

Preparing Novice Teachers to Develop Basic Reading and Spelling Skills in Children

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This study examined the word-structure knowledge of novice teachers and the progress of children tutored by a subgroup of the teachers. Teachers' word-structure knowledge was assessed using three tasks: graphophonemic segmentation, classification of pseudowords by syllable type, and classification of real words as phonetically regular or irregular. Tutored children were assessed on several measures of basic reading and spelling skills. Novice teachers who received word-structure instruction outperformed a comparison group of teachers in word-structure knowledge at post-test. Tutored children improved significantly from pre-test to post-test on all assessments. Teachers' post-test knowledge on the graphophonemic segmentation and irregular words tasks correlated significantly with tutored children's progress in decoding phonetically regular words; error analyses indicated links between teachers' patterns of word-structure knowledge and children's patterns of decoding progress. The study suggests that word-structure knowledge is important to effective teaching of word decoding and underscores the need to include this information in teacher preparation.

The importance of effective teacher preparation in reading has been widely recognized by scientific investigators, scholarly

panels, and professional organizations (e.g., Brady & Moats, 1997; Hoffman & Roller, 2001; International Reading Association, 2003; National Reading Panel, 2000; National Research Council, 1998). These groups have emphasized the extensive knowledge base and skills required to teach reading well to diverse groups of children. Well-prepared teachers also are central to implementing the recommendations of scholarly panels such as the NRC (1998) and NRP (2000).

Teachers' knowledge base and skills for developing children's word-level reading abilities—such as phonemic awareness, word identification, and word decoding—appear especially important to address in teacher preparation for several reasons. First, difficulties with word-level reading skills are common in struggling readers generally, as well as a key deficit for children with learning disabilities (Rack, Snowling, & Olson, 1992; Shankweiler et al., 1999; Stanovich & Siegel, 1994). Effective teaching is essential for overcoming these difficulties and for helping to prevent reading problems in beginning readers. Second, written English is structurally complex (Moats, 1994, 2000); teaching it well, especially to struggling readers, requires a knowledge base that is not an automatic consequence of adult literacy. Indeed, literate adults' knowledge of word spellings and automatic recognition of words may sometimes create confounds in their understanding of word structure, leading to instruction that is unintentionally confusing (McCutchen & Berninger, 1999; Moats, 1994; Moats & Foorman, 2003; Spear-Swerling & Brucker, 2003). Finally, the knowledge base for teaching word-level reading skills seems to have been a relatively neglected area in teacher preparation (Hoffman & Roller, 2001; Moats, 1994; Moats & Lyon, 1996). A number of studies (e.g., Bos, Mather, Dickson, Podhajski, & Chard, 2001; Bos, Mather, Narr, & Babur, 1999; McCutchen, Abbott, & Green, 2002; McCutchen, Harry, et al., 2002; Moats, 1994; Spear-Swerling & Brucker, 2003) have demonstrated that even experienced elementary and special-education teachers may lack knowledge about many aspects of word structure, including being able to segment words by phoneme, identify morphemes in words, and recognize common orthographic syllable patterns in English.

In addition to acquiring a knowledge base about literacy, prospective teachers need opportunities to apply their knowledge in working with children (Brady & Moats, 1997; Hoffman & Roller, 2001; International Reading Association, 2003;

National Commission on Excellence in Elementary Teacher Preparation for Reading Instruction, 2003). Although there is strong agreement about the importance of practical field experiences in teacher preparation, the impact of these experiences on children also must be considered. Unlike professional development programs aimed at experienced teachers, few studies have addressed the influence of preservice teacher preparation on children's achievement (NRP, 2000), and even fewer have focused specifically on field experience. For instance, if struggling readers are tutored by preservice teachers as part of their teacher preparation program, how much does this tutoring actually benefit the children? Additional attention and encouragement from a sympathetic adult, even one without specific literacy-related knowledge or teaching experience, could be beneficial to some youngsters (e.g., Baker, Gersten, & Keating, 2000). Some authorities, however, have expressed concern about the possible negative effects of inexperienced, untrained teachers, especially on the most vulnerable readers in a classroom. For example, Vadasy, Jenkins, Antil, Wayne, and O'Connor (1997) suggest that, at best, poor tutoring is ineffective; at worst, it might actually hurt children by removing them from more skilled classroom instruction.

Numerous investigators have examined the impact of tutoring by novice teachers on poor readers (e.g., Baker et al., 2000; Fitzgerald, 2001; Invernizzi, Juel, & Rosemary, 1996; Invernizzi, Rosemary, Juel, & Richards, 1997; Jenkins, Vadasy, Firebaugh, & Profilet, 2000; Juel, 1996; Vadasy et al., 1997; Vadasy, Sanders, Peyton, & Jenkins, 2002). Although these studies have not usually been done in the context of teacher preparation, they do provide insights about the conditions that appear to be important for effective tutoring by novices. These studies have focused on early elementary, especially first grade, poor readers. Typically, they have used community volunteers, paid instructional assistants, or college students from a variety of majors as novice teachers, providing some initial training—usually not more than 12 hours and frequently less—before the start of tutoring, followed by ongoing training, supervision, and coaching. In general, these studies suggest that tutoring by novices can be very effective under certain conditions. For instance, Vadasy, Jenkins, and their colleagues (Jenkins et al., 2000; Vadasy et al., 1997, 2002) found that novice teachers who worked with at-risk first graders for four 30-minute sessions per week over a period of about 35 weeks brought the children's achievement in word attack, word identification, and

spelling near or to grade level. After three consecutive years of implementation, Invernizzi, Juel, and their colleagues (Invernizzi et al., 1996, 1997) found an effect size of +1.29 for word identification for a tutoring program involving community volunteers and first grade struggling readers. These and most other authorities agree that to be effective, novice teachers require considerable training, the use of structured materials or lessons, supervision, and guidance from a more knowledgeable teacher.

In most of these studies, novice teachers had little or no responsibility for administering or interpreting assessments, or for designing lessons. For example, the Book Buddies program of Invernizzi, Juel, and their colleagues employed community volunteers as novice teachers, but assessments were conducted by paid graduate students (or former graduate students) in reading education, who also planned individual lessons based on the assessment data for the volunteers. Because the tutoring program described here was part of a teacher preparation program, the learning needs of the novice teachers as well as the tutored children had to be considered. The novice teachers varied considerably in background characteristics (e.g., teaching experience), but they were all taking a special-education language arts course required for teacher-education students lacking strong prior preparation for teaching word decoding and phonics. Hence, all were relative novices at teaching this particular aspect of reading. The goals of the tutoring experience for the novice teachers included administering and interpreting assessments, as well as designing lessons, so the teachers had responsibilities in these areas. To provide the novices with experience teaching a range of word-level reading skills (e.g., word decoding, sight word identification, fluency), the tutoring program targeted second rather than first graders. In university classroom sessions that began about seven weeks prior to tutoring, the novice teachers received approximately 18 hours of initial training. This was followed by ongoing training (about 75 minutes per week) and supervision by the course instructor once tutoring began.

Within the teacher-education program, tutoring was envisioned as a preliminary experience for the novice teachers, to be followed by a full semester of field work in another school, then by two eight-week student-teaching periods. Thus, tutoring involved only about eight sessions of which two were devoted to assessment. The rationale behind this program structure was to provide the novice teachers with gradually increasing time and

responsibility working with children. However, the tutoring experience obviously had very serious limitations in terms of being able to address the needs of struggling readers. Attempts to address this issue included having the novice teachers use a highly structured lesson plan and focused assessments, as well as selecting tutees whose instructional needs were not complex or severe. Nevertheless, whether children could derive any benefit from such short-term tutoring was a matter of concern.

As part of their initial 18 hours of training, the novice teachers received information about English word structure (e.g., the phonemic and morphemic structure of words and the relevance of English word structure to teaching reading), and did a variety of activities to develop their understanding of word structure. An analysis of data from the first year of the study (Spear-Swerling & Brucker, 2003) indicated that novices who received instruction about word structure outperformed a comparison group on three measures of word-structure knowledge involving graphophonemic segmentation of words, classification of pseudowords by syllable type, and classification of real words as phonetically regular or irregular. The post-test results on these three measures also demonstrated a nonsignificant trend in which novice teachers who did supervised tutoring, applying what they were learning about word structure in working with children, outperformed those who received word-structure instruction but did not do supervised tutoring. The study discussed here includes data from a second year of implementation and reexamines the novice teachers' growth in word-structure knowledge. A critical question, which we were unable to address in the first year of the study due to the small number of tutored children, was whether any significant relationships would emerge between novice teachers' word-structure knowledge and children's progress in reading or spelling.

To summarize, the main questions addressed by this study were as follows:

1. Would significant differences in post-test knowledge about word structure emerge between novice teachers who did supervised tutoring and those who did not do supervised tutoring?
2. Would the tutored children improve in basic reading and spelling skills?
3. Would any significant relationships emerge between novice teachers' knowledge about word structure and tutored children's progress in reading or spelling?

METHOD

PARTICIPANTS

Novice Teachers. In total, 147 novice teachers participated in the study. All of the teachers came from a special-education teacher certification program and were native English speakers. There were three groups of teachers. Those in Instructional Group 1 ($n = 39$, 4 male, 35 female, mean age = 26.73 years, $SD = 9.46$ years) were taking day sections of an upper-level special-education course on teaching language arts to individuals with special needs in which information about English word structure and phonics is routinely provided. Group 1 teachers also did supervised tutoring of children in a local elementary school. Teachers in Instructional Group 2 ($n = 49$, 9 male, 40 female, mean age = 32.55 years, $SD = 10.27$ years) were taking evening sections of the same special-education language arts course. These teachers received the same course content involving word structure and phonics as Group 1, but they did not do supervised tutoring. Finally, teachers in Group 3 ($n = 59$, 8 male, 51 female, mean age = 25.78, $SD = 8.56$ years) formed a comparison group. These participants were taking introductory special-education courses that did not cover phonics, reading, or language arts topics.

A background questionnaire evaluated participants' prior preparation and type (not length) of prior experience for teaching reading, using procedures identical to those described in Spear-Swerling and Brucker (2003). Prior preparation was evaluated through a series of questions about current certifications, prior coursework in reading, and special literacy training, with points assigned for each relevant certification, course, and training program. Scores for prior preparation ranged from 0 to 5, with most scores in the range of 0 to 2. In table I, which summarizes the background characteristics of the novice teachers, scores of 0 indicate no prior preparation, scores of 1 to 2 a moderate degree of prior preparation, and scores of 3 to 5 a relatively high degree of preparation. For experience, participants were coded into one of three categories as shown in table I: no prior experience teaching reading; experience assisting in reading instruction (e.g., as a classroom volunteer or paraprofessional); and experience planning and delivering instruction to many children (e.g., as an elementary or special-education teacher).

Teachers' background characteristics did not differ substantially across different class sections within groups, so the data

were aggregated across sections. As shown in table I, most students in Groups 1 and 3 had no prior preparation or experience, whereas Group 2 contained a higher percentage of experienced teachers with some prior preparation for teaching reading. Also, over 90% of Group 2 participants were graduate students, most taking evening courses because they were working during the day, typically in education. By contrast, a majority of students in the other two groups were undergraduates.

Tutored Children. The tutored children ($n = 38$, 25 male, 13 female, mean age = 7.81, $SD = .48$) were all second graders from a K-4 urban elementary school. This school was a particularly educationally needy school in a generally needy district. For example, at the time of the study, 93% of youngsters at the school received free or reduced-price meals as compared with 83% of children districtwide and 26% statewide; and only 15% of fourth graders at the school met the goal for reading on the

TABLE I. Background Characteristics of Novice Teachers.

Characteristic	Instructional Group 1 Word-structure instruction + supervised tutoring ($n = 39$) Number and percentage of group	Instructional Group 2 Word-structure instruction only ($n = 49$) Number and percentage of group	Comparison Group 3 No word-structure instruction ($n = 59$) Number and percentage of group
Prior Preparation			
None	29 (74.4%)	24 (49.0%)	49 (83.1%)
Moderate	9 (23.1%)	16 (32.6%)	8 (13.5%)
High	1 (2.5%)	9 (18.4%)	2 (3.4%)
Prior Experience			
None	31 (79.5%)	27 (55.1%)	44 (74.6%)
Tutoring, paraprofessional, etc.	6 (15.4%)	6 (12.2%)	12 (20.3%)
Classroom teaching	2 (5.1%)	16 (32.7%)	3 (5.1%)
Level of Education			
Grad	14 (35.9%)	45 (91.8%)	21 (35.6%)
Undergrad	25 (64.1%)	4 (8.2%)	38 (64.4%)

state-mandated assessment as compared with 21% of children districtwide and 57% of children statewide. Children were referred to the tutoring program by their second grade teachers. Classroom teachers were asked to refer youngsters who had word-decoding problems, whose difficulties appeared to be relatively mild rather than severe, and who were likely to demonstrate consistent attendance. Few of the children had significant behavior problems and none was receiving special-education services at the time of the study. All but one tutored child was African-American, and all were native English speakers.

MATERIALS AND PROCEDURE

The Test of Word-structure Knowledge. The three groups of novice teachers listed in table I were pre- and post-tested on three measures of word-structure knowledge (graphophonemic segmentation, syllable types, and irregular words) as described below. Testing was group administered at the beginning and end of each course. Alternate forms (*a* and *b*) of the word-structure measures were employed with approximately half of the students pre-tested on form *a* and post-tested on *b*, and with the rest receiving the tests in the reverse order. Participants were provided with examples before taking each measure. Alternate-form reliabilities were determined using a separate sample ($n = 45$) of novice teachers. Directions and a full list of items for both forms of each measure can be found in Spear-Swerling and Brucker (2003).

The graphophonemic segmentation (GPS) measure, modeled after the one used by Scarborough, Ehri, Olson, and Fowler (1998), required participants to read one- and two-syllable real words, indicate the number of phonemes in each word, and show which letter(s) represented each phoneme. For instance, for the word *thigh*, participants were supposed to specify two phonemes and needed to segment the word by underlining *th* and either *i* or *igh*. Items included words with silent letters (such as the *w* in *sword*) and common orthographic patterns (such as the *oo* in *balloon*). The participant's score was the total number of items correct with a possible maximum of 16. The alternate-form reliability for this task was .78.

The syllable types (ST) task required participants to indicate the syllable type of pseudowords such as *trube* (magic e), *sply* (open), *knoof* (vowel team), *fisp* (closed), *sare* (vowel r-magic e) and *blarn* (vowel r-closed). All items were single syllables that could be unambiguously classified by syllable type. The terminology used in the directions and in scoring was drawn directly

from a synthetic-phonics program (Fischer, 1993; Gallistel, Fischer, & Blackburn, 1977) employed in the language arts course. On this task, the highest possible score was 14 and the alternate-form reliability was .77.

The irregular words (IW) task involved a set of 40 common words that participants had to classify as phonetically regular or irregular. Irregular words were drawn from lists of exception words (e.g., Fischer, 1993; Gallistel, Fischer, & Blackburn, 1977; Moats, 2000) used in teaching phonics and were described as words that violate typical letter-sound patterns in English. Half of the 40 words were phonetically regular (e.g., *saw*, *box*, *food*), whereas half were irregular (e.g., *pretty*, *eye*, *of*). The participant's score on this task was the number of irregular words correctly circled, minus the number of "false alarms" to regular words, with 20 the highest possible score. The alternate-form reliability for this task was .63. Classifications of words were based on reading rather than spelling. For instance, in spelling, children can remember to add a silent *e* to words such as *have* or *love* by having their attention drawn to the fact that English words almost never end in *v* (Moats, 2000). However, in reading, the printed letter pattern *-ave* usually is pronounced with a tense or long vowel sound as in *cave*, *brave*, or *slave*; thus, *have* was classified as irregular. Similarly, although *n* is a much more common spelling of /n/ than is *kn*, *kn* consistently is pronounced /n/ within a printed word (e.g., *knife*, *knight*, *knead*, *knit*, *knot*). Thus, *know* and *kneel* were classified as regular.

The three tasks were chosen because they represented a core, although certainly not an exhaustive, sampling of knowledge central to phonics instruction that is addressed in the language arts course. It is difficult to imagine how teachers can provide effective word decoding or spelling instruction, especially to struggling readers, without knowledge of the phonemic structure of words, typical grapheme-phoneme mappings, common orthographic syllable patterns (which help to predict the vowel sound in many words), and irregularities in words. In observing teachers' work with children, we had often seen difficulties related to a lack of this kind of knowledge such as teachers' inadvertent use of irregular words or misclassified regular words as examples of specific phonic generalizations (e.g., *was* or *smart* as examples of closed syllable, short-vowel words).

There is some variability in the generalizations taught by different phonics programs. The three word-structure measures used in this study were scored so as to be consistent with the

instructional content of the language arts course, which was based heavily on Fischer (1993) and Gallistel et al. (1977). This approach does not vary in substantive ways from other synthetic-phonics methods of teaching reading and spelling.

Nature of Instruction for Novice Teachers. Teachers in Groups 1 and 2 received approximately six hours of university classroom instruction to develop their knowledge about English word structure (see Spear-Swerling & Brucker, 2003, for a more detailed description). Instruction included the following topics, discussed approximately in this sequence: the importance of systematic, explicit teaching of word decoding to beginning readers and children with reading difficulties; characteristics of the English alphabetic writing system; linguistic terminology (e.g., phoneme, grapheme, morpheme); phonemic awareness; the role of orthographic and morphemic units in reading and spelling; common syllable types in English; multisyllable words; and phonetically irregular words. Both groups used the same textbooks (Consortium on Reading Excellence, 1999, 2000; Overton, 2003) with the phonics generalizations taught in class drawn primarily from those used in Fischer (1993) and Gallistel et al. (1977). However, Group 1 participants applied course content by doing supervised tutoring of children in basic reading and spelling skills; Group 2 participants, many of whom were already teaching during the day, did not do supervised tutoring although they were given similar assignments to carry out independently. Group 1 and 2 participants also were taught by two different instructors. Both instructors had equivalent levels of university teaching experience, comparable background knowledge for course content, and very similar viewpoints about the importance of phonics instruction.

The Tutoring Program. The tutoring program involving Group 1 participants began approximately in the seventh week of the course, after all course content related to phonics and to administration of the assessments to be used in tutoring had been covered. Tutoring sessions occurred once weekly and lasted about 60 minutes each, usually after (i.e., supplemental to) the regular classroom language arts block. The regular classroom curriculum used literature-based instruction with some integration of phonics and typically encouraged children to employ multiple cueing systems (e.g., sentence context and pictures as well as graphic cues) in reading words. Phonics instruction during tutoring was much more systematic and intensive than regular classroom phonics instruction; it emphasized attention to print and the application of decoding

strategies, and it employed different activities (described below) than those typically used in regular classroom instruction.

Because of space constraints at the school, locations for tutoring often involved the school library, a partially empty classroom, or a hallway, with other students frequently present. For youngsters who were unduly distracted under these conditions, a limited number of small private rooms was available. There were eight field work sessions; the first and last sessions were devoted to assessment and the remaining six to instruction. The day instructor of the language arts course was present at all sessions and rotated observation of teacher-child pairs to provide suggestions, modeling of various instructional techniques, and written feedback on lessons. Novice teachers also participated in a 15-minute "debriefing" after each tutoring session and had the opportunity to ask questions or seek guidance with specific problems.

Assessments Used in Tutoring. Assessments were criterion-referenced and selected so as to be maximally useful for planning instruction. Children were pre- and post-tested on the following five assessments: CORE Phonics Survey, both reading and spelling (Consortium on Reading Excellence, 1999), reading and spelling of irregular words, and knowledge of sounds for letters and letter patterns.

The CORE Phonics Survey-Reading is a test of word decoding in which children read words in isolation. The words are organized into phonic categories (e.g., short vowel words, long vowel words) and include both real words and pseudowords. The CORE Phonics Survey also has a spelling subtest with categories that involve spelling the first letter of a dictated word, spelling the last letter of a dictated word, and spelling 10 phonetically regular words (e.g., *shop, tub, float, drive*).

Another measure used in tutoring employed a list of common irregular words that children had to read and spell in isolation. The reading and spelling tests were separated by other assessments so that children were not asked to spell words they had just read or vice versa. The spelling test used standard dictation format in which the examiner said the word, then a sentence containing the word, and then repeated the word. Finally, the letter-sounds assessment contained single letters and common letter patterns (e.g., *sh, ck, ar, ay*) for which children were asked to give sounds. Items used in teaching irregular words and letter sounds were taken directly from these assessments; however, novice teachers were cautioned not to take regular words for instruction from the CORE Phonics Survey because

these words represented a sampling of phonic categories. Abbreviated directions and items for the unpublished measures can be found in Appendix A.

Novice teachers were generally able to complete these five assessments, which had been previously discussed and practiced in class, in one tutoring session. Other than separating the administration of reading versus spelling of irregular words, teachers were not instructed to give the assessments in any particular order. All assessments were checked for accuracy of administration and scoring by the course instructor soon after they had been given, and if necessary, were rescored or readministered. Errors in scoring and administration were rare. Pre-test reliabilities (coefficient alphas) for the children's measures were as follows: .86 (letter-sound knowledge), .91 (CORE-Reading), .71 (CORE-Spelling), .94 (Irregular Words-Reading), and .41 (Irregular Words-Spelling). Post-test reliabilities for the same measures were .85, .95, .69, .97, and .56, respectively. Internal consistencies were substantially lower for the spelling than for the reading measures, especially for spelling irregular words, perhaps because of the smaller number of items children could complete in spelling as compared to reading.

Nature of Tutoring Instruction. Novice teachers were responsible for having a lesson plan for every tutoring session involving instruction. They used a structured lesson plan format (see Appendix B) that provided instruction in the following areas: letter sounds, phonics concepts (e.g., the closed syllable type), reading and spelling of regular words, reading and spelling of irregular words, fluency, reading connected text, and listening comprehension. Suggested time allocations for each step were given. Lesson plans also had to include objectives for each lesson that the teacher marked as met or unmet after the session, as well as a reflective self-evaluation by the teacher.

With guidance as needed from the course instructor, novice teachers were responsible for selecting appropriate skills and content to work on, but specific instructional activities for each area were largely prescribed. For example, for reading and spelling regular words, novice teachers were expected to use word-building activities with letter tiles (see, e.g., McCandliss, Beck, Sandak, & Perfetti, 2003); for irregular words, they were taught to use whole-word multisensory techniques (e.g., Fernald, 1943); and for fluency, they could choose between rereading a familiar book or speed drills on words in isolation (e.g., Fischer, 1995). Because most tutored children were functioning at an early to middle first grade level in reading, and all needed work on

decoding skills, the majority were placed in decodable texts for oral reading with children's literature and trade books used for listening comprehension. The texts were made available for novice teachers to examine independently and use in their teaching, but novice teachers were responsible for deciding the appropriate level and type of text in which to place the child (again, with assistance when necessary from the course instructor).

Although no fixed sequence of instruction was prescribed, a suggested sequence was described to the novice teachers, based on the typical sequence of skills covered in most phonics programs, children's entry-level skills, and the time constraints of the tutoring program. Almost all of the novice teachers spent time working on lax or short vowel sounds, tense or long vowel sounds, and consonant digraphs; on the closed syllable type; and on decoding words with a variety of closed syllable patterns. Some novice teachers also worked on magic *e*, open and easy vowel team words (i.e., those with only one sound such as *ai* or *ee*). Few novice teachers addressed vowel *r* words, more difficult vowel team words such as those with diphthongs having more than one sound (e.g., *ow*), or two-syllable words. Teachers were also told to use real words, not pseudowords, in instruction, but to avoid very common words such as *sat*, which children were likely to know by sight. The lesson plan format, accompanying activities, and suggested sequence of instruction all were discussed at length in university classroom sessions with opportunities for teachers to practice a variety of activities in class.

RESULTS

NOVICE TEACHERS' RESPONSE TO WORD-STRUCTURE INSTRUCTION

Table II displays pre- and post-test scores on the word-structure tasks (GPS, syllable types, and irregular words) for Groups 1 and 2, which both received instruction about English word structure, and Group 3, the comparison group, which did not receive this instruction. The table shows data aggregated across the two years of the study; overall patterns of performance were similar across year one versus year two and fall versus spring semesters. Means and standard deviations in table II are based on participants who completed post-testing on all three word-structure measures (37 students in Group 1, 43 in Group 2, and 48 in Group 3). Some students did not complete post-testing because they had withdrawn from the course or were absent the day of the post-test.

TABLE II. Pre- and Post-test Performance of Instructional and Comparison Groups of Novice Teachers.

Task	Instructional Group 1 Word-structure instruction + supervised tutoring (n = 37)		Instructional Group 2 Word-structure instruction only (n = 43)		Comparison Group 3 No word-structure instruction (n = 48)	
	Pre-test Mean (SD)	Post-test Mean (SD)	Pre-test Mean (SD)	Post-test Mean (SD)	Pre-test Mean (SD)	Post-test Mean (SD)
Graphophonemic Segmentation (GPS) Max = 16	10.054 (2.549)	13.243 (1.770)	11.023 (2.144)	10.953 (2.507)	9.146 (2.752)	8.604 (3.337)
Syllable Types (ST) Max = 14	6.000 (3.127)	12.000 (1.600)	6.512 (2.789)	9.791 (2.416)	3.688 (3.075)	3.771 (3.224)
Irregular Words(IW) Max = 20	6.351 (3.953)	9.351 (3.343)	6.930 (3.782)	8.535 (4.245)	5.188 (3.745)	4.771 (3.996)

Note. Means and SDs for each group are based only on participants who completed post-testing.

Because the three instructional groups varied substantially in terms of background characteristics as shown in table I, it would have been desirable to include the variables of prior preparation, experience, and graduate versus undergraduate status in analyses of the means in table II. A series of one-way ANOVAs on each of these three background variables confirmed that the instructional groups did differ, with the pattern of significant differences on each variable as follows: Group 2 > Group 1, Group 2 > Group 3, and Group 1 = Group 3. Unfortunately, cell totals were too small to consider each of the background variables separately. To boost cell numbers, a global prior background score was calculated for each participant, based on the average of the participant's z-scores for prior preparation, experience, and status. A one-way ANOVA indicated that the instructional groups differed on overall prior background, $F(2, 125) = 24.175, p < .001$; Tamhane post hoc comparisons showed Group 2 with significantly higher prior background than Group 1 ($p < .001$) or Group 3 ($p < .001$), but no significant differences between Groups 1 and 3. For the analyses of the pre- and post-test means in table II, participants were divided into three roughly equal groups based on the cutpoints for the 33.3 percentile and the 66.7 percentile for global prior background score. Separate repeated-measures ANOVAs were done for each word-structure task, with instructional group and prior background group as between-subjects factors, and participants' pre- and post-test scores on each task as a within-subjects factor.

The patterns of results for the syllable-types (ST) task and the irregular-words (IW) task were very similar. Between-subjects tests indicated main effects only for instructional group; for ST, $F(2, 119) = 42.038, p < .001$, and for IW, $F(2, 119) = 7.019, p < .01$. There were no significant interactions between instructional group and prior background for either task. Within-subjects tests indicated very significant overall pre-post differences; for ST, Wilks' Lambda = .619 and $F(1, 119) = 73.174, p < .001$, and for IW, Wilks' Lambda = .924, $F(1, 119) = 9.777, p < .01$. There were also very significant pre-post differences based on instructional group; for ST, Wilks' Lambda = .595, $F(2, 119) = 40.463, p < .001$, and for IW, Wilks' Lambda = .887, $F(2, 119) = 7.605, p < .01$. Again, none of the interactions with prior background were significant. Scheffe post hoc comparisons showed that for both tasks, the two instructional groups significantly outperformed the comparison group ($p < .001$ for ST and $p < .01$ for IW), with no significant differences between the two instructional groups.

For the GPS task, the pattern of results was slightly different. Again, the only between-subjects main effect was for instructional group, $F(2, 119) = 15.511, p < .001$, with no significant interactions between instructional group and prior background. However, within-subjects tests for overall pre-post differences did not attain significance, Wilks' Lambda = .972, $F(1, 119) = 3.413, p = .067$. Nevertheless, there were very significant pre-post differences based on instructional group, Wilks' Lambda = .704, $F(2, 119) = 24.994, p < .001$. There were also pre-post differences based on prior background, Wilks' Lambda = .949, $F(2, 119) = 3.226, p < .05$. Scheffe post hoc comparisons again showed both instructional groups significantly outperforming the comparison group ($p < .001$) with no significant Group 1 versus Group 2 differences.

As shown in table II on the GPS task, only the scores of Group 1 actually increased from pre-test to post-test. Thus, it seemed likely that the pattern of results on the ANOVA for this task was due to significant improvement on the part of Group 1 only. A separate repeated-measures ANOVA, using only the data from Group 1 participants, confirmed this idea. For Group 1 only, within-subjects tests for pre-post GPS differences were highly significant, Wilks' Lambda = .311, $F(1, 34) = 75.337, p < .001$. There were also pre-post differences based on prior background, Wilks' Lambda = .835, $F(2, 34) = 3.369, p < .05$, suggesting the possibility of a somewhat different pattern of response to instruction based on global prior background within Group 1. However, there were no significant between-subjects effects for prior background in Group 1. Analogous ANOVAs for Groups 2 and 3 on the GPS task yielded no significant between-subjects effects, no significant within-subjects differences, and no significant interactions.

Across all three word-structure tasks, instructional group emerged as much more important than prior background group. With the exception of Group 2's scores on the GPS task, teachers in both instructional groups did increase their knowledge about word structure after course instruction. Nevertheless, many teachers still scored well below ceiling at post-test, especially on the irregular words task. The post-test means for Group 1 on all three tasks were higher than the means for Group 2, but none of these differences approached significance. Overall, these results duplicated those from the first year of the study (Spear-Swerling & Brucker, 2003).

CHILDREN'S RESPONSE TO TUTORING

Table III shows the pre- and post-test scores of the tutored second graders on the five measures used in tutoring: knowledge of

letter sounds, CORE Phonics Survey (reading and spelling), and reading and spelling of irregular words. The means and standard deviations in the table are based on the 31 youngsters who were post-tested on all five tutoring measures. A one-way MANOVA on these data found highly significant within-subjects (pre-post) differences, Wilks' Lambda = .128 and $F(5, 26) = 35.35, p < .001$. Follow-up univariate tests showed highly significant differences between pre and post scores for each of the 5 measures. For letter-sound knowledge, $F(1, 30) = 82.78, p < .001$; for CORE Reading, $F(1, 30) = 33.70, p < .001$; for CORE Spelling, $F(1, 30) = 13.71, p < .01$; for reading irregular words, $F(1, 30) = 85.52, p < .001$; and for spelling irregular words, $F(1, 30) = 16.74, p < .001$.

TABLE III. Pre- and Post-test Performance of Tutored Children.

Test	Pre-test Mean Score (SD) <i>n</i> = 31	Post-test Mean Score (SD) <i>n</i> = 31
Knowledge of letter sounds and patterns Max = 60	30.548 (8.003)	41.161 (7.335)
CORE Phonics Survey– Reading Words (phonetically regular words/pseudowords) Max = 94	21.839 (14.378)	31.161 (20.047)
CORE Phonics Survey– Spelling Words (phonetically regular words/sounds) Max = 20	10.032 (2.938)	11.903 (2.271)
Reading Irregular Words Max = 55	26.613 (13.032)	34.323 (13.295)
Spelling Irregular Words Max = 55	12.000 (7.197)	16.581 (9.384)

Note. The numbers in the table are raw scores that represent the number of correct letter sounds the child could give, the number of words read or spelled correctly, and so on. Means and SDs are based only on youngsters who completed post-testing on all of the measures listed in the table.

Children showed some consistent error patterns on these measures. On the letter-sound test, most children began tutoring knowing single consonant sounds, but had relatively little knowledge of sounds for vowels or letter patterns. At post-test, many children showed improvement in their knowledge of long vowel sounds, short vowel sounds, and consonant digraphs; fewer children improved in knowledge of sounds for vowel r or vowel team patterns. On the CORE Reading measure at pre-test, many children appeared to recognize some of the real words (e.g., *cat* and *stop*) by sight, but they had more difficulty reading pseudowords, even simple ones such as *vop*. Most children did improve their ability to decode simple real words and pseudowords at post-test. On the spelling portion of this test, many youngsters could spell initial and final sounds in words at pre-test; their progress during tutoring often related to some improvements in spelling the vowel in short vowel words. Almost all children could read many more irregular words than they could spell at both pre-test and post-test, and they appeared to make more progress in reading irregular words than in spelling them.

LINKS BETWEEN NOVICE TEACHERS' KNOWLEDGE AND CHILDREN'S PROGRESS

Correlations between Group 1 novice teachers' post-test performance on the three word-structure measures and children's post-test performance on the five tutoring measures were examined to see whether a relationship could be found between tutor knowledge and children's progress in tutoring. These were all partial correlations that controlled for children's pre-test scores. Two partial correlations were statistically significant: the correlation between novice teachers' post-test GPS score and children's post-test CORE Reading score, with pre-test CORE Reading controlled ($r = .338$, $df = 33$, $p < .05$), and the correlation between novice teachers' post-test irregular words score and children's post-test CORE Reading score with pre-test CORE Reading again controlled ($r = .381$, $df = 33$, $p < .05$). No other partial correlations approached significance, including those based on novice teachers' pre-test word-structure knowledge.

Specific Improvements on the CORE Phonics Survey-Reading. Two additional MANOVAs provided a more fine-grained analysis of tutored children's progress on the CORE. For the first MANOVA, children's pre- and post-test scores on five different CORE reading categories were used: short vowel words with single consonants and digraphs; short vowel words with consonant blends; long vowel words, including both magic

e and long vowel teams such as *ai*; words with vowel *r*, vowel plus *l*, and diphthongs; and two-syllable words. Some of the original seven CORE categories were combined to increase the number of items within categories. Children's pre- and post-test means for the five categories, along with sample words for each category, are listed in table IV. Within-subjects (pre-post) differences were highly significant, Wilks' Lambda = .376 and $F(5, 29) = 9.621, p < .001$. Follow-up univariate tests showed highly significant differences between pre- and post-test scores for the first two categories. For short vowel words with single consonants and digraphs, $F(1, 33) = 21.180, p < .001$, and for short vowel words with blends, $F(1, 33) = 19.954, p < .001$. Pre-post differences for long vowel words were also significant, $F(1, 33) = 9.842, p < .01$. Pre-post differences were not significant for vowel *r*, vowel plus *l*, and diphthongs, $F(1, 33) = 2.527, ns$. Somewhat surprisingly, however, pre-post differences for two-syllable words did attain significance, $F(1, 33) = 4.970, p < .05$.

The second MANOVA used children's scores for real words versus pseudowords, summed across word categories. Means and standard deviations for these types of words are shown at the bottom of table IV. Within-subjects differences again were highly significant, Wilks' Lambda = .493 and $F(2, 32) = 16.467, p < .001$. Univariate tests showed highly significant differences for both real words, $F(1, 33) = 32.165, p < .001$, and for pseudowords, $F(1, 33) = 16.509, p < .001$.

Children's error patterns on the two-syllable category of the CORE indicated that words read correctly at post-test generally were composed of simple short vowel or long vowel syllables (e.g., *kidnap*, *locate*, *pugnad*, *sunop*), not vowel *r* or diphthongs. For example, no child read *pharbid*, a word containing both a vowel *r* pattern and a consonant digraph (*ph*) not taught in tutoring, correctly at pre- or post-test. Thus, the small growth in this category appeared to involve some youngsters' abilities to generalize to longer words vowel sounds and word patterns taught in the context of one-syllable words.

Overall, children demonstrated the greatest improvement in categories that typically received the most attention in tutoring and the least in categories that received little or no attention in tutoring. Children improved in their ability to read both pseudowords and real words, suggesting that they were acquiring a decoding process and not merely increasing their knowledge of sight words.

Teachers' Improvements on the Word-structure Tasks. Group 1 teachers' error patterns on the three word-structure

TABLE IV. Tutored Children's Performance on Different Categories of the CORE Phonics Survey.

Category	Pre-test Mean Score (SD) <i>n</i> = 34	Post-test Mean Score (SD) <i>n</i> = 34
Short vowel words with single consonants and digraphs (e.g., <i>sip, vop, when, shom</i>) Max = 20	9.088 (5.029)	11.265 (4.481)
Short vowel words with consonant blends (e.g., <i>stop, limp, brab, jelt</i>) Max = 20	5.735 (4.588)	8.647 (5.667)
Long vowel words (e.g., <i>tape, feet, bine, soat</i>) Max = 10	2.441 (2.427)	3.441 (2.987)
Words with vowel r, vowel + l, and vowel diphthongs (e.g., <i>bark, coin, cold, murd, zoy</i>) Max = 20	4.824 (4.745)	5.824 (5.691)
Two-syllable words (e.g., <i>kidnap, locate, pugnad, morkle</i>) Max = 24	1.500 (3.405)	2.824 (4.648)
Total real words Max = 43	15.441 (9.362)	19.147 (10.632)
Total pseudowords Max = 51	8.147 (7.620)	12.853 (10.204)

Note. The numbers in the table are raw scores that represent the number of words read correctly in each category. Means and *SDs* are based on youngsters who completed post-testing on the CORE Phonics Survey.

measures were examined for specific links between teacher knowledge and tutored children's growth on the CORE. Teachers' error patterns at pre- and post-test were very consistent across alternate forms (*a* versus *b*) of the word-structure measures, so the error analysis emphasized patterns aggregated across forms.

On the GPS task, teachers performed best at post-test on relatively transparent words, including words with consonant blends, digraphs, and two-vowel combinations like *ea* (e.g.,

sweat, blocks, pistol, bread, fraud). At pre-test, almost all teachers failed to recognize that *x* in words like *mix* and *sax* represents two phonemes (/k/ and /s/), and many teachers segmented consonant blends (e.g., *bl* and *fr*) as a single phoneme, perhaps because of the tendency of literate adults to “chunk” common letter patterns. Few participants made these kinds of errors at post-test. However, teachers continued to show confusion at post-test on how to segment words with vowel *r* (*sword, chart*) and some two-syllable words (*listen, fasten*). Their errors on these words appeared to reflect some ongoing confusion between phonemic and orthographic levels of analysis; for instance, they typically segmented *ar, or,* and the suffix *-en* as single phonemes.

On the ST task, the most striking change from pre- to post-test was a reduction in obvious guessing. At pre-test, teachers often classified as vowel *r* words that did not even contain an *r*, such as *ike*. At post-test, participants did not make these kinds of errors, but rather sometimes failed to recognize vowel plus *l* patterns such as *alt* or *alk* (e.g., classifying *talt* as a closed syllable) or incompletely classified vowel *r* words (e.g., classifying *blarn* as vowel *r* or closed instead of vowel *r*-closed). Error rates at post-test were lowest for closed, magic *e*, open, and consonant-le syllables.

On the IW task, teachers false alarmed frequently to words like *kneel, know, rifle, and bugle* at pre-test, whereas at post-test, most participants recognized these words as regular. In terms of failing to detect irregular words, novice teachers made the most errors at both pre- and post-test on words containing only an irregular vowel sound. For example, they often failed to classify as irregular words like *do, what, bush, was, and were*, whereas they usually recognized words with irregular consonants such as those in *hour, whose, and island*. Teachers did improve at post-test in their ability to recognize irregular vowels in some words such as those with closed (e.g., *was, of*), magic *e* (e.g., *lose*), and open (e.g., *do*) orthographic patterns; however, they made little or no improvement on many words involving vowel team patterns (e.g., *flood, aunt, friend*).

To sum up, there appeared to be some clear links between teachers' changes in word-structure knowledge and children's improvements on specific CORE categories. Children showed the most growth in categories involving closed syllable patterns (short vowel words with single consonants, digraphs, and blends) and long-vowel words (including magic *e*). Novice teachers showed the strongest post-test performance on the

word-structure measures in areas related to these kinds of words: segmenting one-syllable words with blends and digraphs; recognizing closed, magic *e*, and open syllables; and recognizing irregular vowels in some common words with closed, magic *e*, and open syllable structures. Due to the sequence of instruction recommended to the novice teachers, these categories (i.e., closed, magic *e*, and open syllable words) also were those most likely to be addressed in tutoring.

DISCUSSION

These findings are very consistent with a growing body of research (e.g., Bos et al., 2001; Mather, Bos, & Babur, 2001; McCutchen, Abbott, et al., 2002; McCutchen, Harry, et al., 2002; Moats, 1994; Moats & Foorman, 2003; Scarborough et al., 1998; Spear-Swerling & Brucker, 2003), indicating the importance of including information about English word structure in both preservice teacher preparation and ongoing professional development. In this study, even participants with prior background for teaching reading (including some certified elementary and special educators) performed at relatively low levels on the word-structure measures at pre-test. Course instruction was consistently a more important influence on post-test performance than was prior background. On all three measures for Group 1, and on two out of three measures for Group 2, course instruction was effective in improving teachers' knowledge. Post-test means for Group 1 participants, who did supervised tutoring, all were higher than those for Group 2 participants, who received similar course instruction in word structure but did not do supervised tutoring, despite the fact that, compared to Group 2, Group 1 had significantly less prior background. However, similar to previous findings (Spear-Swerling & Brucker, 2003), post-test differences between the two groups were not statistically significant. Thus, there was no clear support for the idea that supervised tutoring experience enhances teachers' word-structure knowledge beyond the benefits provided by course instruction, although tutoring experience may certainly be valuable in other ways, as discussed below.

After course instruction, many novice teachers still performed below ceiling at post-test, especially on the irregular words task. Six hours of course instruction in word structure apparently was not sufficient for all students to perform at high levels, suggesting that more instruction may sometimes be

necessary. Other investigators have found that even periods of instruction much longer than six hours may not yield perfect performance at post-test (see, e.g., McCutchen, Abbott, et al., 2002), perhaps in part because the confounds created by literate adults' knowledge of word spellings and automatic recognition of words are not easily overcome.

Tutored children showed significant progress in all areas of tutoring including knowledge of letter sounds, decoding and spelling of phonetically regular words, and reading and spelling of irregular words. Unfortunately, it was not possible to obtain a comparison group of untutored children. However, tutored children's progress was very consistent with specific skills covered during tutoring sessions, as well as with novice teachers' patterns of post-test performance on the word-structure knowledge measures. During the time span of the study, reading instruction at the children's school did not involve systematic phonics, and it seems unlikely that tutored children's progress was primarily attributable to regular classroom instruction. Thus, it appears that appropriately designed field experiences, even those involving brief instruction delivered by novice teachers, can benefit children's basic reading and spelling skills, at least in the short term.

Novice teachers' post-test scores on two measures of word-structure knowledge (the GPS and IW tasks) correlated significantly, though modestly, with children's post-test scores on the CORE Phonics Survey-Reading when children's pre-test scores were accounted for. In contrast, none of the novice teachers' pre-test scores correlated significantly with children's progress on any of the assessments. This pattern suggests that knowledge acquired as part of course instruction influenced novice teachers' abilities to teach word decoding effectively. Observations of tutoring sessions yielded many examples of ways that the knowledge tapped by study measures might have affected the quality of decoding instruction. For instance, to select appropriate examples of words to employ in teaching phonics generalizations (e.g., the closed syllable type), teachers needed to avoid irregular words (e.g., *what* and *put*). Word-building activities involved making changes in initial phonemes (e.g., *sap* to *lap* to *flap*), final phonemes (e.g., *flap* to *flat* to *flash*), and medial phonemes (e.g., *flash* to *flesh* to *flush*) of words. Designing these activities well required the kind of knowledge tapped by the GPS task; for example, the transition from *lap* to *flap* entailed the understanding that the blend *fl* is composed of two separate phonemes.

Novice teachers' post-test knowledge on the syllable-types task did not relate to children's progress in word decoding, perhaps because few teachers had time to teach more than one or two syllable types. In addition, teachers' word-structure knowledge did not correlate significantly with children's progress in areas of tutoring other than word decoding. The lack of significant findings in these areas may relate in part to the brevity of the tutoring period and the small number of tutored children. Also, decoding instruction may draw more heavily on teachers' understanding of word structure than does teaching of irregular words. In the present study, novice teachers were taught to employ whole-word multisensory tracing techniques for teaching irregular words (e.g., repeatedly tracing the printed word *what*, while at the same time saying the letter names and then the whole word aloud). These techniques do not require the understanding and manipulation of word structure involved in word-building activities or in teaching syllable types. On the CORE Phonics Survey - Spelling, where a relationship between tutor knowledge and children's progress might also be expected, the number of items was much more limited than on the reading part of the survey, and few children progressed beyond learning to spell simple short-vowel words.

Our findings must be interpreted in the context of numerous limitations of the study. We could not randomly assign novice teachers to day and evening sections of the language-arts course to obtain groups with more similar background characteristics, which would have provided a better test of whether supervised tutoring enhances novice teachers' word-structure knowledge. Three administrations of the word-structure tasks (at the beginning of each course, just before the start of tutoring, and at the end of each course) also might have provided further insight about this issue, but entailed some practical problems such as the need to devote additional course time to testing and to develop a third alternate form of each task. Other limitations of the study include the lack of a comparison group for the tutored children, small sample size (especially for the tutored group), a relatively narrow set of measures of teacher knowledge, and low reliabilities for certain study measures, especially children's spelling of irregular words. We are in the process of trying to address some of these issues in this ongoing study.

Overall, the results support the viewpoint (e.g., Brady & Moats, 1997; McCutchen & Berninger, 1999; Moats, 1994, 2000) that an understanding of word structure is important to effective decoding instruction. The novice teachers in this study

were beginning to acquire some competence in teaching word-level reading skills, but most plainly needed further preparation in this area. The extent to which this preparation can and should happen at a preservice level requires additional research (Moats & Foorman, 2003). However, better preservice preparation could allow inservice professional development to focus on topics such as meeting individual differences and grouping children, rather than on basic information such as English word structure.

These findings also are highly consistent with other investigations (e.g., Fitzgerald, 2001; Invernizzi, et al., 1996, 1997; Jenkins, et al., 2000; Juel, 1996; Vadasy, et al., 1997, 2002) indicating that initial training and ongoing guidance are central to effective tutoring by novices. Several characteristics of the tutoring program appeared helpful in balancing the needs of both novice teachers and tutored children: the use of a structured lesson plan emphasizing one or two basic techniques for developing specific skills; focused assessments providing clear information about skills to work on in tutoring; and opportunities for novice teachers to practice administering assessments, as well as various instructional techniques, in university classroom sessions. Selecting appropriate children for tutoring also was important; children whose needs were particularly serious or complex, or that did not involve basic word-level reading skills, were not likely to benefit from this short-term tutoring program, and neither were their teachers.

Although the results did not clearly support the idea that tutoring experience enhanced novice teachers' word-structure knowledge, this experience benefited novice teachers in many other ways. In anonymous evaluations of the language-arts course, Group 1 participants consistently noted the value of the tutoring program to their learning. As well as providing opportunities to implement assessments and instructional techniques, tutoring provided experiences in areas such as responding to children's errors, pacing instruction, and engaging children in the lesson. Even very capable teachers sometimes had difficulties in these areas of which they were unaware, and hence for which they would not have sought help in independent tutoring assignments. Observations of tutoring sessions by the course instructor allowed these kinds of difficulties to be revealed and addressed. Thus, we concur with the position (e.g., Brady & Moats, 1997; Hoffman & Roller, 2001; IRA, 2003) that supervision is essential to providing high-quality field experiences in teacher preparation. The optimal design of these

experiences, to provide maximum benefit to children as well as teachers, is another matter for continued research.

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APPENDIX A: ASSESSMENTS USED IN TUTORING (UNPUBLISHED)

IRREGULAR WORDS/SIGHT WORDS ASSESSMENT

Directions (Reading): Using a blank piece of paper, cover all but the first column of words, and ask the child to read down the column. Proceed to the second, then third, then fourth column of words. If at any point the child misses more than six words in a row, uncover the entire page and ask the child if she or he sees any other words she or he recognizes. Mark any words read correctly. Then discontinue testing.

Directions (Spelling): Moving down the columns, dictate each word, using standard dictation format, and have the child write the word. Discontinue testing when the child misspells more than five words in a row. Do not administer the spelling test immediately after the reading test or the reading test immediately after the spelling test.

the	said	only	group
of	what	also	soup
to	where	two	often
a	some	put	idea
was	should	other	above
are	been	who	along
do	any	nothing	heart
from	could	always	young
they	very	enough	thought
one	come	once	angel
you	both	against	
were	because	another	
there	many	almost	
would	again	eye	
your	does	through	

LETTER-SOUNDS ASSESSMENT

Directions: Test in columns, beginning with the left-hand column, covering the other columns with a blank piece of paper. Ask the child to give the sounds (not letter names) for each of the single letters and letter patterns. For items involving more than one sound, prompt the child to give the second sound if necessary (e.g., “What other sound can that letter make?”). If the child gets more than six items in a row wrong, uncover the page and ask the child if she or he sees any items that she or he knows. Mark any correct answers, then discontinue testing.

Single Letters:		Letter Patterns:	
b	v	sh	ai
f	y	ch	ay
m	c (/s/ and /k/)	th	all
d	g (/g/ and /j/)	qu	aw
k		ck	ee
n	Vowels (long and short)		igh
s	a		oa
l	e	ar	old
p	i	er	oo (long and short)
j	o	ir	ow (/ow/ and /o/)
r	u	or	
t	y	ur	
w			-ing
x			-ed (/id/, /d/, or /t/)
z			-y
h			-ly

APPENDIX B: LESSON PLAN FORMAT USED IN TUTORING SESSIONS BY GROUP 1 NOVICE TEACHERS

1. *Sounds for Single Letters and Common Letter Patterns* (5 minutes)

Review 10 to 15 known letter sounds (this should be done *quickly*, in about a minute, using flash cards or a speed drill).

Introduce 2 to 4 new letter sounds by having the child trace and say them, or by using flash cards and a mnemonic cue. You can take new sounds directly from the informal assessment of letter/sound knowledge. If the new sound involves a letter pattern (such as *sh* or *ar*), you can also try giving the child a set of words containing the pattern, and have him or her circle the new letter pattern and give its sound. Do not require the child to read the word in this step.

2. *Phonics Concepts/Syllable Types* (5 to 10 minutes)

Review known phonics concepts using a sorting or classification task (e.g., sorting a stack of word cards into closed and not-closed syllables). Have the child give the vowel sound for words in the stack(s) involving known concepts.

If appropriate, **introduce** a new concept by briefly explaining a generalization (e.g., magic *e*) and showing examples of words fitting that generalization. (List specific words to be used as examples in your lesson plan.) Then follow up by having the child complete a sorting or classification task. Do not require the child to read words in this step.

3. *Reading and Spelling Phonetically Regular Words in Isolation* (10 to 15 minutes)

If the child needs work on phonemic awareness, integrate these activities with your word building activities below, using the procedures discussed in class.

Review a familiar word category in *decoding* (e.g., cvc words with a, e, and u) by building words with letter tiles and having the child read them.

Introduce a new word category in *decoding* (cvc words with i and o) by building words with letter tiles and having the child read them. Use the procedure demonstrated in class (substitute initial, then final, then medial sounds, using only known sounds).

Review a familiar word category in *spelling* by dictating words for the child to spell by using letter tiles.

Introduce a new word category in *spelling* by dictating words for the child to spell using letter tiles. Again, use only words involving known letter-sound relationships. For both reading and spelling, list examples of words to be used in instruction.

Remember, you should not take words for teaching from the CORE Phonics Survey.

4. *Reading and Spelling Phonetically Irregular Words* (5 to 10 minutes)

Review about 10 to 15 known words *quickly*, using flash cards or a speed drill.

Introduce 2 to 4 new words using a multisensory tracing technique such as the Fernald technique. Try to introduce words with shared letter patterns (e.g., *come* and *some*; *would*, *could*, and *should*) or grammatically related words (e.g., *you* and *your*) together. You should take words directly from the Irregular Word List used in testing, roughly in order, but you may deviate from the sequence to select words with shared patterns or grammatical relationships.

5. *Fluency Activity* (5 to 10 minutes)

Do **one** of the following: a *speed drill* on phonetically regular words (using word patterns that have already been mastered) or *rereading* of a familiar book. If you do a speed drill, attach a copy of it to your lesson plan; if you do rereading of a familiar book, specify the book title.

6. *Reading in Context* (10 minutes)

Introduce and have the child read aloud an instructionally appropriate, new book. "Instructionally appropriate" means that the child can correctly decode at least 90% of the words without help from a tutor. (For most of the children, that will mean using a phonetically

controlled or decodable text.) Introduce the book using the procedures demonstrated in class. During the child's oral reading, if the child has difficulty with a word, scaffold cues using the procedures discussed in class (first nonverbal cues, then verbal cues; tell the child the word only as a last resort; afterward, have the child reread the sentence). Include 5 to 6 sample comprehension questions in your lesson plan.

7. *Listening Comprehension* (10 minutes)

Read an **age-appropriate** children's book (narrative or informational text) to the child (not a decodable book). Include 5 to 6 sample comprehension questions, both literal and inferential. Ask open-ended questions that will encourage discussion; avoid asking questions that have one-word answers. Try to link new vocabulary and concepts to what the child already knows.