Experienced whole language teachers have developed a number of practical strategies that can and should be used to facilitate the development of "graphophonetic knowledge" in their students' literacy learning. Graphophonetic knowledge is defined as the combination of the sound system (phonology), the graphic system (orthography), and how readers relate these two to their own speaking patterns—including dialect. As an added advantage, many of these strategies also contribute to development of the students as conventional spellers. Whole language teachers work to establish an environment and circumstances critical to a child's personal construction of graphphonetic knowledge. Establishing this environment can be accomplished in a number of ways, including: (1) having familiar and favorite stories read to students again and again; (2) rereading favorite stories, songs, poems, independently or with a peer; (3) observing and participating as the teacher demonstrates letter/sound relationships while writing; (4) writing independently, constructing their own spellings as best as they are able; (5) considering how grapho/phonemic cues can be used along with prior knowledge and context; (6) discussing the use of grapho/phonemic cues in the context of meaningful reading; (7) making charts of words exhibiting letter/sound patterns of particular interest; and (8) experimenting with print and solidifying their understanding of letter/sound patterns in a variety of self-chosen ways. As the phonics controversy continues to be an explosive topic in education, it is up to the successes of well trained whole-language teachers to sway those critics who would continue to attempt to force students to endure endless non-contextual phonics skills training. (RS)
Phonics is defined as "the set of complex relationships between phonology (the sound system of an oral language) and orthography (the system of spellings and punctuation of written language)" (Goodman, 1993, p. 8). Phonics has become a controversial issue in education, but upon closer examination of this controversy, one finds that phonics, itself, is not so much the controversy as is how and when phonics is taught. Some contend that phonics should be taught prior to and in isolation from any actual reading and writing experiences. Do children need the pieces before they can make sense of the whole? Indeed, logic would draw one to conclude that as a child learns to speak by speaking—not by first learning all the words, then miraculously one day transforming into a skillful orator, learns to ride a bike by getting on the seat and peddling—not by first learning the names of the parts of the bike and how they work together to propel the bike forward or backward, the natural way for a child to learn to read, and write, is by doing just that—reading and writing.

Reading, simply defined, is making sense of text (Goodman, 1993, p. 3). When a skillful reader comes into contact with text, she should be able to make connections to it and draw meaning from it. In order to accomplish this, there are five main types of cueing systems she may draw upon as needed:

1. Visual information from the print
2. Sound information from oral language
3. Phonic information from understanding how written and oral language relate
4. Knowledge of the language's grammatical structure
5. Knowledge that coherent meaning can be constructed from an authentic literacy event (Goodman, 1993, p. 3)
Though skills/phonics strategies for teaching reading emphasize mastery of phonics knowledge as the most important cueing system and the basis for a child's reading development, the practical implication that can be observed from examining the reading strategies of experienced, independent readers is that "one cueing system cannot be the single most important factor in reading" (Freppon & Dahl, 1991, p. 190). A whole-language approach, as opposed to a skills/phonics approach, equips emergent readers with all of the reading strategies used by experienced readers by immersing them in meaningful print from the very beginning of formalized schooling and by helping children develop those strategies in the context of real text and real reading.

Graphophonic knowledge is defined as the combination of the sound system (phonology), the graphic system (orthography), and how readers relate these two to their own speaking patterns—including dialect (Goodman, 1993, p. 51). More simply put, graphophonic cues are "letter/sound relationships" (Weaver, 1994, p. 5). Graphophonic knowledge is nurtured and built upon in whole-language classrooms as students make the journey from emergent to independent readers and beyond. As speaking, listening, reading, and writing are examined over and over again in meaningful contexts, whole language teachers have limitless opportunities to teach phonics (though whole-language teachers will correctly inform the inquirer that what they are actually doing is working to establish the environment and circumstances critical to a child's personal construction of graphophonic knowledge.)

This establishment of this environment and these circumstances can be accomplished in a number of ways, including the following:

1. By having familiar and favorite stories read to them again and again, during a shared reading experience wherein they can see the text and thus begin to make
connections between spoken and written words and between letters and sounds.
2. By rereading favorite stories, songs, and poems, independently or with a peer.
3. By observing and participating as the teacher demonstrates letter/sound relationships while writing.
4. By writing independently, constructing their own spellings as best they are able.
5. By considering how grapho/phonemic cues can be used along with prior knowledge and context, to predict what might make sense before looking at the entire words or the following context.
6. By discussing the use of grapho/phonemic cues in the context of meaningful reading.
7. By making charts of words exhibiting letter/sound patterns of particular interest to them.
8. By experimenting with print and solidifying their understanding of letter/sound patterns in a variety of self-chosen ways.
(Wheaver, 1994, pp. 199-205)

Research on the acquisition of literacy, on cognitive development, on reading styles, on children's use of reading strategies, on less proficient, disabled and dyslexic readers, on comparative effects of whole language and skills programs, on phonics rules, on word perception, on the reading process, and on the acquisition of language all supports the development of phonics knowledge in a whole language environment under the set of above-described circumstances (Wheaver, 1994, p. 200).

But, then, how is phonics taught in a whole-language classroom? Experienced whole-language teachers have developed a number of practical strategies that can and should be used in order to facilitate the development of graphophonic knowledge in their students' literacy learning. As an added advantage, many of these strategies also contribute to development of the students as a conventional spellers. These strategies are the ways "teachers thoughtfully orchestrate opportunities for skills learning while children are reading and writing in content that is significant to them" (Powell & Homsby, 1993, p. 32):
By having familiar and favorite stories read to them again and again, during a shared reading experience wherein they can see the text and thus begin to make connections between spoken and written words and between letters and sounds...

1. By using a cloze procedure to focus on certain letters, letter clusters, and/or letter patterns to:

   Focus on beginning and ending cues:
   "Paul br---t his pet dog to scho--. It was wagging its t--- and b--king."

   Focus on semantic and syntactic cues:
   "Paul brought his pet d-- to school. It was wag--- its t--- and b------."  
   (Powell & Hornsby, 1993, p. 56).

   This type of cloze procedure differs from the traditional in that entire words are not left out, only parts of words. This lends focus for the reader's sake.

2. By having ample copies of favorite books available for the class to experiment with during independent reading time. This experimentation may take the form of paired readings, shared readings, or independent reading. The children will gain from additional, varying exposures to books that have been used previously for whole-class, shared readings (Powell & Hornsby, 1993, p. 45).

3. By learning variations of ABC songs and rhymes. Two that are suggested by Tim O'Keefe (Mills, O'Keefe, & Stephens, 1992, p. 6) are ABC Blues and ABC Rock, (from We All Live Together, 1975, Young Heart Records, Los Angeles). Variations of the familiar ABC song we all learned as children often do not have the I-m-n-o problem.
4. By doing a routine called rhyme reading where a familiar rhyme is copied three times onto three large pieces of chart paper. The first copy is left intact. The second copy is cut into sentence strips. The third copy is cut up into individual words. The children then work with the various versions of the text, as their ability allows, but gradually proceeding from the whole to the parts (Powell & Hornsby, 1993, p. 60).

5. By tuning children in to initial sounds through tongue twisters and alliterations. Powell & Hornsby (1993, p. 62) give the example of the “Peter Piper” tongue twister rhyme as being an excellent rhyme for teaching children to recognize the initial sound of p.

6. By placing prepared strips of phrases of a familiar refrain to a poster while the group recites the passage (Weaver, 1994, p. 200-201). Children see the text as they simultaneously say the words.

7. By providing tape-recordings of books, poems and songs for students to use independently, or in small groups, as they follow along in the text (Weaver, 1994, p. 201). Children see the text as they simultaneously hear the words. Or, perhaps, the child may listen to the book being read on the recording before he reads it independently. He may then feel more confident when he does attempt to read the text aloud; thus, the tape recorder is serving as a non-judgmental shared-reading partner.

By rereading favorite stories, songs, and poems, independently or with a peer...

1. By posting transcriptions of ABC songs on chart paper and displaying them permanently on the wall of the classroom (Mills, O'Keefe, & Stephens, 1992, p. 6). Children already have the songs memorized so they can relate the sounds contained in the words of the songs they know to the words printed on the charts.
2. By making "connections between certain letters, letters in their names, in favorite words, [to] print found in their environment" (Mills, O'Keefe, & Stephens, 1992, p. 54). This is the case for ample environmental print being displayed in the classroom. Constant exposure to print assures ample opportunities for students to make connections between letters found in a variety of different textual circumstances.

3. By using predictable books—books which are predictable according to the readers' "background knowledge, interests and language competence" (Goodman, 1993, p. 113), for shared reading experiences. These books may take the form of Big Books. During the reading, the teacher would take advantage of opportunities to draw the students' attention to letter patterns and sounds.

4. By having children read and reread their own written and illustrated books (Weaver, 1994, p. 201). Children will make the connection between print that they can read easily (because it is in their own words) and the sound/symbol relationships contained therein.

By observing and participating as the teacher demonstrates letter/sound relationships while writing...

1. By setting aside daily time for writing messages on a message board in conjunction with calendar time. These messages are composed by the students and transcribed, word for word, by the teacher as the children watch (Mills, O'Keefe, & Stephens, 1992, P. 8). The teacher can take advantage of this situation to draw students' attention to letter/sound patterns.

2. By writing the day's agenda on a chart or the chalkboard (Freppon & Dahl, 1991, p. 192). The teacher could verbalize his writing, emphasizing
certain sounds in certain words, as was necessary to fit the needs of the students who where observing and listening.

3. By showing and sharing verbally *non-contrived* pieces in her own handwriting (Powell & Hornsby, 1993, p. 69). These pieces could take most any authentic form—lists, poems, stories, letters, etc. Teachers need to present themselves as writers to their students.

4. By doing *shared writing* experiences with a whole class, small group, or individual student (Powell, & Hornsby, 1993, p. 89). In this scenario, the class, group, or individual child would take turns, as their abilities allowed, with the teacher in transcribing a story. The teacher would write and verbalize the words which the students were not yet willing to attempt to write. The students would transcribe as well, especially words and parts of words which they felt confident in taking the risk of writing.

5. By modeling the writing of an entire story, verbalizing letter sound and patterns as he sees fit, during part of a *language experience* story exercise (Weaver, 1994, p. 202). A language experience story is a story that a class composes about a shared experience—perhaps a field trip or a special guest to their class. It could be revised, edited, published and kept in the class library.

*By writing independently, constructing their own spellings as best they are able...*

1. By keeping a class attendance journal in which students sign in daily; ostensibly as a record of attendance, but with the underlying advantage of serving as a record of student progress over the course of the school year in both handwriting and spelling development. Teachers might use the journal to call attention to letters and sounds in children's names (Mills,
O'Keefe, & Stephens, 1992, p. 5) in whole-class discussions perhaps as part of a mini-lesson.

2. By having name-writing parties (Mills, O'Keefe, & Stephens, 1992, p. 60). Emergent readers and writers have a natural fascination with reading and writing the names of their classmates. Teachers can take advantage of this by natural curiosity by setting aside specific times when the whole class, working individually, in pairs, in groups, or as a whole, spends a significant amount of time saying, listening for and pointing out letter patterns and sounds in, and writing each other's names.

3. By writing and editing letters to classmates (Mills, O'Keefe, & Stephens, 1992, p. 17). Children love to write notes to each other. Letter-writing, and especially editing for spelling, provides an opportunity for examining letter patterns and sounds. This activity might become part of a Post Office dramatic play area.

4. By making connections with sounds in classmate's names as did Jevon, in Jevon Doesn't Sit At The Back Anymore (White, 1990). Jevon's development of graphophonic knowledge resulted from his observations of letters and sounds in his classmates' names. Throughout the book, Connie White emphasizes over and over again the importance of constant exposure to and discussion about students' names—the spellings, the sounds, the letter patterns, and letter clusters that exist therein.

5. By having a daily journal-time set aside to write about self-chosen topics (Freppon & Dahl, 1991, p. 192). Children who do not feel pressured to produce contrived texts may be more apt to pay more attention to letter sounds and patterns as they form their words on the page.

6. By writing in specific types of journals and response logs (Powell & Hornsby, 1993, p. 71). Increased writing time, devoted to any authentic writing
purpose is increased time spent composing words from letters and sounds. J. Richard Gentry (1987, p. 33) contends that the best and "real foundation for [conventional] spelling is frequent writing."

7. By initiating the practice of written conversations, be they teacher-child or child-child (Powell & Hornsby, 1993, p. 76). During a written conversation, one-party verbalizes questions/answers for the other party while that other party watches as what is being said is simultaneously being written. The other party then responds in like manner. As the child hears, he sees that same phrase being formed into words on the page.

By considering how grapho/phonemic cues can be used along with prior knowledge and context, to predict what might make sense before looking at the entire word or the following context...

1. By, again, using predictable books. Ken Goodman (1993, p. 113) claims predictability as a crucial factor in developing graphophonic knowledge at all stages of reading development and as especially important for those students who are learning English as a second language. Teachers should draw their students to focus on "words, word identification, and sound-symbol relations" (Freppon & Dahl, 1991, p. 192).

2. By spontaneously taking advantage of occasions during the reading of children's books to model how to use "prior knowledge, context, and initial consonants to predict a word" (Weaver, 1994, p. 202) in addition to modeling how to use grapho/phonemic cues.
By discussing the use of grapho/phonemic cues in the context of meaningful reading...

1. By using the large format of Big Books to point out to the students how words look and sound (Freppon & Dahl, 1991, p. 192). Many teachers use a pointer to point to the words as they are being read by the class. Stories printed in Big Book are most often quality children's literature.

2. By taking advantage of the predictability of predictable books to point out and verbalize to students cues that are grapho/phonemic (Goodman, 1993, p. 113). Children are quick to pick up on these patterns.

3. By using the repetitiveness of alliteration and rhyme as grapho/phonemic cues. Connie Weaver (1994, p. 203), suggests that students keep track of and graph the number of words in a story or rhyme that begin with the same letter. Graphing of other characteristics of words could also be done. This is an excellent way of integrating math into literature studies.

By making charts of words exhibiting letter/sound patterns of particular interest to them...

1. By making generic charts/lists of words—always verbalizing what is simultaneously being written—be they favorite words, words in the environment, etc. (Mills, O'Keefe, & Stephens, 1992, p. 54).

2. By making charts/lists which explore inconsistencies like ph in phone (Mills, O'Keefe, & Stephens, 1992, p. 56).

3. By playing with words (Mills, O'Keefe, & Stephens, 1992, p. 54). Make list after list of rhyming words and compare their conventional spellings.

4. By making a chart/list of all words from one book with the same sound (Powell & Hornsby, 1993, p. 47).
5. By making charts/lists which are lists that focus on word endings, contractions, and opposites (Powell & Hornsby, 1993, p. 50).

6. By leaving charts/lists available around the room--perhaps even posted on the walls--so as to encourage students to add more words as they are discovered at later dates (Powell & Hornsby, 1993, p. 52).

7. By having students make their own First Letter Dictionaries (Powell & Hornsby, 1993, p. 53). Each letter of the alphabet would get two facing pages in the dictionaries. The students would make entries into the dictionaries as they came across the words in their readings and writings, and be able to refer back to them for correct spellings later.

8. By making charts/lists of cluster analysis sessions. Clusters are letter combinations that make "certain sounds in certain words" (Powell & Hornsby, 1993, p. 58). An example might be words that contain *ish* that sounds like *fish*.


11. By making charts/lists of words with the same root words (Powell & Hornsby, 1993, pp. 64-65).


*By experimenting with print and solidifying their understanding of letter/sound patterns in a variety of self-chosen ways...*

1. By playing the word game "I'm thinking of a words that begins with (ends with, sounds like) ____" (Mills, O'Keefe, & Stephens, 1992, p. 58). This game can even be used with young emergent readers as they begin to become...
familiar with the spellings of each other's names, using the names as the mystery words.

2. By having children design and play their own board or card games that deal with letters and sounds (Mills, O'Keefe, & Stephens, 1992, pp. 59-60).

3. By giving the students the opportunity to establish pen-pal-relationships (Mills, O'Keefe, & Stephens, 1992, p. 17). These could be either exist within or outside of the classroom but should, in any case, be chosen by the student as an activity that she would like to pursue.

4. By designing opportunities for writing at all centers—have writing utensils and paper permanently located there. Freppon & Dahl (1991, p. 192), suggest that dramatic play centers be changed frequently to encourage different types of writing—a restaurant for writing orders, a kitchen for writing grocery lists, a post office for writing on envelopes, etc.


6. By doing word sorts using words written on cards by students from chart/lists or first-letter dictionaries. The students should come up with many different ways to sort the cards into categories—by initial letter, clusters, silent letters, syllables, etc. (Powell & Hornsby, 1992, p. 57).

Whole language philosophy, as it relates to development of graphophonics knowledge, could be summarized as follows: learning should be learner centered and developmentally appropriate; language processes should be learned in context of authentic literacy experiences; instruction should be meaning-based; phonics instruction should be integrated with authentic literacy experiences; learning about sound-symbol relationships should be integrated within the whole realm of the Language Arts; letter-sound relationships should be taught, in part,
through teacher modeling; graphophonic knowledge should be learned through active involvement with real texts; knowledge about phonics should be learned through many different kinds of experiences in reading and writing (Freppon & Dahl, 1991, pp. 195-196). As the phonics controversy continues to be an explosive topic in education, it is up to the successes of well-trained whole-language teachers to sway those critics who would continue to attempt to force students to endure endless, fruitless, non-contextual phonics skills training.
Bibliography


