Systematic, not "balanced", instruction

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http://speldnsw.org.au/event/dr-louisa-moats-language-learning-and-literacy/

The accomplished researcher Susan Brady, in reviewing evidence regarding the merits of phonics instruction since the National Reading Panel (NRP), concluded that systematic, explicit, synthetic approaches are most strongly supported by past and current research, even though the NRP stopped short of delineating what kind of phonics would work best for novice or struggling readers (Brady, 2011).

Explicit, systematic, code-based instruction is more effective with novice or poorly skilled readers than implicit, incidental, less structured methods (Archer & Hughes, 2011; Chapman & Tunmer, 2011; Connor, Morrison, & Katch, 2004; Hattie, 2011; Rosenshine, 2012). Nevertheless, confusion reigns regarding the differences among these approaches. Further, teachers naturally prefer literature-based, non-systematic, student-centered, implicit teaching of literacy (e.g., Cunningham, 2009) unless they, too, are taught explicitly about what to do with whom, when, how, and why. This article illustrates the crucial differences in approaches and offers concluding thoughts about strengthening teacher education.

Explicit phonics instruction

Explicit means fully and clearly defined. Information is put out in the open, explicated and demystified.

Example of explicit instruction

"Today we will study a new way to spell words that have a long vowel sound. This pattern is called the long vowel, silent e pattern, or VCe."

- "When a long vowel sound is spelled with one vowel letter, a single consonant, and an e at the end it is called long-vowel, silent e or VCe."

- "Let's count the number of sounds in the word *late.* You finger stretch and say the sounds while I move a counter into each box: /l/ /ā//t/. " Teacher moves counters into 3 boxes as students say each sound.

- Teacher writes the word on the board. “Look at the word *late.* How many letters are there? (4) How many sound boxes? (3)”

- “Since there are four letters and only three sounds, one letter is silent. It’s the final e. Let’s write the letters. What’s the first sound? (/l/) What letter spells /l/? (l)”

- “What’s the second sound? (/ā/) Let’s write a in the second box.”

- “What’s the last sound? (/t/). What letter spells /t/? (t)”

- “There is a silent e at the end of the word. Does it go in a separate box? (no) Why not? (Because it doesn’t represent a sound.) We write a small e in the bottom corner of the box with the letter t.”

- “The e is silent but it has an important job. It works with the a to spell the long a sound.”

Example of non-explicit instruction

- While chorally reading a passage aloud students stop at the word *late* and look up at the teacher for help.

- The teacher asks the students to sound it out. They still struggle. “What’s the first sound?” The students say /l/.

- “/l/ is correct. So what’s the word?”

- Students misread the word *late* as *lat* with a short a sound.

- “Would the word *lat* make sense in this sentence? No, this is about a person who is behind schedule and is not going to arrive on time.”

- The teacher supplies the word. “The word is *late.”*

- The teacher writes the following list of words on the board: late, fate, Kate, mate, Nate.

- “Look at all these words. See how they look alike. They are all part of a word family. Now that you know how to read *late* you can also read all these other words.”

Students don’t guess or intuit what they are supposed to learn. The teacher states what is expected and uses lesson routines to support and ensure learning. Explicit instruction follows an “I do, we do, you do” sequence, or model, lead, practice, practice, practice” until the student has mastered the skill or concept.

Non-explicit instruction, in contrast, asks students to infer or deduce concepts from context, exposure to examples, or prior experience. Exposure to phonics concepts or skills may be haphazard or incidental, or may involve insufficient practice to support automatic application of the skill. For instance, a popular “balanced literacy” activity asks students to work with the letters of an appealing word, such as “rabbit”. The teacher dictates words such as bar, barb, bait, bib, and Brit that can be constructed from the letters in rabbit.

If students have not been explicitly taught each pattern, which in this example include an r-controlled vowel (ar), a vowel team (ai), a short vowel i), and a consonant blend (br), they will guess at the dictated words' letter sequences without conscious understanding of spelling correspondences.

Making Words is fun for students who already can read and spell well; it is insufficient for students mystified by the sound symbol correspondence system.

The contrasts between explicit and non-explicit instruction examples above might occur with explicit and non-explicit teaching of the long a, silent e (or VCe) phonics pattern.

During text reading, if instruction is implicit, students typically are asked to decode words in context on the basis of the meaning of the sentence, passage, or accompanying illustrations. For example, in a context-based, non-explicit approach, students are coached to recognise words using these steps:

1. Think about what would make sense here.
2. Skip the word and read the whole sentence.
3. Look at the pictures for help.
4. Look at the first letter; what sound?
5. Sound out the whole word.

In contrast, an explicit word recognition routine, for use while reading text, follows these steps:

1. Look carefully at the whole word. [Name the letters, if necessary.]
2. Sound it out, left to right.
3. Check it; does the word make sense here?

The first approach conveys to the student that he or she need not know exactly how the correspondences work and that guessing is a productive way of approaching unknown words. The second approach conveys that the student has – or should have – learned the major correspondences that can be relied upon to recover a reasonable pronunciation from the print.

Systematic instruction of phonics

The term "systematic" describes two important characteristics of instruction:

a) teaching that is carried out using step-by-step procedures or routines; and
b) teaching of elements in relation to their place within a coherent knowledge structure – in this case, the system of correspondence between speech and print (Moats, 2010).

Step-by-step teaching routines and consistent lesson formats. Pre-established routines that occur in a general sequence are the procedural building blocks of each lesson.

Routines help both the students and the teacher: students anticipate what is coming in a lesson, and thereby focus on the content of the lesson, and the teacher, in turn, attends more easily to student responses and adjusts the pacing accordingly.

Lessons with established routines are likely to cover all steps necessary to facilitate learning and retention of information.

Systems of explicit teaching often incorporate consistent signals cues, or prompts that elicit student responses. They may include routines for introducing a new concept, such as the following:

- Identify the target phoneme in spoken words.
- Pronounce and describe articulatory features of the phoneme, with mirrors.
- Write letter(s) that are used to represent the phoneme.
- Learn a mnemonic or keyword for the sound-symbol correspondence.
- Decode and spell words with the correspondence.
- Use the words in passage reading and writing.

Having to do with a system. The written code of English is a system in which each part (grapheme, grapheme sequence, syllable, or morpheme) can be categorised, named, explained, and/or understood in relation to a conceptual whole. As with any system, elements can be distinguished from one another, but each part has a place within the knowledge structure. The whole of English orthography is organised by several principles of representation: individual phoneme grapheme correspondences, allowable letter sequences, morphemes or meaningful parts, and the language from which a word originally entered English. Any word can be explained from one or more angles and learned within this larger conceptual framework.

Suppose we were to teach a lesson on the suffix "-ful". What would be a systematic approach to teaching this word part? Any and all of the following concepts could give a student sufficient insight to support memory for the meaning and spelling of this suffix:

- -ful is a suffix morpheme with consistent meaning and spelling.
- -ful is a bound morpheme that marks a word as an adjective, although in some cases it can form a noun denoting quantity (as in spoonful).
- It is related in meaning to the Anglo-Saxon word "full" that does stand alone.
- It is in the category of suffixes that begin with a consonant.
- Because it begins with a consonant, it will not change the spelling of words to which it is added (useful, armful, spoonful, hateful, masterful)

Within the whole system of printed English, -ful is one adjective suffix among many that also need to be taught, Adjectives are words with specific grammatical roles and suffixation is one way of making an adjective. A suffix is one of a class of affixes, probably taught after prefixes and before roots. Affixes are in the class of morphemes. Morphology is one system within language. And so we go.

What are the characteristics of non-systematic programs? Often termed "literature-based," "meaning-based," or "top-down," these programs emphasise book reading (or being read to), written and oral responses to reading, and story writing activities. Phonics and spelling instruction may be embedded in these activities, but letter-sound relationships are taught either in the order of the alphabet or randomly, in favourite words appearing in texts. Any lessons in the alphabetic code that do take place are separate from text reading.

For example, there might be a lesson on "short o" (as in *hot*), followed by reading in a levelled book using the words "from", "of", "son", and "off" – none of which have the sound of /ŏ/ (in North American accents).

Some programs emphasise sight-word memorisation and begin by teaching children from 50 to 100 words as wholes, on flash cards, as if reading were a matter of visual imprinting. Only after learning to read these words do children receive instruction in the alphabetic principle.

Some presumably "balanced" programs add a phonics workbook, but instruction in decoding remains incomplete, incidental, and irrelevant to the rest of the reading lesson. The student gains no fundamental grasp of how the system of representation works.

To summarise, *non-systematic* programs – which may be far more common than truly systematic programs:

- Teach concepts "as they come up" – during reading and writing.
- Do not teach the entire system of sound-symbol correspondences or other aspects of word structure in relation to a complete framework, and also do not explain how sentences, paragraph organisation and text organisation can be understood within language systems.
- Do not follow established teaching routines in each lesson that children and teachers can come to rely on.
- Do not categorise concepts or place them within language systems. For example, igh may be taught in a family of "ight" rhyming words, but students are not taught that it is a low frequency, Old English, three-letter grapheme that is one of at least six spellings for the long vowel /ī/.
- Do not provide practice materials, such as decodable books, that offer children the opportunity to apply what they are learning about letter-sound relationships. The reading materials these programs do provide for children are selected according to other criteria, such as their interest to children or their literary value.

The system of English orthography is complex. Its apparent irregularities and multi-layered representations of spoken language explain to some extent why many students struggle. Given its challenges, English then deserves more logical, comprehensive, informed, systematic teaching than other more transparent languages. Most of all, we know that instructional emphasis on the system and how it works is a key factor in how well students learn (Archer & Hughes, 2011; Brady, 2011; Calhoon & Petscher, 2013).

Is there a role for discovery learning?

Sometimes explicit instruction is caricatured as rote and deadly. On the contrary, it can and should be interesting, engaging, and even entertaining. Alternating formats and introducing novelty, giving students manipulative letter tiles or words on cards, and involving the whole body in word building, for example, will maximise student attention. Some phonics concepts lend themselves to *inductive* teaching, although if well designed, an inductive or "discovery" activity is also teacher-directed.

English has many letter patterns and rule-based spelling conventions that are determined by the position of a grapheme or a phoneme in a word. For example, the word "catch" uses "tch" to spell /ch/, but "ranch" uses ch.

This regular, alternating spelling pattern depends on what immediately precedes the phoneme /ch/. When students are to learn that "tch" is used for /ch/ right after a short vowel, the teacher might present lists of words with "tch" (latch, fetch, botch, pitch) and without "tch"(mulch, birch, bench), ask students to sort them by the spelling for /ch/. Students are then to discover and state what is different about the spellings for /ch/.

The teacher is actively involved in directing students to the target stimulus and giving immediate feedback, followed by practice with words using the spelling pattern.

Discovery lessons tend to take more time and to be much less efficient than explicit, systematic, direct instruction, especially with students who have trouble "getting" what they are supposed to pay attention to. On the other hand, students usually enjoy the hands-on activity of sorting words to find the patterns at work. In so doing, they have attended to the details in print and are more likely to remember specific words used in the lesson. In general, students tend to remember what they understand and have thought about, and well-designed inductive learning activities can be effective in promoting print awareness.

A final word about teacher training

Explicit, systematic phonics instruction is preferable to implicit, incidental instruction. Indeed, the less well a student reads, the more the student depends on the teacher's ability to reveal order and sense in a print system that often seems random and incomprehensible. Therefore, it is given that explicit, systematic instruction requires a knowledgeable teacher who is able to explain concepts, choose examples, give corrective feedback, and provide extended practice.
Moreover, the teacher must follow a scope and sequence of concepts, from simple to complex, and from common to unusual, as necessary. Otherwise, randomness characterises instruction and the alphabetic system is never learned or understood.

Are teachers generally prepared to teach phonics – or indeed, any aspects of language structure – explicitly and systematically? The answer, unfortunately, is that those teachers who have strong preparation are a privileged minority (Moats, in press). There are many reasons why this is the case, including the difficulty of the subject matter, lack of opportunity to learn it in preparation or continuing education, lack of instructional materials and textbooks with accurate information, and general misconceptions about how children learn to read and why it is difficult for so many.

What can be done? Several courses of action are already showing promise in the USA that might be replicated in Australia. First, university professors who collaborate on updating and upgrading the substance of their courses have been shown to produce more effective teachers. The Texas Higher Education Collaborative provides a model for other states and countries to emulate. Second, the International Dyslexia Association (http://eida.org/) has established Knowledge and Practice Standards to guide teacher certification and accreditation of teacher training programs. A certification exam aligned with the IDA standards is under development and will serve as an international marker of basic disciplinary knowledge in literacy instruction. Third, an independent advocacy group, the National Council on Teacher Quality, has succeeded in rating teacher education programs and disseminating the results of those ratings.

While they are not flattering to many institutions, the rankings are raising public awareness of the importance of disciplinary knowledge, the challenge of preparing strong teachers, and how far we have to go before we know that there is a "highly qualified" teacher in every classroom.

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Originally printed in the February 2015 SPELD NSW E-News.