Phonological Awareness Instruction: Opinions and Practices of Educators and Speech-Language Pathologists

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Strong literacy skills, especially reading and writing, are essential to the academic, economic, and personal success of those who live in a literate society (Chard & Dickson, 1999; Greenhalgh & Strong, 2001; Spracher, 2000). Therefore, it is important that every child be given the opportunity to develop these skills. However, research indicates that 17% to 20% of children living in the United States have significant difficulty learning to read, with more than one third of students in fourth grade nationwide and nearly 70% in some low-income urban schools reading below grade level (Education Commission of the States, 2004). Additionally, children who are not fluent readers by fourth grade are likely to continue to struggle with reading into adulthood (Nancollis, Lawrie, & Dodd, 2005), highlighting the importance of prevention and/or early identification of reading problems.

Not only is reading essential to economic and personal success in the long run, but in the short term, reading helps children expand their vocabularies and improve their overall language skills (Catts, 1993; Watson, Layton, Pierce, & Abraham, 1994). Children who spend more time reading also have been shown to perform better in school than their peers who read less often (Catts, 1997; Chard & Dickson, 1999). How does a child become a proficient reader? Research has shown that children entering kindergarten who have had repeated exposure to emergent literacy activities during the preschool years (Hegde & Maul, 2006; Justice, Invernizzi, & Meier, 2002) are likely to be successful readers during the school years. Emergent literacy skills include written language awareness (alphabet knowledge and print concepts), literate features of oral language, and phonological awareness skills (Justice, Chow, Capellini, Flanagan, & Colton, 2003; Justice & Kaderavek, 2004; Justice & Pullen, 2003).

Print concepts and alphabet knowledge have been shown to be predictive of reading achievement and phonological awareness acquisition (Pullen & Justice, 2003; Watson et al., 1994). It has been suggested that children become
aware that environmental print has meaning at a very early age and that this leads to the development of alphabet knowledge during the preschool and early school years (Pullen & Justice, 2003; Wood, 2000). Alphabet knowledge allows children to understand that written words are made up of letters and that those letters make sounds that, when blended together, become spoken words. Therefore, children begin to understand that words that represent objects in the environment can be produced in either oral or written form (Pullen & Justice, 2003). Oral language skills also have been shown to predict success in learning to read (Snow, Burns, & Griffin, 1998), with receptive (Dickinson & Tabor, 2001) and expressive vocabulary, specifically children’s ability to define words (Nation, Clarke, Marshall, & Durand, 2004; Roth, Speece, & Cooper, 2002), predicting strong reading comprehension skills. Another aspect of oral language that has been associated with reading success is children’s ability to include literate language features in their oral language (Pullen & Justice, 2003). Literate language features include the use of conjunctions (e.g., but, because, so, if), elaborated noun phrases (e.g., the nice big boy, the water from the river, the dog jumping over the fence, the boy who likes me), mental verbs (e.g., think, wish, know), and linguistic verbs (e.g., promise, report, exclain, say) (Paul, 2001).

Finally, phonological awareness, which is the awareness of the sound structure of spoken language and its correspondence to a grapheme system, is predictive of successful literacy outcomes (Badian, 2001; Bradley & Bryant, 1991; Catts, 1993; Pullen & Justice, 2003; Singleton, Thomas, & Horne, 2000), especially of how proficiently children will acquire word decoding skills (Roth et al., 2002). Phonological awareness allows children to understand the different ways that language can be divided into smaller components and manipulated (Chard & Dickson, 1999). Pullen and Justice described phonological awareness as developing on a continuum from shallow (large phonological features, such as words and syllables) to deep (phoneme representation). Table 1 summarizes the components of phonological awareness in the order of their development.

Prediction studies have shown that phonological awareness contributes uniquely to conventional literacy outcomes (Justice et al., 2003; Pullen & Justice, 2003). Therefore, if a child has difficulty developing phonological awareness skills, explicit instruction should be provided to facilitate the acquisition of these skills. As noted in Table 1, rhyming is among the earliest components of phonological awareness to emerge in young children (Cassady & Smith, 2004; Chard & Dickson, 1999; Justice et al., 2002; Major & Handford Bernhardt, 1998; Neuman, 2004; Pullen & Justice; Sandberg, 2001; Stahl & Murray, 1994; Wood, 2000). Studies have shown that children who were explicitly taught to rhyme during the preschool years learned this skill more effectively than did children who were not explicitly taught the skill (Majsterek, Shorr, & Erion, 2000; Mitchell & Fox, 2001; Reynolds, Callihan, & Browning, 2003; van Kleek, Gillam, & McFadden, 1998; Walton, Bowden, Kurtz, & Angus, 2001), with Reynolds et al. demonstrating that rhyming could be taught effectively to children as young as 3 years. If children entering school have a good foundation in the shallow components of phonological awareness, such as rhyming, they will be better able to learn the deeper levels, such as blending phonemes into words and segmenting words into phonemes (Pullen & Justice, 2003). Research suggests that acquisition of these deeper level skills, which occurs in normally developing children between the ages of 5 and 7 years, provides the strongest foundation for reading acquisition (Chard & Dickson, 1999; Nancollis et al., 2005; Pullen & Justice, 2003). The ability to blend phonemes into words is specifically correlated to word decoding skills, and the ability to segment words into phonemes is correlated to spelling ability (Cassady & Smith, 2004; Chard & Dickson, 1999), both of which are necessary to master literate language.

Although all of the components of emergent literacy are strong predictors of success in acquiring literate language (Justice & Kaderavek, 2004), instruction in letter-sound correspondence, which combines written language and phonological awareness, has been found to be especially

### Table 1. Components of phonological awareness (Cassady & Smith, 2004; Chard & Dickson, 1999; Gilbertson & Bramlett, 1998; Justice et al., 2002; Major & Handford Bernhardt, 1998; Pullen & Justice, 2003; Sandberg, 2001; Stahl & Murray, 1994).

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Age of acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word and syllable awareness (segmentation)</td>
<td>Identify the number of words in a phrase or syllables in a word.</td>
<td>3–4 years</td>
</tr>
<tr>
<td>Rhyming</td>
<td>Identify and produce words that differ in only the consonants that precede the first vowel.</td>
<td>3–4 years</td>
</tr>
<tr>
<td>Alliteration</td>
<td>Recognize when words begin with the same sound.</td>
<td>3–4 years</td>
</tr>
<tr>
<td>Blending</td>
<td>Combine smaller language units into larger units (e.g., p – o – p = pop).</td>
<td>5 years</td>
</tr>
<tr>
<td>Identification of initial and final phonemes</td>
<td>Know that stop begins with /s/ and ends with /p/.</td>
<td>6 years</td>
</tr>
<tr>
<td>Phoneme segmentation</td>
<td>Produce the individual phonemes of a word.</td>
<td>6–7 years</td>
</tr>
<tr>
<td>Phoneme manipulation</td>
<td>Ability to change, modify, or move the individual sounds in a word. e.g., bake – delete /b/ = ache, tied – delete /d/ = tie</td>
<td>6–7 years</td>
</tr>
</tbody>
</table>
beneficial in supporting the development of literacy (Adams, 1990, cited in Pullen & Justice, 2003; Catts, 1997; Nancollis et al., 2005). Instruction in letter-sound correspondence also strengthens phonological awareness, especially the more sophisticated levels of phonemic awareness (Chard & Dickson, 1999).

As stated earlier, there is a strong relationship between children’s oral language proficiency and their emergent literacy development. Children with specific language impairment (SLI) have difficulty acquiring language in the absence of underlying problems such as sensory, neurological, or intellectual deficits; emotional disturbance; or environmental deprivation (Bishop, 1992a, 1992b; La Paro, Justice, Skibbe, & Pianta, 2004; Lubert, 1981). Children with oral language difficulties are more likely than other children to have problems acquiring emergent literacy (Justice et al., 2003) and learning to read (Bishop & Adams, 1990; Blaiklock, 2004; Catts, 1993; Catts, Fey, Zhang, & Tomblin, 2001; Chard & Dickson, 1999; Justice et al., 2002; La Paro et al., 2004; Menyuk, Chesnick, & Liebergott, 1991). Snowling, Bishop, and Stothers (2000) found that nearly half of the children from the study conducted by Bishop and Adams were still having reading difficulties at 15 years of age. Bishop and her colleagues determined that preschoolers with SLI who had the greatest risk for developing reading difficulties were those who had language problems that were not resolved by the time they started formal reading instruction.

There is evidence to suggest that reading instruction is optimized when it is delivered by a team of professionals rather than by just one individual (Hadley, Simmerman, Long, & Luna, 2000; Steckbeck, 2004). Depending on the unique needs of each child, members of the literacy team may consist of a classroom teacher, a reading specialist, a teacher of special education, and a speech-language pathologist (SLP). Each member of the team plays a unique but interconnected role in literacy instruction. Classroom teachers have the primary responsibility for educating all children, and special education teachers modify the curriculum to meet the needs of children with unique learning challenges (Bureau of Labor Statistics, 2006). Both reading specialists and SLPs have educational preparation that enables them to meet the needs of children who are at risk for reading failure. SLPs also have advanced education in child language and phonological development, making their involvement especially important in providing all children with strong foundations in phonological awareness skills. The expertise of SLPs is especially important in helping children with SLI acquire the phonological awareness foundation they need to successfully acquire reading skills (American Speech-Language-Hearing Association [ASHA], 2002; Catts, 1991; Justice et al., 2002; Spracher, 2000). Since passage of the No Child Left Behind Act of 2001 (Education Commission of the States, 2004), renewed emphasis has been placed on the importance of providing all children, regardless of socioeconomic status or disability, the support they need to learn to read (U.S. Department of Education [USDE], 2005a, 2005b). In the current study, we wanted to see what effect this current emphasis on reading had on the opinions and practices of public school personnel regarding phonological awareness instruction and its relationship to literacy. Therefore, the aims of the current study were as follows:

- Determine what types of phonological awareness experiences respondents consider most important for children to have during the preschool and early school-age years to promote literacy.
- Determine which education professional (e.g., classroom teachers, reading specialists, SLPs) respondents think is the most important to be involved in teaching phonological awareness skills to young children.
- Determine the average number of minutes per week that SLPs and other specialists (reading specialists and special education teachers) spend in phonological awareness instruction with children on their caseloads.
- Determine the diagnostic categories of children to whom SLPs provide phonological awareness instruction.
- Determine the proportion of SLPs who are involved in phonological awareness instruction in the regular education curriculum and the nature of their involvement.

For the first three aims, we also wanted to determine if there was a significant relationship between survey responses and the professional category of the respondents.

### METHOD

**Participants**

Participants in this study included kindergarten and first-grade teachers (hereafter collapsed into classroom teachers), reading specialists and special education teachers (hereafter collapsed into special teachers), and SLPs working in a small state in the Appalachian region. These participants were drawn from all public schools within this state.

**Research Design**

The study used a nonexperimental design that examined the independence of categorical variables. These variables included professional category (classroom teacher, special teacher, and SLP) and respondents’ answers to items on researcher-generated surveys (Appendix A).

**Survey Instrument**

The authors developed survey instruments for each participant group (classroom teachers, special teachers, and SLPs). These surveys asked participants which components of phonological awareness they felt to be most important in supporting the development of reading, which professionals they felt to be most important in providing phonological awareness instruction to children, the type of involvement of the SLP in phonological awareness instruction, the
amount of time special teachers and SLPs spent in direct phonological awareness instruction and, for SLPs, the disorders of children on their caseloads who received extra phonological awareness instruction evidenced. Appendix A includes all of the survey questions.

Procedures

The surveys were disseminated using an electronic survey instrument known as Enhanced Version of Advanced Survey (http://www.advancedsurvey.com). Advanced Survey is designed so that surveys are returned anonymously, with identifying information encrypted and therefore not available to the researcher. The surveys were sent electronically to all kindergarten and first-grade teachers, reading specialists, special education teachers, and SLPs for whom e-mail addresses were available. The participants received an invitation via e-mail giving them information about the surveys and providing them with the link to the appropriate survey (see Appendix B). Of a total of 610 surveys sent, 127 were returned, resulting in a return rate of 21%. This information is further elaborated in Table 2.

Data Analysis

The data collected from the surveys were coded and entered into the Statistical Package for the Social Sciences (SPSS, 2004) for analysis. Data were analyzed using a series of descriptive, chi-square, and Cramer’s V statistical procedures. According to George and Mallery (2006), the chi-square procedure tests the independence, rather than the association, of variables. They further state that, because chi-square results are dependent on sample size and the number of cells in each analysis, multiple chi-squares often cannot be compared with one another. Therefore, we also used the Cramer’s V procedure, which tests the strength of the association between variables. An alpha level of .05 was used to determine statistical significance for all analyses.

Interrater Reliability

Twenty percent of the surveys returned in each of the three participant groups were randomly selected, and a second rater coded and entered their data into SPSS. A unit-by-unit agreement ratio (Hegde, 2003) showed interrater reliability to be 100%.

Table 2. Survey response rates.

<table>
<thead>
<tr>
<th>Participant</th>
<th># responded/# sent</th>
<th>% of response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom teacher</td>
<td>55/329</td>
<td>17</td>
</tr>
<tr>
<td>Speech-language pathologist</td>
<td>38/116</td>
<td>33</td>
</tr>
<tr>
<td>Special teacher</td>
<td>34/165</td>
<td>21</td>
</tr>
<tr>
<td>Total participants</td>
<td>127/610</td>
<td>21</td>
</tr>
</tbody>
</table>

RESULTS

First, chi-square tests were employed to test the independence between demographic variables (age, gender, number of years in public education, number of years in current position) and professional category (classroom teacher, special teacher, SLP). Results showed independence between gender and professional category only. All other demographic variables were not independent of professional category, with Cramer’s V showing weak but statistically significant relationships between the following variables: age and professional category, $\chi^2 (10) = 25.512, p = .018$ (Cramer’s V = .301); number of years in public education and professional category, $\chi^2 (8) = 16.155, p = .040$ (Cramer’s V = .367); and number of years in current position and professional category, $\chi^2 (8) = 23.059, p = .003$ (Cramer’s V = .310). Frequencies in each category are shown in Table 3.

Further results are summarized according to the aims of the study. The first aim was to determine which phonological awareness activities respondents felt to be most important in promoting literacy. Slightly more than 50% of respondents felt that letter-sound correspondence was the most important phonological awareness skill for children to learn to promote literacy, with blending sounds into words chosen as most important by 24.4% of respondents. When asked which phonological awareness activities respondents felt to be the second most important, 29.8% chose blending sounds into words, and 18.5% chose letter-sound correspond-

Table 3. Frequency of responses among participant groups for demographic variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>CR teacher</th>
<th>Special teacher</th>
<th>SLP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (&lt; 22)</td>
<td>0.0</td>
<td>0.0</td>
<td>5.4</td>
</tr>
<tr>
<td>22–30</td>
<td>18.4</td>
<td>12.1</td>
<td>5.4</td>
</tr>
<tr>
<td>31–40</td>
<td>6.1</td>
<td>27.3</td>
<td>16.2</td>
</tr>
<tr>
<td>41–50</td>
<td>22.4</td>
<td>37.3</td>
<td>40.5</td>
</tr>
<tr>
<td>51–60</td>
<td>53.1</td>
<td>30.3</td>
<td>32.4</td>
</tr>
<tr>
<td>&gt; 60</td>
<td>0.0</td>
<td>3.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2.1</td>
<td>12.1</td>
<td>2.7</td>
</tr>
<tr>
<td>Female</td>
<td>97.9</td>
<td>87.9</td>
<td>97.3</td>
</tr>
<tr>
<td># Years in public education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 5</td>
<td>12</td>
<td>9.1</td>
<td>10.8</td>
</tr>
<tr>
<td>6–10</td>
<td>14</td>
<td>18.2</td>
<td>18.9</td>
</tr>
<tr>
<td>11–15</td>
<td>6</td>
<td>27.3</td>
<td>8.1</td>
</tr>
<tr>
<td>16–20</td>
<td>20</td>
<td>12.1</td>
<td>2.7</td>
</tr>
<tr>
<td>&gt; 20</td>
<td>48</td>
<td>33.3</td>
<td>59.5</td>
</tr>
<tr>
<td># Years in current position</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 5</td>
<td>28</td>
<td>51.5</td>
<td>21.6</td>
</tr>
<tr>
<td>6–10</td>
<td>26</td>
<td>24.2</td>
<td>24.3</td>
</tr>
<tr>
<td>11–15</td>
<td>16</td>
<td>6.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Note. CR = classroom teacher, SLP = speech-language pathologist.
 ance. Taken together, these results show that respondents clearly chose these two components of phonological awareness as being most important in supporting the acquisition of literacy. Chi-square analysis showed that participants’ responses were independent of professional category for both the most important component, \( \chi^2 (14) = 18.865, p = .170 \) (Cramer’s \( V = .273 \)), and the second most important, \( \chi^2 (14) = 13.719, p = .471 \) (Cramer’s \( V = .235 \)).

The second aim of the study was to determine which education professionals respondents felt to be most important in teaching phonological awareness. Results showed that respondents felt that classroom teachers were the most important, with reading specialists and SLPs also being important, in that order. Chi-square analysis showed that professional category was not independent of respondents’ opinions regarding the most important professional members of the phonological awareness team, \( \chi^2 (10) = 26.579, p = .003 \) (Cramer’s \( V = .331 \)). As can be seen in Table 4, whereas all respondents felt that classroom teachers were most important for phonological awareness instruction, those special teachers and SLPs who designated someone other than classroom teachers as being most important tended to designate their own category most frequently.

To determine whether the significant association between professional category and opinion as to which professional was most important for phonological awareness instruction was influenced by the demographic variables (age, number of years in public education, number of years in current position) that were earlier found to be significantly related to professional category, we conducted additional chi-square and Cramer’s \( V \) procedures to compare respondents’ opinions concerning the most important professional to deliver phonological awareness instruction with each of the demographic variables listed above. Results showed no statistically significant associations between respondents’ opinions and the following demographic variables: age of respondent, \( \chi^2 (20) = 16.954, p = .656 \) (Cramer’s \( V = .189 \)); number of years in public education, \( \chi^2 (20) = 10.848, p = .950 \) (Cramer’s \( V = .150 \)); and number of years in current position, \( \chi^2 (20) = 22.462, p = .316 \) (Cramer’s \( V = .216 \)). These results suggest that professional category, rather than demographic variables, was significantly related to respondents’ opinions concerning the individual who is most important for phonological awareness instruction.

The third aim of the study was to determine the average number of minutes per week that SLPs and special teachers (reading specialists and special education teachers) spent in phonological awareness instruction with children on their caseloads. Eighty-nine percent of SLPs reported spending 30 min or less per week in phonological awareness instruction with children on their caseloads, with 46% of the respondents reporting spending less than 10 min per week. Responses from special teachers ranged from less than 10 min per week to more than 60 min per week (see Table 5).

The relationship between the number of minutes per week that were spent in phonological awareness instruction and professional category was significant, \( \chi^2 (3) = 18.386, p < .001 \) (Cramer’s \( V = .583 \)). Further analysis showed no significant association between number of minutes per week spent in phonological awareness instruction and age, \( \chi^2 (15) = 8.999, p = .878 \) (Cramer’s \( V = .207 \)); number of years in public education, \( \chi^2 (12) = 13.367, p = .343 \) (Cramer’s \( V = .252 \)); or number of years in present position, \( \chi^2 (12) = 12.860, p = .379 \) (Cramer’s \( V = .247 \)). These findings suggest that reading specialists and special education teachers spend more time providing phonological awareness instruction than do SLPs, and that this finding is not influenced by demographic factors.

The fourth aim of the study was to determine the diagnoses of children to whom SLPs provided phonological awareness instruction. Thirty-four percent of respondents said that they provided phonological awareness instruction to children with articulation and phonological disorders, 29% said that they provided instruction to children with other disorders (e.g., syntactic/morphological, semantic, pragmatic), 7% reported that they provided instruction to children with multiple disordered components of language, and 29% reported that they did not provide phonological awareness instruction to any children on their caseloads. The fifth aim of the study was to determine the proportion of SLPs who reported being involved in phonological awareness instruction in the regular education curriculum and to determine the nature of their involvement. Only 46% of the SLPs surveyed reported being involved in phonological awareness instruction in the regular curriculum. Of

Table 4. Frequency of responses to Question 9, “If only one professional could provide phonological awareness instruction, which one should it be?”

<table>
<thead>
<tr>
<th>Variable</th>
<th>CR teacher</th>
<th>Special teacher</th>
<th>SLP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most important</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social worker</td>
<td>2.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Classroom teacher</td>
<td>70.6</td>
<td>57.6</td>
<td>40.5</td>
</tr>
<tr>
<td>SLP</td>
<td>13.7</td>
<td>0.0</td>
<td>35.1</td>
</tr>
<tr>
<td>Reading specialist</td>
<td>11.8</td>
<td>33.3</td>
<td>18.9</td>
</tr>
<tr>
<td>LD teacher</td>
<td>0.0</td>
<td>3.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Other</td>
<td>2.0</td>
<td>6.1</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Note. LD teacher = teacher of children with learning disabilities.

Table 5. Frequency of responses to Question 8, “Approximately how many minutes per week do you spend in phonological awareness instruction with each child on your caseload?”

<table>
<thead>
<tr>
<th>Variable</th>
<th>Special teacher</th>
<th>SLP</th>
</tr>
</thead>
<tbody>
<tr>
<td># of minutes per week in phonological awareness instruction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10</td>
<td>9.1</td>
<td>45.9</td>
</tr>
<tr>
<td>11–30</td>
<td>39.4</td>
<td>43.2</td>
</tr>
<tr>
<td>31–60</td>
<td>27.3</td>
<td>8.1</td>
</tr>
<tr>
<td>&gt; 60</td>
<td>24.2</td>
<td>2.7</td>
</tr>
</tbody>
</table>
those reporting involvement, 28% said that they provided extra services for children on their caseloads within the classroom, 40% said that they provided multiple services, and 32% said that they assisted reading specialists with testing or assisted with school-wide testing. Of interest is that no SLP reported collaborating with classroom teachers in the planning or implementation of phonological awareness instruction.

**DISCUSSION**

The current study surveyed education personnel who might be involved in phonological awareness instruction. The purpose of the survey was to gather respondents’ opinions on a number of factors related to the importance of providing children with early experiences, especially phonological awareness experiences, that support literacy development. We also wanted to determine if survey responses were related to respondents’ professional category (i.e., classroom teacher, special teacher, SLP). The study yielded some interesting descriptive results. Respondents felt that letter-sound correspondence and blending phonemes into words were the two most important phonological awareness skills to teach young children, in that order. This finding demonstrates that respondents were familiar with research concerning the importance of phonological awareness in giving children the foundation they need to acquire literate language (Blaiklock, 2004; Cassady & Smith, 2004; Justice et al., 2003), as well as with research regarding the components of emergent literacy that most strongly predict success in acquiring literate language. For example, Swank and Catts (1994) found that first-grade children’s performance on a task of syllable and phoneme blending differentiated between good and poor readers with 76% accuracy. Although blending is strictly a phonological awareness skill, letter-sound correspondence allows children to combine a phonological awareness skill (recognition of phonemes) with a written awareness skill (recognition of orthographic letters). The ability to combine these two emergent literacy skills gives children the prerequisite skills they need to begin to “sound out” words (Blaiklock, 2004).

There was a significant relationship between professional category and respondents’ opinions regarding the most important professional needed for the school’s phonological awareness team. Although the majority of professionals in each category felt that classroom teachers were the professionals who are most important in providing phonological awareness instruction, when special teachers (the majority of whom were reading specialists) and SLPs chose another professional as being most important, they were more likely to choose their category than one of the others (see Figure 1).

That classroom teachers were chosen as the most important professional to be on the phonological awareness team was not surprising given that these professionals have primary responsibility for the education of children during kindergarten and first grade. We also noted that classroom teachers who designated another professional as being most important to the team about equally designated reading specialists and SLPs as this individual. However, it is interesting to note that, although SLPs designated themselves as being the most important member of the phonological awareness team almost twice as often as they designated reading specialists, special teachers never designated SLPs as being most important. We conclude from these responses that the reading specialists surveyed viewed themselves as having more of a responsibility than SLPs for helping children develop skills that support reading. However, many special teachers did designate SLPs as being the second or third most important professionals on the team (Figure 2), suggesting that they acknowledge the role that SLPs can play in helping children develop preliteracy skills.

Special teachers were more likely to report spending 60 min or more per week working with at-risk children than were SLPs. Approximately 24% of special teachers surveyed reported spending more than 60 min per week providing phonological awareness instruction to children they teach, whereas only 3% of SLPs reported spending as much time, with the majority of SLPs reporting spending 30 min or less providing phonological awareness instruction.
to children on their caseloads. However, we did not ask the respondents how many children were on their caseloads and how much total time they spent with each child per week. It may be that reading specialists and special education teachers work with fewer children and spend more time with each child than do SLPs. It also should be noted that reading specialists work exclusively with children who are at risk for reading failure. However, because research (Chard & Dickson, 1999; Major & Handford Bernhardt, 1998) shows that many children with speech and language impairments also are at risk for reading problems, we suggest that SLPs be encouraged to include phonological awareness instruction in their therapy with children on their caseloads and to collaborate with these children’s classroom teachers and parents so that instruction can be carried over in the classroom and at home. (See Figure 3 for a comparison between SLPs and special teachers in the amount of time spent in phonological awareness instruction with children on their caseloads.)

We also wanted to see how likely SLPs were to be part of phonological awareness instruction in the regular curriculum, how likely they were to provide phonological awareness instruction to children on their caseloads, what types of speech and/or language disorders the children to whom they provided phonological awareness instruction had, and how many minutes per week they spent providing phonological awareness instruction to children on their caseloads. It is of concern to us that more than half of the SLPs surveyed reported that they did not participate in phonological awareness instruction in the regular classroom, even in a collaborative role. This finding suggests that public school teachers and administrators may not understand that the SLP’s scope of practice includes helping children to acquire the prerequisite skills, especially phonological awareness skills, needed for strong literacy development (ASHA, 2002).

Additionally, 29% of the SLPs surveyed reported that they did not provide phonological awareness instruction to any children on their caseloads. This is particularly disturbing given the research showing that children with speech and language impairments are at significant risk for literacy problems (Chard & Dickson, 1999; Major & Handford Bernhardt, 1998). Of those SLPs surveyed who reported providing phonological awareness instruction to children on their caseloads, 34% reported providing it only to children with articulation and phonological disorders. Although there is a link between these disorders and reading problems, research suggests that children with other types of SLI, such as problems with syntax, morphology, and semantics, also are at risk for reading difficulty (Catts, 1997; Menyuk et al., 1991; Pullen & Justice, 2003).

In conclusion, our findings can be summarized as follows:

- Respondents rated teaching letter-sound correspondence and blending phonemes into words as being the most important prerequisite emergent literacy activities for literacy development.
- Although the majority of respondents in each professional category (i.e., classroom teachers, special teachers, SLPs) felt that classroom teachers were the most important member of the school’s phonological awareness team, reading specialists and SLPs who did not designate classroom teachers as being most important were more likely to specify their own category as most important than that of the other professional.
- Special teachers reported spending significantly more time teaching phonological awareness skills to children who are at risk for reading problems than did SLPs.
- Twenty-nine percent of the SLPs surveyed indicated that they did not provide phonological awareness instruction to children on their caseloads. Those that did provide this instruction were most likely to provide it to children with articulation and/or phonological impairments.
- More than half of the SLPs surveyed indicated that they did not provide phonological awareness instruction in the regular classroom and/or collaborate with classroom teachers.

**IMPLICATIONS FOR FUTURE RESEARCH**

In light of the findings of this study, we suggest that further research be conducted to answer the following questions:

- What do education professionals understand to be the role of SLPs in phonological awareness instruction with young children?
- What are the barriers to effective collaboration between SLPs and other professionals in providing children with phonological awareness instruction and how can these barriers be removed?
- How can SLPs be most effective in facilitating phonological awareness development in young children in the regular school curriculum?
- What are the barriers that SLPs face in spending adequate time providing phonological awareness
instruction to children with speech and language impairments who are at risk for reading failure and how can these barriers be removed?

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**REFERENCES**


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APPENDIX A. QUESTIONNAIRE

(Unless otherwise designated, these questions were asked of all participants)

1. Which of the following do you think is most important in preparing children to learn to read?
   - Teaching letter/sound correspondence
   - Teaching children to identify letters
   - Teaching children to segment words into syllables
   - Teaching children to segment words into sounds
   - Teaching children to blend sounds into words
   - Teaching children to blend syllables into words
   - Teaching children to identify beginning sounds of words
   - Teaching children rhyming instruction

2. Which of the following do you think is second most important in preparing children to learn to read?
   - Teaching letter/sound correspondence
   - Teaching children to identify letters
   - Teaching children to segment words into syllables
   - Teaching children to segment words into sounds
   - Teaching children to blend sounds into words
   - Teaching children to blend syllables into words
   - Teaching children to identify beginning sounds of words
   - Teaching children rhyming instruction

3. Which of the following do you think is least important in preparing children to learn to read?
   - Teaching letter/sound correspondence
   - Teaching children to identify letters
   - Teaching children to segment words into syllables
   - Teaching children to segment words into sounds
   - Teaching children to blend sounds into words
   - Teaching children to blend syllables into words
   - Teaching children to identify beginning sounds of words
   - Teaching children rhyming instruction

4. Are you directly involved in general kindergarten or first-grade phonological awareness instruction?
   [Question for special teachers and speech-language pathologists]
   - Yes
   - No

5. If yes, what is the nature of your involvement? (Please check all that apply)
   [Question for special teachers and speech-language pathologists]
   - I conduct phonological awareness instruction with all kindergarten children.
   - I conduct phonological awareness instruction with all first-grade children.
   - I provide extra phonological awareness instruction to children on my caseload.
   - The kindergarten teachers and I plan phonological awareness instruction together.
   - The first-grade teachers and I plan phonological awareness instruction together.
   - I am not involved.
   - Other involvement (Please specify).  ____________________________________

6. If you provide phonological awareness instruction to children on your caseload, what is the primary diagnosis of children to whom you provide the service? (Please check all that apply)
   [Question for speech-language pathologists]
   - Articulation disorder
   - Syntactic/morphological language disorder
   - Semantic language disorder
   - Pragmatic language disorder
   - Phonological language disorder
   - Other (please specify).  ____________________________________

7. If you do not provide phonological awareness instruction for children on your caseload, what are the reasons? (Please check all that apply) [Question for speech-language pathologists]
   - I do provide phonological awareness instruction to children on my caseload.
   - Not enough time.
   - Other professionals work on phonological awareness skills.
   - No children with phonological awareness difficulties on my caseload.
   - Other (please describe).  ____________________________________

continued on next page
8. Approximately how many minutes per week do you spend in phonological awareness instruction with each child on your caseload? [Question for special teachers and speech-language pathologists]
   ______ < 10 minutes
   ______ 11–30 minutes
   ______ 31–60 minutes
   ______ > 60 minutes

9. If only one professional could provide phonological awareness instruction, which one should it be?
   ______ Social worker
   ______ Classroom teacher
   ______ Title I reading teacher
   ______ Learning disabilities’ teacher
   ______ Other (Please specify)

10. If there could be two members on the phonological awareness team, who would be second most important?
    ______ Social worker
    ______ Classroom teacher
    ______ Title I reading teacher
    ______ Learning disabilities’ teacher
    ______ Other (Please specify)

11. If there could be three members on the phonological awareness team, who would be third most important?
    ______ Social worker
    ______ Classroom teacher
    ______ Title I reading teacher
    ______ Learning disabilities’ teacher
    ______ Other (Please specify)

12. Which of the following professionals would you be least likely to include on a phonological awareness team?
    ______ Social worker
    ______ Classroom teacher
    ______ Title I reading teacher
    ______ Learning disabilities’ teacher
    ______ Other (Please specify)

13. Please check your current position.
    ______ Social worker
    ______ Classroom teacher
    ______ Title I reading teacher
    ______ Learning disabilities’ teacher
    ______ Other (Please specify)

14. How many years have you been working in public education?
    < 5
    6–10
    11–15
    16–20
    > 20

15. How many years have you been working in your current position?
    < 5
    6–10
    11–15
    16–20
    > 20

16. What are your areas of certification? (Please check all that apply)
    ______ Reading endorsement
    ______ Gifted education
    ______ Elementary education
    ______ School administration
    ______ English as a second language
    ______ Special education
    ______ Speech-language therapy
    ______ Other (Please list).

17. Gender: Please check ______ Male ______ Female

18. Age: Please check appropriate range.
    < 22 years
    22–30 years
    31–40 years
    41–50 years
    51–60 years
    > 60 years
APPENDIX B. INVITATION

Dear Educator:

My name is Melinda Daniel and I am a graduate student at Marshall University. As part of the requirements for my master’s degree, I am completing a thesis investigating the relationship between children’s phonological awareness skills and their success in learning to read. As part of my thesis requirements, I am asking professional educators (classroom teachers, Title I and special education teachers, and speech-language pathologists) in West Virginia to complete a short survey about their experiences in teaching phonological awareness skills to young children.

I would very much appreciate your participating in the study. Completing the survey will take no more than 15 minutes. Your participation is important because you are in a unique position to give us unbiased feedback regarding your perceptions of the effectiveness of phonological awareness instruction. However, as with all research, your participation is voluntary. There is no penalty if you choose not to participate and you may choose to withdraw from the study at any time.

Please be aware that the surveys are being distributed electronically using the enhanced version of Advanced Survey. If you choose to participate in the survey, click on this link (INSERT LINK HERE) and you will be directed to the survey. When you complete the survey and hit the “submit” link, the results will be sent to me without any identifying participant information. In no way will your survey be able to be identified as having come from you. Details about Advanced Survey are available at http://www.advancedsurvey.com/.

If you have questions or would like results of the study upon its completion, please contact either me at daniel55@marshall.edu or my faculty advisor, Dr. Mary E. Reynolds, at reynoldm@marshall.edu. Additionally, if you have questions about your rights as a research participant, you may contact Dr. Stephen Cooper, IRB#2 Chair, at 304-696-4303.

Thank you for completing the survey!

Melinda Daniel, BS
Graduate Student
Marshall University