs (Joshi, Binks, Graham, et al., 2009 [this issue]) provide a new perspective on why research findings may not have been disseminated at the teacher level. Addressing this issue from the top down may lead to a more substantive change in practice, and the finding that new teachers preferred to allocate more time to teacher-managed reading than veteran teachers is perhaps an indicator that such a change may already be under way. Nevertheless, if reading education policy initiatives attempting to create a balanced approach to beginning reading instruction are to be successful, the important link between beliefs and practice merits further investigation.

Although ensuring that the empirical rationale guiding such initiatives disseminated to teachers is important, it is not enough. Future studies should focus on the conditions that make the revision of beliefs most likely and also explore the preexisting factors that influence teachers' beliefs concerning literacy instruction. In this further research, measures must be employed that strategically capture teachers' actual beliefs rather than what they think others want them to say. Therefore, although teachers may indicate that certain practices such as phonics are important to them when answer options are limited (e.g., Bos et al., 2001; Cunningham et al., 2004; McCutchen, Harry, et al., 2002), insight into their true thinking about how first-grade students should be taught to learn to read is likely better captured by indirect measures such as the one employed in this study.

In addition, a recent line of research suggests that teachers are largely unable to accurately assess their own performance on measures of literacy knowledge and that they often overestimate their knowledge of phonemic awareness, phonics, morphology, and children's literature (Cunningham, Davidson, & Zibulsky, 2007; Cunningham et al., 2004; Cunningham & Zibulsky, 2008; Cunningham, Zibulsky, & Callahan, 2009). As researchers who examine teacher belief structures continue to improve on their measurement tools and researchers who examine teacher knowledge constructs do the same, it may be worth considering that these two fields of study are drawing from the same pool of participants and perhaps mirroring each other's findings. If teachers do not have knowledge of empirically supported best practices or have been taught that other modes of literacy instruction are better, then their beliefs will not reflect the current research or policy recommendations. At the same time, if teachers' beliefs are such that they are not receptive to new approaches to teaching literacy, then it will be difficult for them to acquire knowledge of the

English language that is essential for working with beginning readers. Teacher beliefs concerning code- and meaning-based instruction may be representative of their level of knowledge of language structures and research-based instructional practices. Although our measure of phonics knowledge was perhaps not sensitive enough to adequately differentiate between teachers, the observed trend between performance and self-reported practices suggests that the relationship between knowledge and beliefs should continue to be explored.

To further clarify the field's understanding of these complex relationships and to elucidate these significant issues, further research should deeply explore the association between teacher knowledge and beliefs and focus on the influence of teacher beliefs on student reading growth. Research-based practices will not be employed widely, nor with fidelity, until teacher knowledge and beliefs are congruent with the instructional practices recommended by research and policy consensus. For this reason, studies that explore teacher characteristics are essential in determining how to truly support student success in reading.

Appendix
Examples of Activities Included in Different Categories of Instructional Practice

Teacher-managed reading: basal reading, center activities—read aloud, decodables, whole class oral reading

Writing: creative story writing, reading response journal, peer editing, sentence development

Independent reading: free choice reading, sustained silent reading, partner reading, practice reading

Phonics: building words, decoding, structural analysis, word attack

Oral language: listening centers, morning message, pair talking, clozechant

Grammar and spelling: verb tenses, punctuation, irregular words, spelling pattern analysis

Reading comprehension: before reading discussion, asking prediction questions, story recall, graphic organizers

Phonemic awareness: clap sounds, segmenting, rhyming, blending

Literature: book share, reader's workshop, literature circles, story mapping

Sight words: word bank, word list, word wall, match words

Letters/sounds/concepts of print (COP): consonant letter naming, daily letter, prereading skills, ABCs

Vocabulary: dictionary work, hands-on vocabulary development activity, vocabulary resources, vocabulary review work

Assessment: prereading assessment, running records, testing, individual reading assessment

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