

Some Issues in Phonics Instruction.

Hempenstall, K. (No date). Some issues in phonics instruction. Education News 26/2/2001. [On-line]. Available: http://www.educationnews.org/some_issues_in_phonics_instructi.htm

There are essentially two approaches to teaching phonics that influence what is taught: implicit and explicit phonics instruction.

What is the difference? In an explicit (synthetic) program, students will learn the associations between the letters and their sounds. This may comprise showing students the graphemes and teaching them the sounds that correspond to them, as in "This letter you are looking at makes the sound sssss". Alternatively, some teachers prefer teaching students single sounds first, and then later introducing the visual cue (the grapheme) for the sound, as in "You know the mmmm sound we've been practising, well here's the letter used in writing that tells us to make that sound". In an explicit program, the processes of blending (What word do these sounds make when we put them together mmm-aaa-nnn?), and segmenting ("Sound out this word for me") are also taught. It is of little value knowing what are the building blocks of our language's structure if one does not know how to put those blocks together appropriately to allow written communication, or to separate them to enable decoding of a letter grouping. After letter-sound correspondence has been taught, phonograms (such as: er, ir, ur, wor, ear, sh, ee, th) are introduced, and more complex words can be introduced into reading activities. In conjunction with this approach "controlled vocabulary" stories may be used - books using only words decodable using the students' current knowledge base.

The term "synthetic" is often used synonymously with "explicit" because it implies the synthesis (or building up) of phonic skills from their smallest unit (graphemes). Similarly, "analytic" is used synonymously with "implicit" because it signifies the analysis (breaking down) of the whole word to its parts (an analysis only necessary when a child cannot read it as a whole word). In implicit phonics, students are expected to absorb or induce the required information from the word's structure, merely from presentation of similar sounding words ("The sound you want occurs in these words: mad, maple, moon." The words may be pointed to or spoken by the teacher, but the sounds in isolation from words are never presented to children). A major problem with implicit phonics methods is the erroneous assumption that all students will already have the fairly sophisticated phonemic awareness skills needed to enable the comparison of sounds within the various words.

There are also two approaches to the instructional process (as opposed to the instructional content) - "systematic" and "incidental". In systematic instruction, there will be attention to the detail of the teaching process. Instruction will usually be teacher-directed, based on a logical analysis of the skills required and their sequence. At its most systematic, it will probably involve massed and spaced practice of those skills (sometimes in isolation), corrective feedback of errors, and continuous evaluation of progress.

Incidental (or discovery, or embedded) instruction shifts the responsibility for making use of phonic cues from the teacher to the student. It assumes that students will develop a self-sustaining, natural, unique reading style that integrates the use of contextual and grapho-phonetic cues, without the possibly disabling influence (it is argued) of systematic instruction.

This approach is most likely to be found of late in whole language classrooms as their supporters deny any previously disdain for phonics. The new cry is "But we've never disparaged phonics, only the teaching of it outside of the context of stories". Unfortunately, even if one accepted this sophism, such a restriction precludes many students from deriving benefit from phonics.

Purist whole language teachers have never felt comfortable with demonstrating to students precisely how words are composed of sounds. They were exhorted in their training not to examine words at other than the level of their meaning. Teachers who acceded to this stricture took meaning-centredness to extremes, unfortunately producing an example of ideology precluding effectiveness. Other whole language teachers who could not accept such an extreme view, would sneak some references to alliteration or rhyming words during a story. "Did you notice that "cat" and "mat" end with the same sound?"

Sadly, for struggling students such well-intentioned clues are neither explicit enough, nor are they likely to occur with sufficient frequency to have any beneficial impact. This approach is sometimes called embedded phonics because teachers are restricted to using only the opportunities for intra-word teaching provided within any given story.

Many students have great difficulty in appreciating individual sound-spelling relationships if their only opportunities to master them occur at variable intervals, and solely within a story context. In a story,

the primary focus is quite properly on story comprehension not word structure, so restricting the opportunity to focus on word parts to such activities is both distracting and ineffective.

At-risk students require careful systematic instruction in individual letter-sound correspondences, and developing them requires teachers to explicitly isolate the phoneme from the word (This letter says "mmm"). At-risk students also need ample practice of these sounds in isolation from stories if they are to build a memory of each sound-symbol relationship.

It is necessary to teach at least 40-50 such associations, and to provide stories in which these associations are beneficial. Herein lies another problem for whole language purists. A fascination with *authentic* texts precludes the use of controlled vocabulary stories - the very ones that will build students' confidence in the decoding strategies which they have been taught. Flooding children with an uncontrolled array of words does no favours for struggling students; it forces them to guess from context (a strategy promoted by their whole language teachers). Even good readers find that contextual guessing is accurate on only one occasion for every four times it is attempted. Guessing is a hallmark of poor readers - good readers abandon it as moribund. The end result is that struggling students are burdened with a limp strategy - one that fails them regularly when they most need it.

The "We do phonics in context" model implies that it is valuable to mix sound-spelling instruction with comprehension activities. In the early years of schooling, students are vastly superior in oral comprehension compared to written comprehension. Children enter school knowing thousands of words, but it is some years before their written vocabulary matches their oral lexicon. Both written and oral language development are appropriate emphases for instruction, but given the wide initial disparity, it is more effective to address them separately. Thus, the use of teacher-read stories is an appropriate vehicle for oral comprehension, and allows for a level of language complexity which students could not attain if the stories were presented in written form.

The relatively undeveloped decoding skill requires simpler text to allow the development of the competence and confidence needed for the ultimate objective - equivalent oral/written comprehension proficiency. Those arguing that the two are inextricable have confused process with objective, and compromise the development of both oral and written language.

In the USA, the National Institute of Child Health and Human Development has synthesised the work of more than one hundred key researchers in fourteen different centres, and the findings are remarkably coherent. Children who lack an awareness of the sound structure of words become poor readers. This deficit does not resolve with age, unless intervention incorporating systematic, structured teaching occurs. Of children who struggle in Year One, 90% will still be struggling in Year Four. Of children categorised as reading disabled in Year Three, 75% of them will still be disabled in Year Nine. Children who are poor readers make greater use of contextual cues than do good readers. Good readers make greater use of the graphophonic cuing system; they read fluently and accurately, without predicting or re-reading.

Teaching children about the sound structure of our oral and written language reduces the level of reading failure; and teaching students how to blend sounds to create words, and to segment words into their individual component sounds are important instructional features of a good reading program. These skills do not arise naturally for many students, after all, writing is not natural - merely an invention. For many students, an understanding of the written code requires careful explanation. Simply immersing students in interesting stories, or providing the occasional and unsystematic clue from time to time does not constitute effective teaching for them.

Scientific research has clearly demonstrated that explicit phonics instruction is the single most effective approach for all students. Obviously, many students can learn to read without such instruction; however, it is not only the at-risk students who achieve greater success under a phonics regime - so do those in the average and below reading groups (those who do OK, but not really well). A large scale study by Barbara Foorman and colleagues from the University of Houston found that explicit, systematic phonics was by far the most effective approach. It was also more effective in reducing the occurrence of reading problems than any of the one-on-one tutorial programs that were evaluated, including Reading Recovery. Her findings are consistent - both with currently accepted theories of reading development and instruction, and with other empirical research emphasising student outcome measures.

There remain numerous issues to be resolved concerning explicit phonics instruction. It's not clear what is the optimum number of letter-sound correspondences necessary in a teaching program to enable all children to develop the alphabetic principle. Does one need to teach all the possible combinations? Or,

what is the minimum number of taught correspondences that will induce in children generalisation to untaught combinations? Do all children need to be taught the same size group of correspondences? Not only is there concern about which correspondences should be included, but also in what order should they occur? At what rate should they be introduced? What level of student mastery should be expected? What proportion of allocated time should be employed in teacher-led instruction, reading words in isolation, words in context, writing, worksheets?

The principle of salience offers some guidance. It suggests that humans learn best that which has immediate importance to them. Thus one would consider what combinations will occur in the print with which the student of a given age is to be soon confronted. If this utilitarian principle is adopted, then it is also necessary to make a decision for either decodable or uncontrolled text. If decodable text is the predominant literature for that year then the content and sequence can be readily managed, as the text is chosen or developed to support the newly acquired combinations. If uncontrolled text is adopted- "In the very first reading books in first grade, ... the child is exposed to between 300 and 600 different words in running text" (Juel, 1993). Thus, the decision may be based upon the relative frequency of occurrence of letter combinations in such beginning texts. Even so, great variations may occur. Grossen and Carnine (1990) identified one basal reading program that attempted to teach 200 letter-sound correspondences, many of which occurred with very low frequency. Burmeister (1975) argued for 55 useful generalisations. Some (Chall, 1996) suggest that as long as the introduction to reading has an early and systematic phonics emphasis, the precise details make little difference to the student outcomes. An alternative view of such uncertainties suggests the need for finer grained research questions to assess the relative effectiveness of the elements of interventions rather than only comparing whole interventions one against the other.

In the Direct Instruction approach (e.g., Reading Mastery), the decision rules are based upon frequency of occurrence of letter combinations in beginning texts, and upon the similarity of the letter combinations. A letter combination is presented if it is consistent more than 50% of the time, and if it appears in 10 or more common words. High frequency combinations are introduced before those of lower frequency. Letter combinations with confusably similar sounds (such as ch and sh) are separated in time by other combinations. Different combinations that produce the same sound (ee, ea) need not be separated.

It is possible to teach inductively or deductively. One can teach a set of correspondences (this combination ea makes the sound eee) one-by-one (inductive). One can also teach verbalised rules (g can say /j/ only if it is followed by e, i, or y) with the view of promoting generalisation (deductive). The critical issue in either case is that sufficient examples are introduced to induce in children the conceptual understanding that words are constructed according to a system - their construction is not capricious. Additionally, such teaching focusses children's attention on spelling patterns, thus promoting subsequent visual-pattern recognition. Some (Clymer, 1963) suggest that the proportion of occurrences (percentage utility) in which the sound is consistent across words should determine the usefulness of teaching a phonic rule. Under this principle, the CVCe words (like, made, hope) in which the long sound is evident in about 2/3 of all cases is probably worth teaching. Groff (1986) argued that a rule has utility if it produces an approximation of the pronunciation sufficient to evoke the correct word. Others (Adams, 1990) argue that the rules themselves are only valuable to the extent that they promote pattern recognition - they are not often used by children in their taught form to make decisions about pronunciation. In this view, rules may be pointed out but children not asked to remember or recite them. Still others argue against verbalised rules entirely.

Here are some other questions that have been raised before (Adams, 1990) and which would be productive foci for a great deal of future research.

- Should initial reading vocabulary be selected on the basis of the frequency and familiarity of the words in the childrens' oral language or on the basis of the frequency and regularity of their spelling patterns?
- In what order should different levels of literacy skills be developed?
- Should the students be thoroughly versed in letter-to-sound correspondences before words are presented?
- Should the program begin with the presentation of some words before getting into phonics?
- Should meaningful, connected text be used from the start or saved until the children have achieved some level of word reading?
- How should multiple letter-sound correspondences (more than one sound for a letter) be handled?
- Should development of writing or spelling skills be initiated before, at the same time as, or after initial reading instruction?
- What fonts should be used for initial reading instruction?
- Should initial instruction be exclusively conducted with uppercase letters or lowercase letters?
- Are color and graphic aids, diacritical marks, and modified alphabets helpful, harmful, or neither?
- Should one teach letter names, or avoid using them altogether?
- In what order should the sounds of letters and spelling patterns be introduced?
- Should common consonants be introduced before vowels? Should vowels be introduced before consonants?
- Should the introduction of consonants and vowels be intermixed?
- Should short vowels be taught before long ones - or the other way around?
- For letters or spelling patterns that have more than one pronunciation, should alternative sounds be presented closely in time or considerably separated?
- Should letters that are visually easy to confuse be presented together to allow contrasts and comparisons or separated in time to minimize interference?
- Should verbalized rules (e.g. "When two vowels go walking the first does the talking"; "g can say/j/ only if it is followed by e, i, or y", "every syllable in English must contain at least one vowel"; "a diphthong is two vowels together, both speaking, making a compound sound") be emphasized or eschewed?

Adams, M. J. (1990). *Beginning to read: Thinking & learning about print*. Cambridge, MA: MIT Press.

Burmeister, L. (1975). *Words - from print to meaning*. Reading, MA: Assison Wesley.

Carnine, D., & Silbert, J. (1979). *Direct Instruction: Reading*. Columbus, OH: Merrill.

Chall, J.S. (1996). *Learning to read: The great debate* (revised, with a new forward). New York: McGraw Hill.

Foorman, B., Francis, D., Beeler, T., Winikates, D., & Fletcher, J. (1997). Early interventions for children with reading problems: Study designs and preliminary findings. *Learning Disabilities: A Multidisciplinary Journal*, 8, 63-71.

Groff, P. (1986). The maturing of phonics instruction. *The Reading Teacher*, 39(9), 919-923.

Grossen, B., & Carnine, D. (1990). Translating research on initial reading instruction into classroom practice. *Interchange*, 21(4), 15-23.

Phonemic Awareness Ain't Phonics

Phonics means:

- a) the relationship between sounds and their symbols,**
- b) the methods of instruction used to teach those relationships**
- c) the mental activity of using the sound-symbol relationship to "read through" a new word**

Phoneme awareness is a necessary but not sufficient condition for learning to read an alphabetic writing system. Complicating the issue is the problem that English is not a transparent orthography:

English and French are more complex than Italian. English has 1,120 ways of representing 40 sounds, whereas there are only 25 sounds in Italian and they are represented in 33 combinations of letters. The disorder is more common in the United States than in Italy.

In Any Language, Dyslexia. (2001, 19 March). The Washington Post. [On-Line]. Available:

<http://www.washingtonpost.com/ac2/wp-dyn/A23845-2001Mar18?language=printer>

Phonics Ain't Phonics Neither

Explicit (synthetic) phonics: Builds up from part to whole; implicit phonics breaks down from whole to part. If whole words are introduced before short vowel sounds, it's not a systematic phonics program.

Implicit (analytic) phonics: "The sound you want occurs in these words: mad, maple, moon" This implies students can compare the sounds in words, that is have already established phonemic awareness.

Synonyms for implicit (analytic) phonics: "systematic contextualized phonics" - "balanced" - "embedded phonics" - "integrated language arts" - "phonics in context" - "eclectic approach" - "onset-rime approach"

Phonics Instruction

Phonics instruction is a way of teaching reading that stresses the acquisition of letter-sound correspondences and their use in reading and spelling. The primary focus of phonics instruction is to help beginning readers understand how letters are linked to sounds (phonemes) to form letter-sound correspondences and spelling patterns and to help them learn how to apply this knowledge in their reading. Phonics instruction may be provided systematically or incidentally. The hallmark of a systematic phonics approach or program is that a sequential set of phonics elements is delineated and these elements are taught along a dimension of explicitness depending on the type of phonics method employed. Conversely, with incidental phonics instruction, the teacher does not follow a planned sequence of phonics elements to guide instruction but highlights particular elements opportunistically when they appear in text.

April 2000. Findings and Determinations of the **National Reading Panel:**

<http://www.nichd.nih.gov/publications/nrp/findings.htm>

What's the problem with Implicit Phonics?

It proves less effective than explicit phonics, and especially so for at-risk students. While more able students can induce the phonic strategies needed, about 30-50% really need to have the relationships carefully explained, and provided with multiple opportunities for practice.

This example highlights the problems for those who never grasp the alphabetic nature of our written language. Betty Price, Director of Professional Reading Services reports that she was hired to tutor a fully licensed pharmacist who was unable to discern the difference between "chlorpromamide" (which lowers blood sugar) and "chlorpromazine" (which is an antipsychotic)! They look similar if the initial letters are your primary cue.

In Systematic phonics instruction, the term Systematic is about the delivery rather than the content

There will be attention to the detail of the teaching process.

- teacher-directed,
- based on an analysis of the skills required and their sequence.
- massed and spaced practice of those skills (sometimes in isolation),
- corrective feedback of errors, and
- continuous evaluation of progress.

Incidental phonics instruction -

Shifts the responsibility for making use of phonic cues from the teacher to the student. It assumes that students will develop a *self-sustaining, natural, unique reading style* that integrates the use of *contextual and grapho-phonetic cues*, without the postulated disabling influence of systematic instruction.

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Explicit phonics

In explicit phonics instruction, the sounds associated with the letters are identified in isolation and then "blended" together to form words. During a typical explicit phonics lesson, the children will be asked to

produce the sounds of the letters that appear in isolation and in words. A critical step in explicit phonics instruction is blending the isolated sounds of letters to produce words. (1)

Systematic phonics

In systematic code instruction, decodable books are used that are aligned with the sound-symbol associations taught in the lesson. These books, created to make independent reading possible for a beginner, are a device to provide practice reading words that have specific spelling patterns or letter-sound correspondences and to encourage sounding words out. (2)

Decodable Text

Decodable text is composed of words that use the sound-spelling correspondences the children have learned to that point and a limited number of sight words that have been systematically taught. As the children learn more sound-spelling correspondences, the texts become more sophisticated in meaning. (3)

"Research asserts that most children benefit from direct instruction in decoding, complemented by practice with simply written decodable stories. Further, for some children this sort of systematic approach is critical. Stories should 'fit' the child's reading level. Beginning readers should be able to read easily 90 percent or more of the words in a story".

Federal Academics 2000 (Public Law 103-227), "First Things First"

"Thus phonological training that is integrated with phonics training may be as effective as phonological training conducted separately from phonics training."

Hart, T. M., Berninger, V. M., & Abbott, R. D. (1997). Comparison of teaching single or multiple orthographic-phonological connections for word recognition and spelling: Implications for instructional consultation. *School Psychology Review*, 26(2), 279-297.

What might be taught in an explicit phonics program?

The Orton Phonograms

b, c, d, f, g, h, j, k, l, m, n, p, qu, r, s, t, v, w, x, y, z a, e, i, o, u er, ir, ur, wor, ear sh, th, ee, ay/ai ow/ou aw/au ew/ui oy/oi oo, ch, ng, ea, ar, ck, ed, or, wh, oa, ey, eigh, ei, igh, ie, kn, gn, wr, ph, dge, oe, tch, ti, si, ci, ough

Since many of the above 70 phonograms represent multiple sounds, there are 110 combinations that are taught together with their applications for spelling; you will note there are no blends that retain their own sound value even after being combined. These are better taught during dictated spelling lessons otherwise they may destroy auditory discrimination and processing skills needed for correct spelling and fluent reading. Primary children learn these 110 combinations quite easily in the first nine weeks of school. (The Riggs Institute).

Scientific research has clearly demonstrated that explicit phonics instruction is the single most effective approach for all students. Obviously, many students can learn to read without such instruction; however, it is not only the at-risk students who achieve greater success under a phonics regime - so do those in the average and below reading groups (those who do OK, but not really well). A large scale 1997 study by Barbara Foorman from the University of Houston found that explicit, systematic phonics was by far the most effective approach. It was also more effective in reducing the occurrence of reading problems than any of the one-on-one tutorial programs that were evaluated, including Reading Recovery. Her findings are consistent - both with currently accepted theories of reading development and instruction, and with other empirical research emphasising student outcome measures.