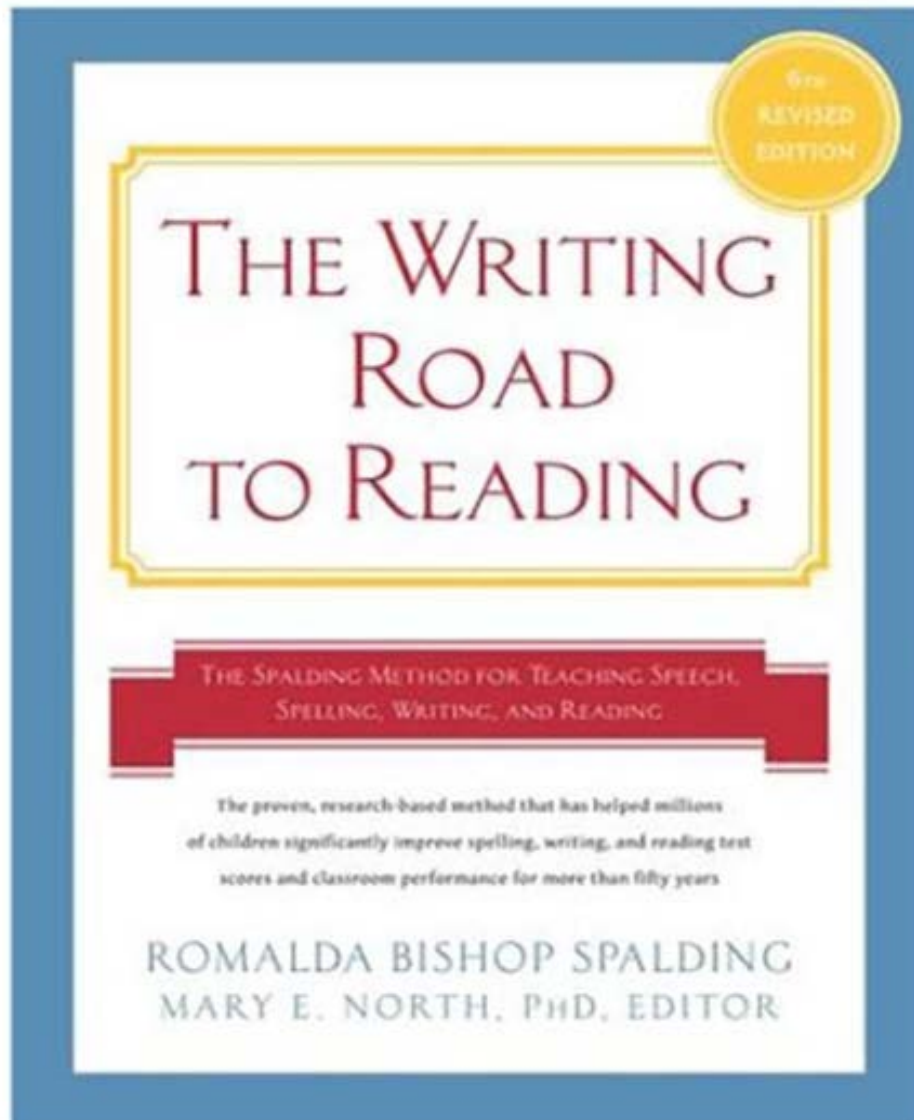


The Research Basis for Spalding's
The Writing Road to Reading
and the Evidence for its Effectiveness



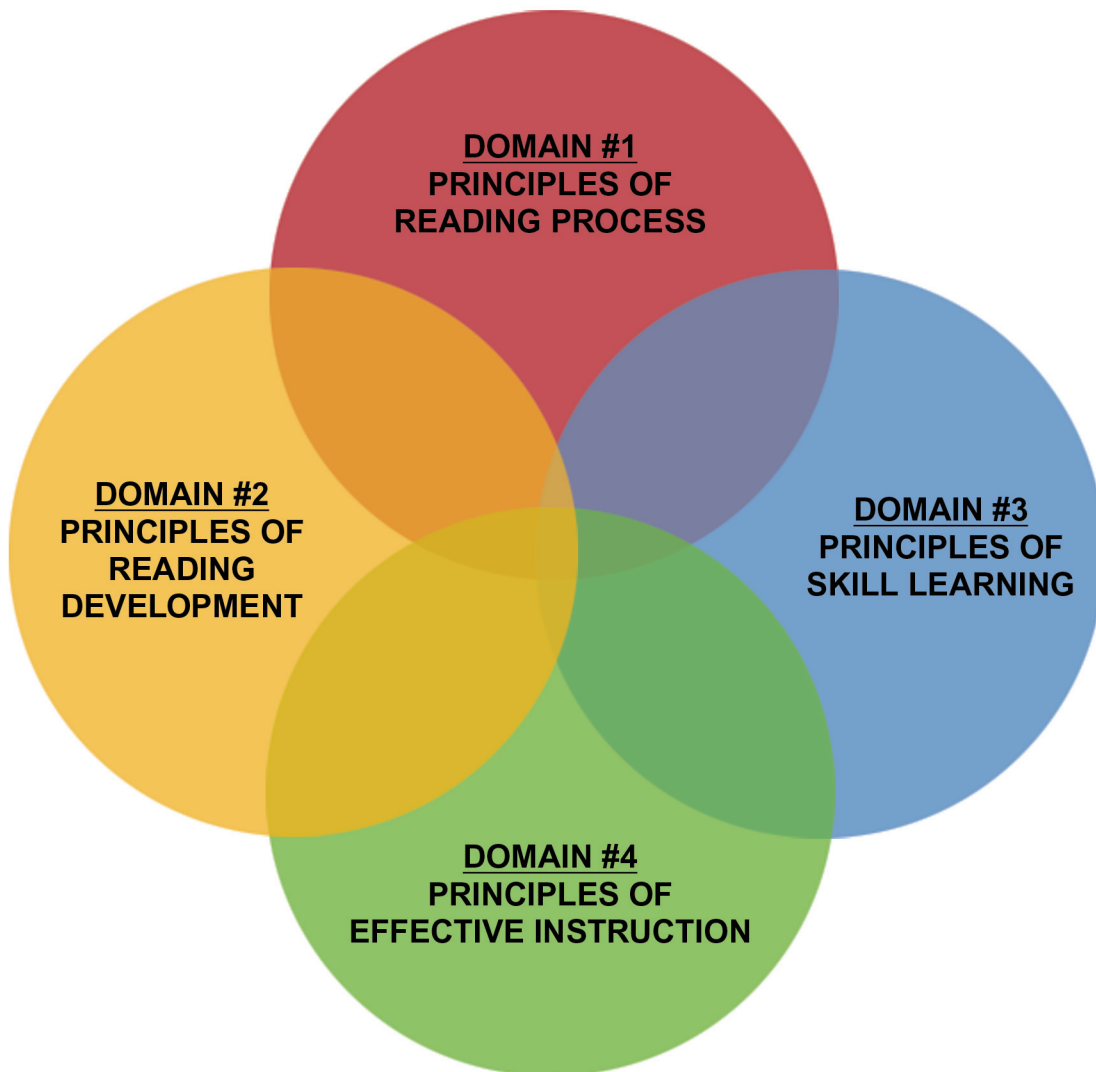
*“Guiding children to a love of reading and learning
for almost half a century.”*

Research incorporated within *The Spalding Method*[®]

The act of reading is a complex process, involving many subprocesses occurring simultaneously or in parallel. Although readers use these subprocesses unconsciously to some degree, research supports systematic and explicit instruction to help all students use them more efficiently.

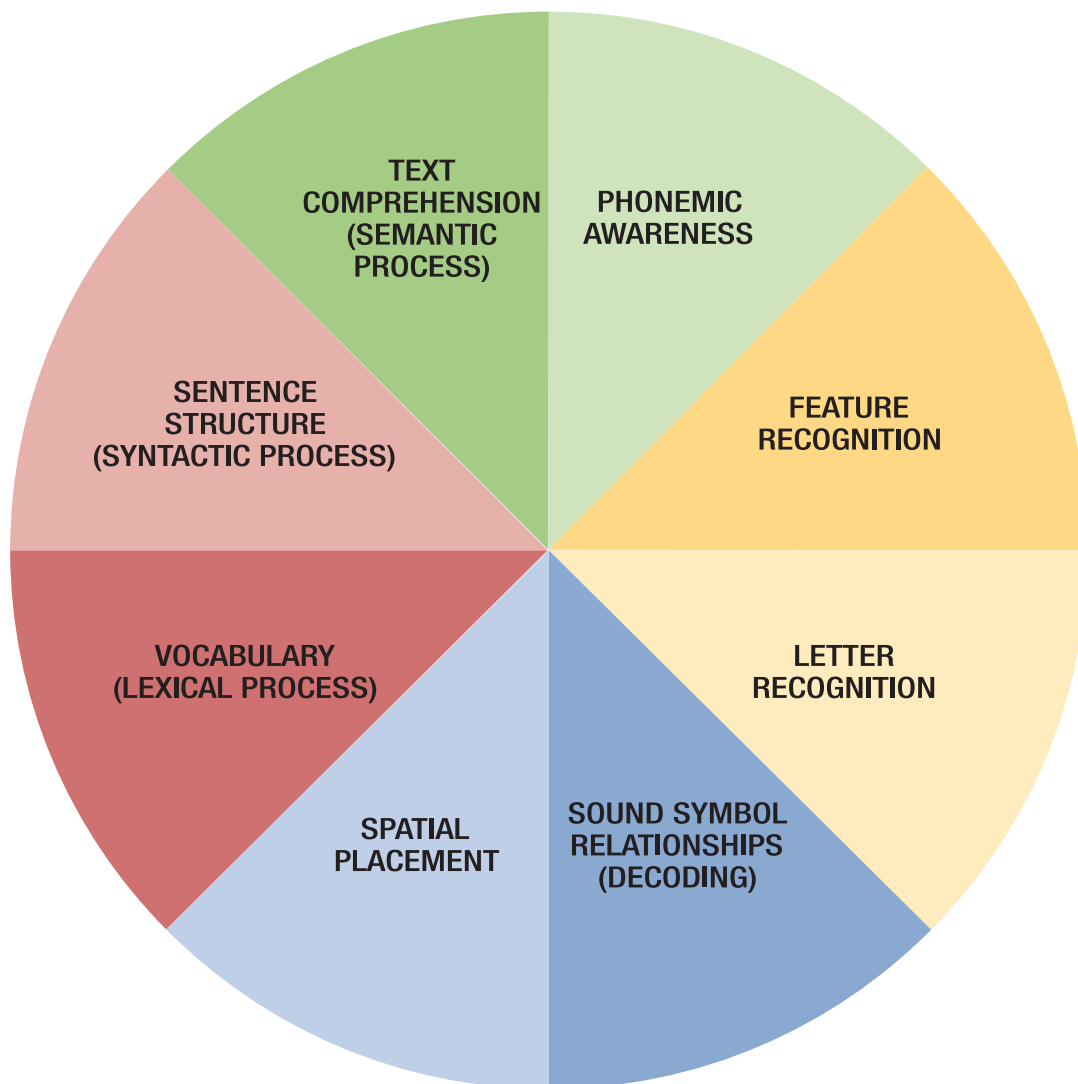
Teachers who are familiar with the research upon which Spalding is based are better able to understand the rationale for the structure and routines of the program. The instructional design of *The Spalding Method* is based upon widely accepted research in the following four domains:

Research domains that form the basis of *The Spalding Method*



Domain #1: Principles of Reading Process

Reading process-related research addressed by *The Spalding Method*



Phonemic Awareness Research

The understanding that spoken words and syllables consist of sequences of elementary speech sounds is a powerful predictor of success in learning to read (Adams 1990). Research findings demonstrate that phonemic awareness is more highly related to learning to read than are tests of general intelligence, reading readiness, and listening comprehension (Stanovich 1986, 1993). Furthermore, it is the most important core and causal factor separating normal and disabled readers (Share and Stanovich 1995); and it is equally important in learning to spell (Ehri and Wilce 1987; Treiman 1985, 1993). Phonemic awareness instruction is strongest when the sounds are presented with the symbols (Ball and Blachman 1991; Byrne and Fielding-Barnsley 1993, 1995; Hatcher, Hulme and Ellis 1994).

Spalding Approach

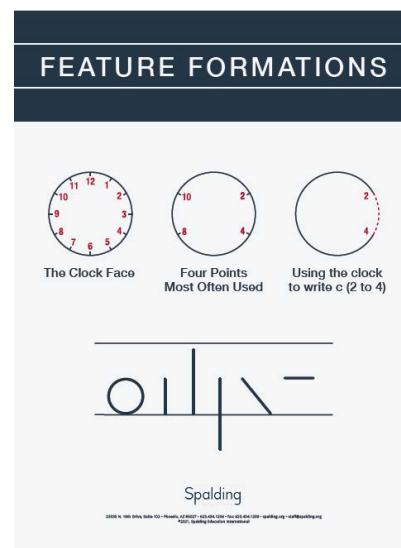


In *The Spalding Method*, children are explicitly taught phoneme manipulation tasks such as isolating, segmenting, and blending phonemes, identifying beginning, ending, and medial sounds, and substituting phonemes in spoken words. Children are also taught the symbols that represent the speech sounds.

Feature Recognition Research

Feature recognition is the ability to distinguish vertical, diagonal and horizontal lines, and curves. Research tells us the parts of the brain specialized for distinguishing lines and curves are activated by looking at print, although the reader may not be conscious of this (Farnham-Diggory 1992). Thus, shapes of letters are not remembered as holistic patterns; rather, the visual system analyzes each letter in accordance with these elementary features. Therefore, to be fluent at recognizing letters, students need to be familiar with the distinctive features of each letter (Adams 1990).

Spalding Approach



The six features used to write the 26 manuscript letters are taught and practiced in *The Spalding Method*.



Letter Recognition Research

Letter recognition is the ability to group features into patterns, automatically recognizing letters as wholes. Previously, poor readers' errors with letter orientation were often considered signs of neurological dysfunction or immaturity. Yet, Adams (1990) notes:

“Letter reversals seem to be merely a symptom of low print knowledge, rather than a cause of reading problems. Moreover, training children to attend to the relevant contrasts between letters has been shown to hasten their ability to recognize and distinguish between them.” (Adams 1990, 65).

The Spalding Approach



In *The Spalding Method*, explicit handwriting instruction in combining features into manuscript letters is followed by practice forming lower-case letters in daily written phonogram reviews. To assist recall, children explain which features are used to form each letter.

Sound-Symbol Relationships (Decoding) Research

Research findings demonstrate that “the critical component of reading that must be taught is the relationship of print to speech.” (Fletcher and Lyon 1998, 57). Early and systematic emphasis on decoding leads to better achievement than late or more haphazard approaches (Adams 1990; Beck and Juel 1995; Chall 1996a). University of Michigan professor Dr. Keith Stanovich asserts that “direct instruction in alphabetic coding facilitates early reading instruction is one of the most well established conclusions in all of behavioral science” (Stanovich 1994, 285).

The Spalding Approach



In *The Spalding Method*, teachers model, then coach children to simultaneously say and write the 70 common sound-symbol relationships (phonograms). From the beginning, teachers provide daily oral and written phonogram (sound-symbol) practice until automaticity is achieved.



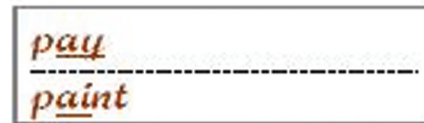
Spatial Placement Research

The spatial placement process enables the reader to recognize or anticipate where particular letters are likely to be located (Farnham-Diggory 1992). This knowledge enhances children's ability to spell and read. For example, they learn that the letter y most frequently occurs at the ends of words.

The Spalding Approach



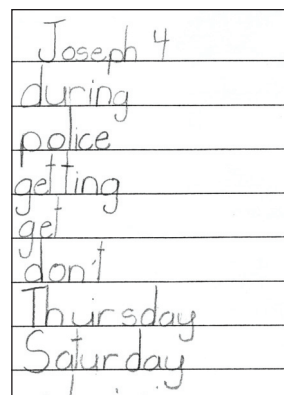
Children are taught to expect certain letters and letter combinations to occur in specific places and to differentiate the “legal” from “illegal” position of letters in print. For example, *ai*, *oi*, and *ui* do not occur at the end of English words.



Vocabulary (Lexical Process) Research

Beginning in infancy, the brain stores the meaning of words, and word parts (prefixes, base words, and suffixes). The lexical process, which includes both understanding of vocabulary and the morphology of language, enables the listener or reader to access those meanings (Farnham-Diggory 1992).

The Spalding Approach



In *The Spalding Method*, high frequency words (the Extended Ayres Words list) are the foundation for vocabulary instruction. Children learn the meanings of these words as well as word parts. Vocabulary is extended through use of quality literature in the daily reading lessons and extensive independent reading.

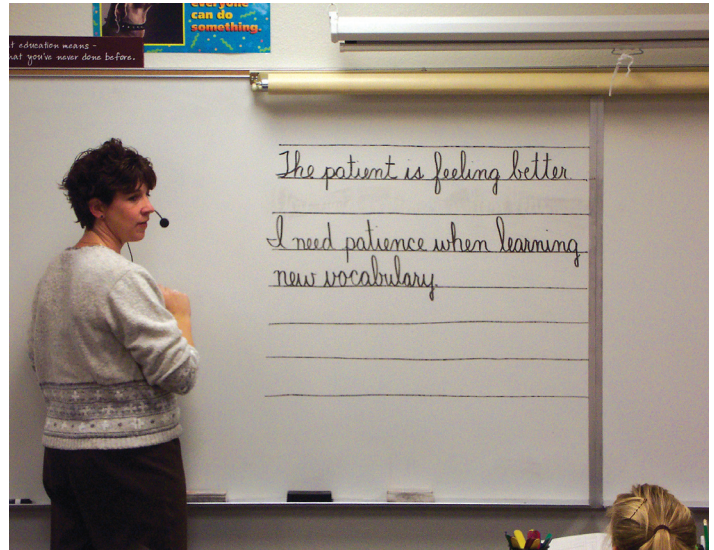


Sentence Structures (Syntactic Process) Research

When children arrive at school, they need direct instruction in the written structure of the English language, including parts of speech, word order, and rules of capitalization, punctuation, and grammar. In her book *Speech to Print*, Dr. Louisa Cook Moats (2000), Director of an Early Intervention NICHD-funded Project, states:

"The teacher who understands language and how children are using it can give clear, accurate, and organized information about sounds, words, and sentences. The teacher who knows language will understand why students say and write the puzzling things that they do and will be able to judge what a particular student knows and needs to know about the printed word." (Moats 2000, 1).

The Spalding Approach



Teachers explain 29 language rules and expand children's knowledge of language structure and conventions in the writing lessons. Master teachers model and coach as children learn the attributes of simple, compound, and complex sentences and parts of speech.



Text Comprehension (Semantic Process) Research

The NRP Report (2000) stated that text comprehension is enhanced when readers:

- Actively connect ideas in print to their prior knowledge and experiences;
- Construct mental representations;
- Use cognitive strategies; and
- Reason strategically when their comprehension breaks down.

The NRP noted that it is helpful for teachers to demonstrate such strategies until the students are able to carry them out independently.

The Spalding Approach



Using *The Spalding Method*, children are explicitly taught five strategies for making meaning out of the text they read.

The five “mental actions” represent conscious processes to be used as tools by children when encountering each new reading experience. They include:

- Monitoring comprehension and the identification of unfamiliar words, phrases, or sentences;
- Making connections both within the text and with prior knowledge while reading;
- Making predictions based upon prior knowledge and details already gathered from text;
- Reformatting of text details to categorize information; and
- Summarizing information to confirm stated or derive implied main ideas.

Children practice these cognitive strategies (mental actions) on narrative, informative, and informative-narrative print.

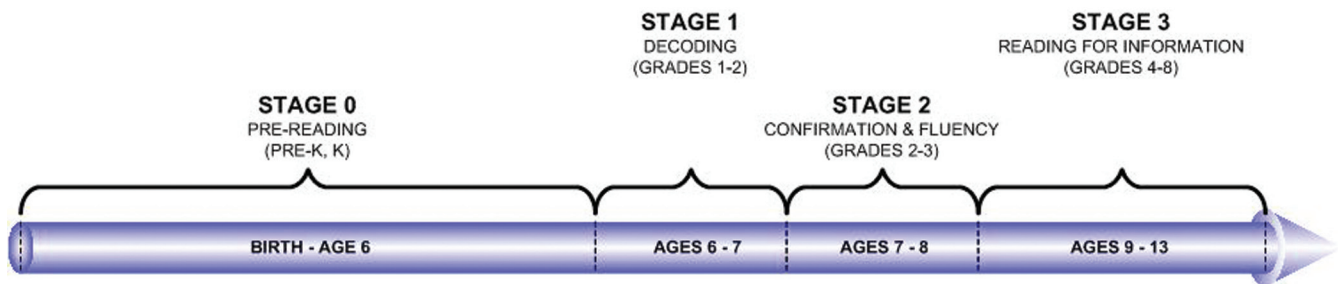


Domain #2: Principles of Reading Development

The late Dr. Jeanne Chall (1983) observed that the facts of beginning reading fit a developmental rather than a single process. This suggests that readers are doing *different* things in relation to printed matter at each successive stage. Analysis of school results, laboratory experiments, and clinical findings indicate that the first task in learning to read is learning the relation between sounds and letters - decoding.

Teachers who know the developmental stages of reading are able to plan lessons that meet students' instructional needs at each stage. Chall identified four stages in the reading development process:

The Chall stages of reading development



Chall notes that the ages or grade levels associated with each stage are *approximations* to identify where the instructional emphasis *typically* takes place. In many schools, Stage 1 begins in kindergarten.



Chall Stage 0: Prereading

From birth to kindergarten, children develop three types of knowledge. First, they learn a basic vocabulary to describe persons, places, things, events, and procedures in their environment. They develop a range of knowledge (facts and concepts) about letters, words, books, and the world around them. During these years, children also develop communication skills. The foundation for all communication is the ability to describe people and events and the facts and concepts they have learned. Students who have traveled, been read to extensively, or have watched educational television, have an advantage. They have an extended vocabulary and quite a range of knowledge upon which to draw. Research has shown that the abilities, knowledge, and skills acquired during the Prereading Stage are substantially related to success with reading at Stage 1.

Spalding Approach



Although the first 700 words in the Extended Ayres list are in the spoken vocabulary of most preschool children, *The Spalding Method* provides procedures for teaching the meaning and usage of unfamiliar words.

In kindergarten, appropriate oral sentence structure is modeled, and the conventions of written sentences are taught. Children's literature is read aloud and discussed to expand vocabulary, knowledge of facts and concepts, and increase communication skills. In this way, disadvantaged children or those who have great difficulty learning language are helped to keep up with classmates.



Chall Stage 1: Decoding

The essential aspect of Stage 1 is learning the relationship between spoken sounds in words and the written symbols representing those sounds. Children learn to identify letters that represent speech sounds, to recognize differences between similar words (bun/bug) and to know when they have made a mistake. Experimental research has indicated that children go through phases in making oral reading errors (Biemiller 1970).

In the first phase, children make word substitutions that are semantically and syntactically correct. Next their errors have a graphic resemblance to the printed word. In the final phase, readers rely mostly on graphic exactness and somewhat on word meaning. Less skilled readers remain in the first phase, relying on word substitutions associated with meaning or a part of speech.

Good readers pass through these stages quickly. They do not skip words or rely on context to decode words; rather, eye movement studies show they see all the letters and read virtually every word (Foorman et al. 1997; Rieben and Perfetti 1991; Vellutino and Scanlon 1991; Vellutino, Scanlon, and Tanzman 1994).

Spalding Approach



Children are directly taught to read and write 70 common phonograms (sounds-symbols) and to blend these phonograms into high frequency words. Daily oral and written phonogram reviews develop sound-symbol mastery. Reading the Extended Ayres list two ways (for spelling and for reading) helps children automatically decode these and other similar words when reading books.

In this stage, the primary focus is on decoding because it must be automatic before the instructional emphasis can shift to reading comprehension. Children cannot pay attention to more than one thing at a time. They cannot pay attention to meaning while struggling to decode words.

Even though decoding is the *primary* emphasis, children also are introduced to the attributes and elements of quality writing, the structure of different types of writing, and the use of comprehension mental actions while listening to stories read aloud. Listening comprehension skills transfer quickly to reading.



Chall Stage 2: Confirmation and Fluency

Chall described Stage 2 as a consolidation of what is learned through reading familiar print and what is already known to the reader. By reading familiar stories, children can concentrate on the print because the content is known to them. This enables them to move beyond accuracy to fluency (automaticity.) During stages 1 and 2, most new information is still learned through listening, observing, and through the muscular (kinesthetic) sense because the instructional emphasis is on *learning* to read. *Emphasis* means that extra time is allotted to the skills that need to be mastered at this stage, however, it does not mean other skills are ignored.

Spalding Approach



Children in Spalding classes are pretested at the beginning of grades 1 and above so teachers know where to begin instruction. Daily oral and written phonogram reviews and spelling dictation procedures, including reading words two ways, develop instant word recognition and fluent reading. Although the primary emphasis is still on mastery of decoding, instant word recognition, and fluency, instructional time is also spent on literary appreciation and listening comprehension.



Chall Stage 3: Reading for Information

In Stages 1 and 2, children learn to connect speech to print. In Stage 3, they learn to connect print to ideas. Thus, the emphasis shifts from *learning to read* to *reading to learn*. At this stage children read for information. Chall pointed out that the importance of prior knowledge becomes apparent at this stage. What a student already knows is the most important element in what he or she is able to learn. In addition, children also need to learn a process for finding information in a paragraph, chapter, or book.

At the beginning of this stage, learning by reading is still less efficient than learning by listening and observing. But by eighth grade, the efficiency of reading should equal and begin to surpass the other means of gaining information.

Spalding Approach

Second-grade and older children are pre-tested at the beginning of each grade to determine where to begin instruction. The *primary* instructional emphasis shifts from listening to reading comprehension.

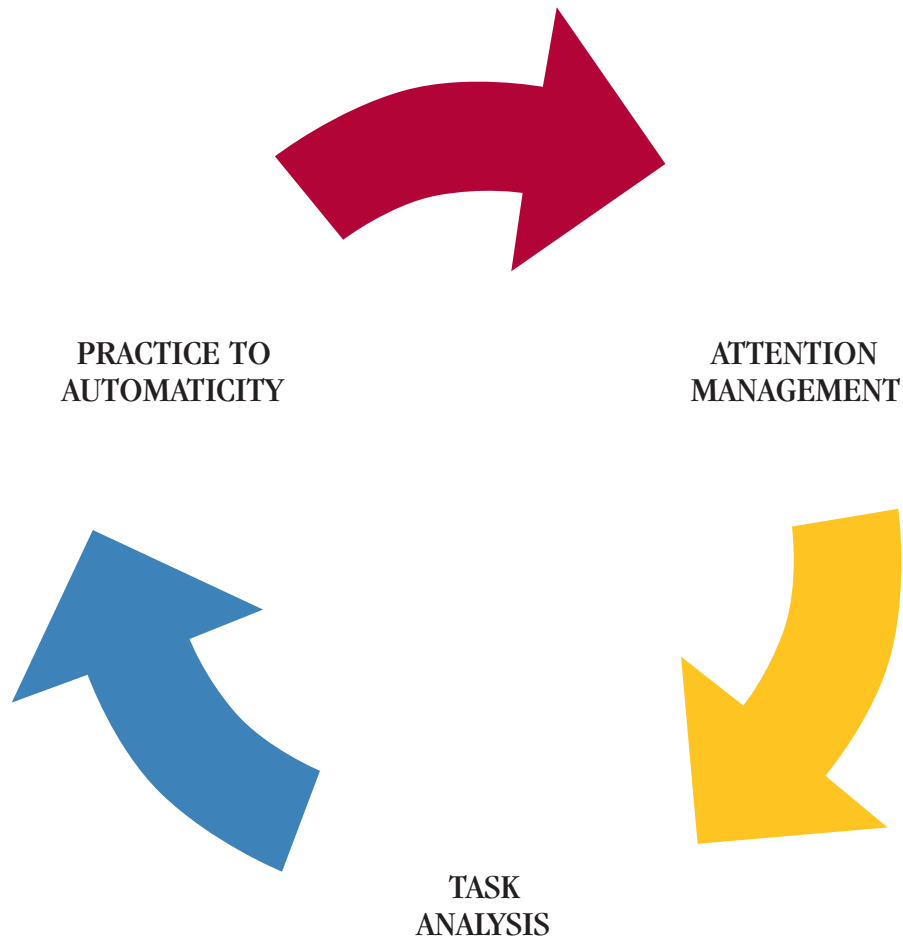
Expository text structure is an important focus at this stage. Children are explicitly taught to use the five mental actions to comprehend text. They also learn basic research skills, e.g., note-taking to identify essential information to determine stated or implied main idea(s), and summarizing text.



Domain #3: Principles of Skill Learning

Over the past hundred years, much research has been devoted to the development of *skill learning*. Scientific literature includes laboratory studies of every type of skill and studies of the development of each in everyday life - from athletes to business entrepreneurs. Farnham-Diggory (1992) notes:

“Skill-acquisition in any field appears to include learning phases of three fundamental types: analysis, practice to the point of automaticity, and attention-management. When you learn a skill, you go in and out of these phases repeatedly... You cannot be in more than one of these learning phases at the same time... Each phase of skill learning has its own logical requirements, and they are not interchangeable.” (Farnham-Diggory 1992, 89).



The following outlines each skill learning phase and how it is incorporated within *The Spalding Method* as explained by Dr. Farnham-Diggory:



The Analytical Phase (Task Analysis)

During the analytical phase, children examine what is involved in the task, clarify, and connect new learning to what is already learned.

Effective teaching divides each new task into its parts. After each subtask has been sequenced, each is then taught directly.

Teachers have children analyze and explain the parts and how they fit together to promote concept and skill mastery.

Spalding Approach



Children are taught to analyze each task. For example, during spelling lessons, they analyze the features of the alphabet letters, the sounds of spoken words, the phonogram to use when there are several possibilities, and the pronunciation of words when more than one pronunciation is possible.

During integrated spelling/writing lessons, children analyze the parts of speech and language rules and concepts. In composition lessons, they analyze their purpose for writing, their choice of a particular type of writing, and their use of the conventions of writing.

During reading lessons, children analyze the attributes of fine literature, the elements of narrative, informative, and informative-narrative writing, and their use of comprehension mental actions. With each of these analysis, children are required to explain their reasoning.



Practice to the Point of Automaticity

Farnham-Diggory noted that basic, or *first-order subskills*, must be automatic so that there is enough working memory available to focus on *second-* or *third-order subskills*. For this to occur, practice must be “well beyond the point where the action feels smooth and efficient” (Farnham-Diggory 1992, 92). Psychologists call this *overlearning*, and it involves actually programming a part of the brain called the *cerebellum* to carry out an action automatically.

Learning a routine to the point of automaticity involves perceptual information, motor actions, and knowledge. One example is the routine of signing one’s name. When first learning to write, he or she tries to remember letters and the rules for making them - jobs handled by other parts of the brain. As name-writing is practiced, features of individual letters are noticed first. With practice, the features are grouped and whole letters are *perceived*. With sufficient practice, a group of letters is perceived as a whole (e.g., one’s first name).

In the beginning, working and kinesthetic memory tell a child’s pencil to move up and around, back and forth; each *motor action* receives a separate command. With practice, all these *motor actions* for writing his or her name are activated with a single command. In the process of automating an activity, control shifts from the cortex to the cerebellum. When name-writing is automated, a child can sign his or her name while talking to a friend; however, it is difficult for him or her to start in the middle or recover if interrupted, and extremely difficult to change one’s signature once fully learned.

At the beginning of learning a new task, practice is short but frequent to achieve accurate performance; however, practice must be *distributed* over time to achieve automaticity (overlearning).

Spalding Approach



SELECTED MCCALL-HARBY
TEST LESSONS IN PRIMARY READING

SELECTED MCCALL-CRABBS
STANDARD TEST LESSONS IN READING
BOOKS A-E

INCLUDES: USER'S GUIDE, PASSAGE ANALYSES, AND ANSWER KEYS

In spelling lessons, children review new phonograms daily until they can say and write them automatically. They read Ayres words two ways until they can read them fluently and spell them accurately.

In integrated spelling/writing lessons, children compose oral (then written) sentences that demonstrate their understanding of *unfamiliar* words. They compose sentences that demonstrate knowledge of the attributes of simple (later compound, complex) sentences. In composition lessons, children write related sentences, then informative-narrative (then informative, finally narrative) paragraphs that include the elements of each type of writing and that demonstrate the attributes of paragraphs (Chapter 2).

In reading lessons, children read aloud daily to develop fluency, identify attributes of quality literature, identify elements of narratives (then informatives, finally informative-narratives), and use and label three (then five) mental actions while listening to or reading *McCall-Harby* and/or *McCall-Crabbs* paragraphs. In Spalding spelling, writing, and reading lessons, children have extensive practice of perceptual, motor, and knowledge routines. Practice is distributed in time over all three lesson types to move beyond accuracy toward automaticity.



Attention Management

When routines become automated, space becomes available in working memory to choose among them. How these choices are made is an important part of learning any skill. Farnham-Diggory (1992) explains:

“In general, attention-management involves the construction of higher-order timesharing programs. . . The attention-management program says, in effect “When this-and-this happens, switch your attention here. When that-and-that happens, switch your attention there.” Learning to construct these higher-order timesharing programs is essential to skill development.” (Farnham-Diggory 1992, 94).

Since attention *can* be focused on only one task at a time, students develop attention control by actively participating in each part of the lesson.

Spalding Approach



Child-teacher interaction takes place in every Spalding lesson. In spelling lessons, children respond in unison during oral and written phonogram reviews and spelling dictation, and all children write phonograms and spelling words. In the integrated spelling/writing lessons, children participate in group discussions about parts of speech and compose oral (then written) sentences. In composition lessons, children discuss related sentences and the writing process. They compose group, then individual paragraphs of the three basic text types. In reading lessons, children discuss attributes and elements of literature, read in unison and independently, answer questions, and use mental actions while listening or reading.

Part of attention management is teaching children to switch focus from one task to another. For example, in spelling lessons, children focus on reading individual sounds or syllables when reading for spelling, and then switch attention to recognizing whole words when reading.

In integrated spelling/writing lessons, children focus on demonstrating the meaning of an unfamiliar word, then switch attention to checking their use of English conventions (e.g., capitalization, punctuation). In composition lessons, they switch attention from composing, to revising for content, and finally, to editing.

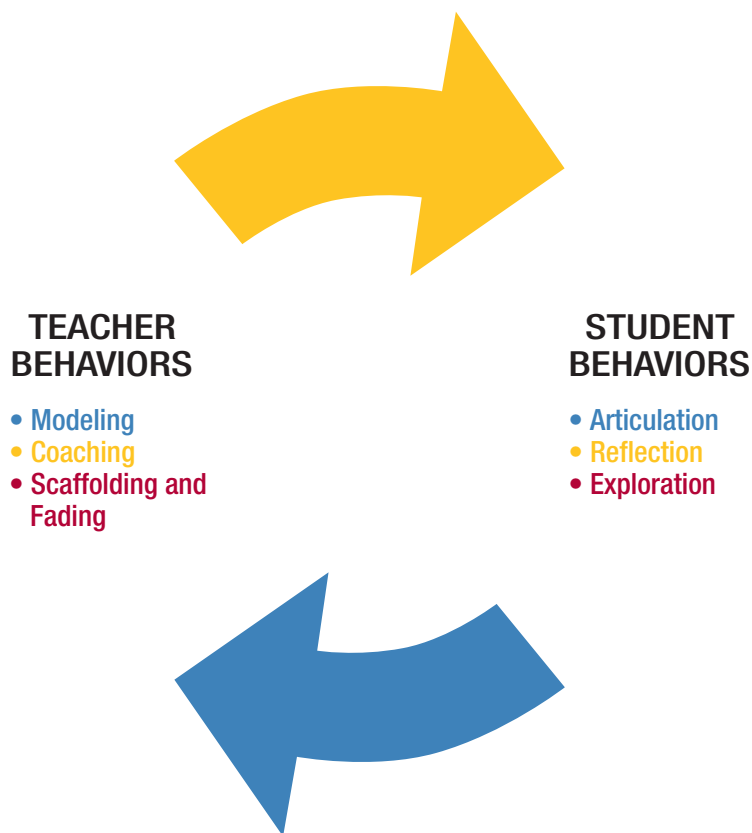
In reading lessons, children switch attention to decoding when they encounter an unfamiliar word, then reread the entire sentence to focus again on comprehension.



Domain #4: Principles of Effective Instruction

A successful model of instruction takes into consideration the nature of learning, how curricula should be organized, how classrooms should be managed, and what constitutes achievement. Dr. Allan Collins and his colleagues developed a *cognitive apprenticeship* model that provides an *integrated* theory of education. This highly effective instructional delivery system involves students in every lesson; makes lessons more meaningful; and develops students' critical thinking skills.

"The...six teaching methods fall roughly into three groups: the first three (modeling, coaching, and scaffolding) are the core of cognitive apprenticeship, designed to help students acquire an integrated set of cognitive and metacognitive skills through processes of observation and of guided and supported practice. The next two (articulation and reflection) are methods designed to help students both to focus their observations of expert problem solving and to gain conscious access to (and control of) their own problem solving strategies. The final method (exploration) is aimed at encouraging learner autonomy not only in carrying out expert problem solving processes, but also in defining or formulating the problems to be solved." (Collins et. al., 1989, p. 481).



The following further details each of the six Collins-based principles of instruction incorporated within *The Spalding Method*:



Modeling

Collins notes that when modeling, an expert carries out a task “so that students can observe and build a conceptual model of the processes that are required to accomplish the task” (Collins et al. 1989, 22). This holds true for tasks that are concrete and observable as well as cognitive tasks such as reasoning, problem solving, knowledge retrieval, and decision-making. It is the teacher’s job to make these tasks visible by thinking out loud.

Spalding Approach



During spelling lessons, teachers model precise formation of features, letters, phonograms, and each word in spelling dictation. During integrated/spelling writing lessons, teachers model composing sentences that demonstrate correct meaning and usage of unfamiliar or difficult spelling words. In composition lessons, teachers model thinking out loud while composing paragraphs of each text type. For literary appreciation lessons, teachers model thinking out loud while identifying and explaining each attribute of literature and the elements of each type of writing. For listening (then reading) comprehension lessons, they model use of five mental actions.



Coaching

As soon as children attempt the task, the transition from modeling to coaching begins. When coaching, the teacher guides, prompts, and provides feedback as the student performs a task, or part of one. The goal is to bring the performance of the novice closer to that of the expert. During the coaching phase, the teacher guides and supervises practice to the point of automaticity. The teacher provides specific feedback, telling students exactly where they departed from the model.

Spalding Approach



After the teacher provides one or more clear, specific models of each new skill, coaching begins.

In spelling lessons, during oral phonogram reviews, teachers say the sounds correctly as soon as a phonogram is mispronounced. During written phonogram reviews, they initially show each phonogram immediately after children write it so errors can be corrected quickly. As children's accuracy improves, teachers use delayed feedback.

In integrated spelling/writing lessons, teachers prompt as children compose oral sentences by giving additional examples and by providing specific, immediate feedback when grammar or word sequence is incorrect. In composition lessons, they guide as children use the writing process.

In reading lessons, teachers guide as children identify examples of descriptive language, help children articulate their reasons for word choices and provide immediate feedback. In text structure lessons, they coach as children determine text type. For conscious use of mental actions, they guide as children think out loud and name the mental action used.



Scaffolding and Fading

In instructional terms, a scaffold is a support system. When scaffolding, the teacher provides support because novice learners are not yet able to independently perform the task.

The difference between coaching and scaffolding is in degree. During the coaching phase, the new skill is not yet in long-term memory so most children need help most of the time. When the majority of children can accurately perform all or part of a skill, teachers fade (withdraw support).

Fading occurs when the majority of children know the content and can apply their knowledge independently. The amount of practice required to reach this point varies significantly.

Spalding Approach



In spelling lessons, teachers can usually fade quickly on single-sound consonants and easy multi-letter phonograms, but they scaffold on multi-sound consonants, vowels, and difficult multi-letter phonograms until mastery is achieved. They fade on easy words and syllables but scaffold when words or syllables have difficult phonograms or more than one spelling is possible.

In integrated spelling/writing lessons, teachers can usually fade quickly with simple sentences but scaffold for compound and complex sentences. In composition lessons, they fade on composing related sentences but scaffold on using the writing process to compose three types of writing.

In reading lessons, teachers can fade as soon as children identify descriptive words accurately, but scaffold all year on difficult concepts. In text structure lessons, they fade as soon as students can identify clear examples, but scaffold all year on more difficult passages. Teachers may fade quite quickly on the first three mental actions, but continue to provide support identifying implied main ideas.



Articulation

Students verbalize the principles, rules, or situations underlying knowledge use. This process can take place through dialogues, critiques, or summaries. It is well-known in learning theory that verbalization aids transfer to new situations. As children put their understanding into words, they learn to generalize more efficiently and to discover principles they did not understand before.

Spalding Approach



In spelling lessons, students explain formation of individual letters and how language rules apply to spelling words. In integrated spelling/writing lessons, they explain the attributes to *simple* (then compound, complex) sentences. In composition lessons, students decide the type of writing and identify the elements to include. In reading lessons, they explain the attributes and elements of literature and the five mental actions.



Reflection

Reflection involves comparing one's own performance on motor tasks, problem solving skills, and thinking processes to those of another. The learner tries to identify key principles and features. This instructional technique frequently utilizes technology that replays students' performance and permits what Collins et. al. (1987) term *abstracted replay*. Children's reflections become more detailed as they become more adept at self-analysis.

Spalding Approach

Spelling Test			Rule Application
got	blow	fall	r.17
miss	sing	nice	you double
tree	block	free	s-f=1
foot	spring	end	at the
sick	sang	lake	end of
feet	river	went	the
ride	song	page	word.
north	winter	lace	
white	plant	back	
spent	cut	stone	

In spelling lessons, children compare their letter formation over time, their handwriting in new and previously written notebook sections, and reflect on how knowing the rules improves their spelling and reading. In writing lessons, they reflect on their daily performance composing sentences and then paragraphs. In reading lessons, children reflect on books they have read and how knowledge of text structure and use of mental actions assists comprehension.



Exploration

Finally, after students have received direct instruction and sufficient practice, they are pushed into applying their new skills to new domains. They must figure out *how* and *when* their skills are relevant, and also must take ownership of the outcomes. Farnham-Diggory stated that:

“Instructionally, a Spalding teacher has been trained to model her own analytical processes; she is trained to coach rather than didactically preach; and she is trained in techniques of scaffolding. The whole curriculum is, in effect, a giant scaffold. It provides a supporting structure for dealing with print. Articulation of principles is consistently demanded of students. They must always explain and justify their reasoning. Reflection is embodied in the marking system - the simple but very effective system for annotating parts of words that exemplify rules... Exploration is assured through the program’s emphasis on literature.” (Farnham-Diggory 1987, 13-14).

Spalding Approach



Children apply decoding skills to reading independently. They apply their knowledge of phonograms, spelling rules, and attributes of sentences to compose sentences and later to compose paragraphs of the three types of texts. They apply the five mental actions to comprehending library books and content area texts.



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