THE LAURITA-TREMBLEY DIAGNOSTIC WORD PROCESSING TEST

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Introduction and Rationale

The Laurita-Trembley Diagnostic Word Processing Test is designed to determine the extent of an individual's ability to process words. Writing words from dictation is the most practical way to determine word processing ability.

This test determines an individual's ability to process words in both the horizontal and vertical dimensions. Horizontal processing involves the ability to accurately discriminate among fifteen vowel forms. Vertical processing involves the ability to work with specific vowel forms at five sequentially organized levels of difficulty. The five levels of difficulty involve the following language elements:

Level I   - vowels and individual consonants
Level II - vowels and blends of consonants
Level III - vowels and consonant digraphs
Level IV - vowels and consonants in combination
            with inflectional endings
Level V   - vowels and consonants in combination
            with prefixes, suffixes and/or
            inflectional endings

The objective of The Laurita-Trembley Diagnostic Word Processing Test is to discover the capacity of the learner to function with spelling (encoding), as an interrelated and integrated series of categorical processes. The correct spelling of individual words by the student on his answer sheet is in no way intended to imply that the learner can, in fact, spell the entire body of words indicated as falling within the framework of the various categories comprising the horizontal and vertical dimensions. Rather, its intended purpose is to indicate the presence of an internalized processing mechanism, one which is functioning sufficiently to allow the learner to graphically express a word, or words, contained within specific categories. At the very least, such a graphic ability indicates a latent and untapped set of processing abilities which, if utilized, may lead to the development of secure categorical spelling skills.

The Word Processing Ability measured by this test encompases the entire range of categorical abilities involved in spelling, from readiness to learn a category of words, to complete mastery in the ability required to spell the words comprising a category. Thus, Word Processing Ability may be defined as the range in a category between those words a student is capable of learning to spell, and those words which the student demonstrates he can already spell.

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Instructional Model For Word Processing Ability

			Stage 1 (ee)	Stage 2 (e)	Stage 3 (a-e)
INDIRECT STRUCTURAL PROCESSING	LEVEL V	Prefixes Suffixes	cheerful 1356	forgetting 998	ungraded 1409
INDIRECT STRUCTURAL PROCESSING	LEVEL IV	Inflected Endings	cheery 148	getting 186	graded 185
DIRECT PHONIC PROCESSING	LEVEL III	Consonant Digraphs	cheer 13	them 29	shade 16
DIRECT PHONIC PROCESSING	LEVEL II	Consonant Blends	fleet 30	spent 76	place 42
DIRECT PHONIC PROCESSING	LEVEL I	Individual Consonants	feet 35	pen 45	lace 87

ABSTRACT → CONCRETE

WORD PROCESSING →

The above Instructional Model shows three of the 15 categories (stages) used in The Laurita-Trembley Diagnostic Word Processing Test. Each stage represents a vowel formation. It is the authors' belief that virtually the entire body of words comprising the English language can be observed to fall into five vertically organized levels of difficulty. The number of words which cannot presently be fitted within the confines of the five difficulty levels are those whose categorical framework is extremely limited, in some cases having as few as a single categorical representative.

When the vowel is kept constant and word categories are developed into groupings sequenced from Level I to Level V, word processing proceeds vertically. When the vowel changes from Stage 1 to Stage 15 at each of the five levels, word processing proceeds horizontally. As words develop vertically, they become more abstract and more complex in their essential structure. Teaching techniques using direct phonic processing are those used most successfully for Levels I through III. Teaching techniques using additive word building and visualization of essential graphic structures are those used most successfully for Levels IV and V.

The authors view all words as being regular (categorical) for purposes of encoding and decoding. Some words may be considered to be more regular than others, in that the related categories into which they fall are large. In The Laurita-Trembley Diagnostic Word Processing Test the most regular categories of words are emphasized since it is from these categories that the bulk of the words used in English are constructed.

For example, there are 79 words in English able to be formed at Level II, Stage 2, a category constructed around the vowel e, as

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in the word end. This total category can be organized for interpretation in many ways, including the following:

    a. as a total category
    b. in groups based upon ending consonant blends
    c. in groups based upon beginning consonant blends

These three categorical variations are presented as follows:

Level II - Stage 2

ending consonant blends

nd	nt	lt	lf	lp	lm	lk	st	misc.
end	bent	belt	elf	help	elm	elk	best	next
bend	cent	felt	self	kelp	helm		nest	text
lend	dent	melt		yelp			rest	left
send	Kent	pelt					test	deft
tend	sent	welt					pest	heft
mend	tent						vest	kept
fend	went						west	wept
								hemp
								tempt
								sect
								desk

beginning consonant blends

l	r	t	m	p	w	misc.
fled	Fred	stem	smell	spell	swell	wren
sled	bred	step	smelt	spend		wreck
bled	Greg	stress		spent		knell
Clem	trek					quell
Glen	fret					quest
fleck	press					
bless	dress					
slept	Brent					
cleft	crept					
blend	crest					

It is clear to the authors of The Laurita-Trembley Diagnostic Word Processing Test that the size of a category is closely related to the difficulty learners experience in establishing satisfactory word processing skills. Therefore, it is their conclusion that the most useful procedures to follow in the development of facility in total word processing skill is through the systematic inculcation of secure and well organized categorical word processing skills.

Purpose of the Test

The Laurita-Trembley Diagnostic Word Processing Test is designed to diagnose the extent of an individual's readiness, or ability, to categorize words for encoding and decoding. This test attempts a diagnosis that contrasts an individual's horizontal word processing ability (vowel discrimination), with his vertical word processing ability (word building with a controlled vowel). The uniqueness of this type of diagnosis lends itself to determining, at the very least, which <u>categories</u> of words a student is ready to learn, and at the other extreme, the minimum <u>number</u> of words a student may be able to learn.

Specifically, the diagnostic examination of a student's spelling ability allows the teacher, or educational therapist, to determine the following dimensions of spelling skill:
(Look at the INDIVIDUAL PROGRESS CHART on page 37)

1. Designation of word categories for initial instruction.(Pre-Test: red areas held in common by group to be taught)
2. Number of words a student is ready to learn to spell.(Pre-Test: Word Count from red area)
3. Increase in readiness for words at higher levels of difficulty.(Post-Test: Vertical Word Processing data)
4. Increase in readiness for vowel discrimination. (Post-Test: Horizontal Word Processing data)
5. Increase in readiness for developing total spelling mastery.(Post-Test: Raw Score gains)
6. Increase in ability at vowel discrimination. (Post-Test: Additional Categories data)
7. Increase in ability at word categorization. - true spelling ability.(Post-Test: Additional Categories data)
8. Number of words a student can potentially spell. (Post-Test: Word Count data)
9. Designation of word categories for future instruction. (Post-Test: blue areas)

Description of the Test

The Laurita-Trembley Diagnostic Word Processing Test consists of 64 words which are dictated to the student. The words are grouped in terms of their internal structure. The first 15 words use the fifteen different long and short vowel constructions with individual consonants. These words test vowel discrimination. The remaining words use a specific and controlled vowel construction to assess a student's proficiency with consonant blends, consonant digraphs, inflectional endings, prefixes and suffixes. The rationale for the test is based upon an instructional model having high program value. Instruction begins with those word categories in which a student has already demonstrated proficiency, thereby insuring a high degree of success. (See model on page 4)

The Laurita-Trembley Word Processing Test has the following components:

    A. Instructor's Manual

    B. Student Answer Sheets

    C. Individual Progress Charts

The Instructor's Manual contains the purpose and description of the test, directions for administering and scoring the test and a section on practical and theoretical considerations relating to test usage.

The Student Answer Sheet (two per student) is designed to minimize feelings of threat a student may have when using the form in the presence of other students or when returning it to the teacher. Although the test may be administered to large groups, individual or small group administration is preferred by the authors. Teacher judgement concerning the most advantageous time to discontinue testing is best exercised when testing is done individually or in small groups.

After the Pre-Test has been administered and scored, the data obtained is transferred to the Individual Progress Chart. The IPC is then used to discover the best instructional placement for a student in terms of demonstrated word processing ability. This chart is designed to assist the teacher in knowing precisely where to start instruction in spelling

After a period of instruction has been administered, and the

Post-Test has been completed, the data obtained is once again transferred to the Individual Progress Chart. Any change in the student's capacity for horizontal and/or vertical word processing will be immediately obvious on the IPC. The information from the IPC indicates the student's <u>assumed minimal competency</u>, that is, the potential number of words an individual can learn to process.

THE LAURITA-TREMBLEY DIAGNOSTIC WORD PROCESSING TEST

Grades 1.9 - 4.9

Directions for Administration

Part I - Horizontal Word Processing (vowel discrimination)

Clear all desks:

1. Hand out answer sheet to each student.

2. Make sure each student has pencil or pen.

3. BOYS AND GIRLS! (pause) I WOULD LIKE TO FIND OUT HOW
   WELL YOU CAN WRITE SOME WORDS. UNFOLD YOUR ANSWER SHEET!
   (pause) CAN YOU FIND THE BALL? (pause for response)
   PUT YOUR FINGER ON THE BALL! (pause) DO YOU SEE THE
   NUMERAL ONE RIGHT NEXT TO THE BALL? (pause) NOW, AFTER
   THE NUMERAL ONE, PLACE THE WORD REEF ON THE LINE PROVIDED.

   The test administrator then checks each paper as he recites
   the appropriate sentence accompanying the word reef and re-
   peats the word a second time. The same procedure is used for
   the remaining fourteen words. The words - AFTER THE NUMERAL
   _____ PLACE THE WORD _____ - should precede each word
   as it is dictated.

Word List

1. reef - The boat crashed on the reef. reef

2. den - A lion lives in a den. den

3. care - Did she take care of the dog? care

4. sag - The chair has a sag in it. sag

5. file - Did he put the paper in the file? file

6. rib - The boy broke his rib. rib

7. rove - To rove is to move from place to place. rove

8. jog - She likes to jog in the park. jog

9. fuse - Is that a good fuse? fuse

10. hum - Can you hum the first line? hum

11. nail - The man needs one more nail. nail

12. leap - Did you see the frog leap? leap

13. pie - Where did he get that pie? pie

14. load - The wagon has a big load on it. load

15. fuel - Is the car out of fuel? fuel

4. NOW WE ARE GOING TO PROCESS WORDS IN A DIFFERENT MANNER. THE

   NEXT GROUP OF WORDS I DICTATE WILL ALL USE THE SHORT VOWEL

   FORM OF THE LETTER i. AS THE TEST PROGRESSES THE WORDS WILL

   BECOME A LITTLE LONGER.

   BOYS AND GIRLS, CAN YOU FIND THE SMALL BOX? (pause) PUT

   YOUR FINGER ON THE BOX! (pause) DO YOU SEE THE NUMERALS

   ONE AND TWO NEXT TO THE BOX? (pause) AFTER THE NUMERALS

   WE ARE GOING TO PLACE TWO WORDS. BOTH HAVE THE LETTER i

   IN THEM. ON THE LINE AFTER THE NUMERAL ONE, PLACE THE

   WORD LID.

   The test administrator then gives the appropriate sentence
   for the word lid and repeats the word a second time. The
   same procedure is used for the word hip.

   AFTER THE NUMERAL TWO, PLACE THE WORD HIP.

Part II - Vertical Word Processing - Direct Phonic Processing

Word List

    A. Level I -   (vowels with individual consonants)

       1. lid - He put the lid on the can.   lid

       2. hip - She fell and broke her hip.   hip

5. BOYS AND GIRLS! (pause) CAN YOU FIND THE LETTER X? (pause) PUT YOUR FINGER ON THE LETTER X. (pause) DO YOU SEE THE SIX BLANK LINES NEXT TO THE X? (pause for response) ON THE BLANK LINE, AFTER THE NUMERAL ONE, PLACE THE WORD CRIB.

The test administrator then gives the appropriate sentence for the word crib and repeats the word a second time. The same procedure is used for the remaining five words. The words - AFTER THE NUMERAL _____ PLACE THE WORD _____ - should precede each word as it is dictated.

Word List

B. Level II - (vowels with blends of consonants)

1. crib - The baby sleeps in a crib. crib

2. rift - The angry girls had a rift. rift

3. sprint- He can sprint very quickly. sprint

4. brisk - The weather was brisk. brisk

5. wing - How did the bird break wing
his wing?

6. quit - The runner quit after two quit
laps.

6. BOYS AND GIRLS! (pause) CAN YOU FIND THE LONG BOX ON YOUR ANSWER SHEET? (pause) PUT YOUR FINGER ON THE BOX. (pause) DO YOU SEE THE FIVE BLANK LINES NEXT TO THE LONG BOX? (pause for response) ON THE BLANK LINE, AFTER THE NUMERAL ONE, PLACE THE WORD <u>CHILL</u>.

The test administrator then gives the appropriate sentence for the word <u>chill</u> and repeats the word a second time. The same procedure is used for the remaining four words. The words - AFTER THE NUMERAL _____ PLACE THE WORD _____ - should precede each word as it is dictated.

<u>Word List</u>

C. Level III - (vowels with consonant digraphs)

1. chill - The ice will <u>chill</u> the melon.   chill

2. swish - I heard the sound <u>swish</u> as the   swish
             ball went past my ear.

3. whip   - Why did he break the boy's <u>whip</u>? whip

4. smith - A <u>smith</u> works with metal.   smith

5. twitch - His eye has a <u>twitch</u>.   twitch

7. BOYS AND GIRLS! (pause) CAN YOU FIND A HOUSE ON YOUR

ANSWER SHEET? (pause) PUT YOUR FINGER ON THE HOUSE!

(pause) DO YOU SEE THE SIX BLANK LINES NEXT TO THE HOUSE?

(pause for response) ON THE BLANK LINE, AFTER THE NUMERAL

ONE, PLACE THE WORD SHADES.

The test administrator then gives the appropriate sentence
for the word shades and repeats the word a second time. The
same procedure is used for the remaining five words The
words - AFTER THE NUMERAL _____ PLACE THE WORD _____ -
should precede the introduction of each dictated word.

Part III - Vertical Word Processing - Indirect Structural
                                                  processing

Word List

A. Level IV - Inflectional Endings - Long Vowel Words

   1. shades   - Did he raise the shades yet?   shades

   2. shading   - The tree is shading the plants. shading

   3. shaded   - The lady was shaded by the tree. shaded

   4. shady   - Dad found a shady spot.   shady

   5. shadier   - That side is shadier in the   shadier
                  afternoon.

   6. shadiest - This side is shadiest in the   shadiest
                  morning.

8. BOYS AND GIRLS! (pause) CAN YOU FIND THE SUN ON YOUR
   ANSWER SHEET? (pause) PUT YOUR FINGER ON THE SUN! (pause)
   DO YOU SEE THE SIX BLANK LINES NEXT TO THE SUN? (pause for
   response) ON THE BLANK LINE, AFTER THE NUMERAL ONE, PLACE
   THE WORD TRIMS.

The test administrator then gives the appropriate sentence
for the word trims and repeats the word a second time. The
same procedure is used for the remaining five words. The
words - AFTER THE NUMERAL _____ PLACE THE WORD _____ -
should precede the introduction of each dictated word.

Word List

B. Level IV - Inflectional Endings - Short Vowel Words

   1. trims   - He trims the tree with popcorn.   trims

   2. trimmer - Did she use the trimmer on her   trimmer
                  hair?

   3. trimmest- She is the trimmest girl in   trimmest
                  the class.

   4. silken   - The old lady used a silken   silken
                  thread for the gown.

   5. picket   - The man painted the picket fence.   picket

   6. trimmed - When was the edge of the lawn   trimmed
                  trimmed?

9. BOYS AND GIRLS! (pause) CAN YOU FIND A MAN ON YOUR

   ANSWER SHEET? (pause) PUT YOUR FINGER ON THE MAN! (pause)

   DO YOU SEE THE ELEVEN BLANK LINES AFTER THE MAN? (pause for

   response) ON THE BLANK LINE, AFTER THE NUMERAL ONE, PLACE

   THE WORD <u>DEGRADING</u>.

The test administrator then gives the appropriate sentence
for the word <u>degrading</u> and repeats the word a second time.
The same procedure is used for the remaining ten words. The
words - AFTER THE NUMERAL _____ PLACE THE WORD _____ -
should precede the introduction of each dictated word.

Word List

C. Level V - Prefixes and Suffixes - Long Vowel Words

1. degrading   - He did a <u>degrading</u> job.   degrading

2. degradedly - He spoke <u>degradedly</u> to the boy. degradedly

3. degradation - She lived a life of <u>degradation</u>. degradation

4. ungraded   - <u>Ungraded</u> schools are a new idea. ungraded

5. retrograde - He acted in a <u>retrograde</u> manner. retrograde

6. gradual   - His pace was very <u>gradual</u>.   gradual

7. gradually   - The water rose <u>gradually</u>.   gradually

8. graduates   - Tom <u>graduates</u> today.   graduates

9. gradualness - Because of the <u>gradualness</u> of   gradualness
                 the hil, we went up.

10. gradient   - What is the <u>gradient</u> between   gradient
                  the two inclines?

11. biodegradable - This detergent is <u>biodegradable</u>.

                                              biodegradable

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10. BOYS AND GIRLS! (pause) CAN YOU FIND A DIAMOND ON YOUR

ANSWER SHEET? (pause) PUT YOUR FINGER ON THE DIAMOND!

(pause) DO YOU SEE THIRTEEN BLANK LINES NEXT TO THE

DIAMOND? (pause for response) ON THE BLANK LINE, AFTER THE

NUMERAL ONE, PLACE THE WORD <u>PREDICT</u>.

The test administrator then gives the appropriate sentence
and repeats the word a second time. The same procedure is
used for the remaining twelve words. The words - AFTER THE
NUMERAL _____ PLACE THE WORD _____ - should precede the
introduction of each dictated word.

<u>Word</u> <u>List</u>

D. Level V - Prefixes and Suffixes - Short Vowel Words

   1. predict   - Whom do you <u>predict</u> will win?   predict

   2. predictive - His statement was <u>predictive</u>.   predictive

   3. predictable- The outcome was <u>predictable</u>.   predictable

   4. predictiveness - The <u>predictiveness</u> of his   predictiveness
                    acts were obvious.

   5. restrict   - Why did they <u>restrict</u> him?   restrict

   6. restrictively- His work was done   restrictively
                 <u>restrictively</u>.

   7. inflict   - Did they <u>inflict</u> that wound?   inflict

   8. convicted - When was he <u>convicted</u>?   convicted

   9. constriction - She had a feeling of   constriction
                 <u>constriction</u>.

10. dictation - Who took the dictation?   dictation

11. dictionary - It isn't in the <u>dictionary</u>.   dictionary

12. picturing - He should try <u>picturing</u>   picturing
              the word.

13. victorious - The army was <u>victorious</u>.   victorious

THE LAURITA-TREMBLEY DIAGNOSTIC WORD PROCESSING TEST

Grades 5.0 - College

Directions for Administration

Part I - Horizontal Word Processing (vowel discrimination)

Clear all desks:

1. Hand out answer sheet to each student.

2. Make sure each stucent has a pencil or pen.

3. TODAY WE ARE GOING TO SEE HOW WELL WE CAN PROCESS WORDS.

   SPELLING WORDS CORRECTLY SHOWS HOW WELL WE CAN DO THIS.

   THE FIRST PART OF TODAY'S ACTIVITY WILL INVOLVE SPELLING

   THREE AND FOUR LETTER WORDS. THIS MAY NOT BE EASY SINCE YOU

   MUST RECALL VOWEL FORMS. UNFOLD YOUR ANSWER SHEET AND FIND

   THE SECTION THAT HAS A CIRCLE. (pause) IN THE SPACE AFTER

   NUMERAL ONE PLACE THE WORD REEF.

   The test administrator then gives the appropriate sentence
   for the word reef and repeats the word a second time. The
   same procedure is used for the remaining fourteen words.

Word List

1. reef   - The boat crashed on the <u>reef</u>.   reef

2. den   - A lion lives in a <u>den</u>.   den

3. care   - Did she take <u>care</u> of the dog?   care

4. sag   - The chair has a <u>sag</u> in it.   sag

5. file   - Did he put the paper in the <u>file</u>?   file

6. rib   - The boy broke his <u>rib</u>.   rib

7. rove   - To <u>rove</u> is to move from place   rove
            to place.

8. jog   - She likes to <u>jog</u> in the park.   jog

9. fuse   - Is that a good <u>fuse</u>?   fuse

10. hum   - Can you <u>hum</u> the first line?   hum

11. nail - The man needs one more <u>nail</u>.   nail

12. leap - Did you see the frog <u>leap</u>?   leap

13. pie   - Where did he get that <u>pie</u>?   pie

14. load - The wagon has a big <u>load</u> on it.   load

15. fuel - Is the car out of <u>fuel</u>?   fuel

4. NOW WE ARE GOING TO PROCESS WORDS IN A DIFFERENT MANNER. THE
NEXT GROUP OF WORDS I DICTATE WILL ALL USE THE SHORT VOWEL
FORM OF THE LETTER i. THE WORDS WE WRITE WILL BECOME LONGER.
FIND THE SECTION ON YOUR ANSWER SHEET THAT HAS A SQUARE.
(pause) NOTICE THAT THERE ARE ONLY TWO WORDS THAT WILL BE
PLACED ON THE LINES IN THIS SECTION. ON THE LINE AFTER THE
NUMERAL ONE, PLACE THE WORD LID.

The test administrator then gives the appropriate sentence
for the word lid and repeats the word a second time. The same
procedure is used for the word hip.

Part II - Vertical Word Processing - Direct Phonic Processing

Word List

    A. Level I - (vowels with individual consonants)

        1. lid   - He put the lid on the can.   lid

        2. hip   - She fell and broke her hip.   hip

5. WE ARE NOW GOING TO USE BLENDS. THESE ARE TWO AND THREE

   CONSONANTS SOUNDED TOGETHER. THE SOUND OF EACH CONSONANT

   CAN BE HEARD. NOW FIND THE SECTION ON YOUR ANSWER SHEET

   THAT HAS AN X NEXT TO THE SIX BLANK LINES. (pause) ON

   THE BLANK LINE, AFTER THE NUMERAL ONE, PLACE THE WORD <u>CRIB</u>.

   The test administrator then gives the appropriate sentence
   for the word <u>crib</u> and repeats the word a second time. The
   same procedure is used for the remaining five words.

<u>Word</u> <u>List</u>

   B. Level II - vowels with blends of consonants

      1. crib - The baby sleeps in a <u>crib</u>.   crib

      2. rift - The angry girls had a <u>rift</u>.   rift

      3. sprint - He can <u>sprint</u> very quickly.   sprint

      4. brisk - The weather was very <u>brisk</u>.   brisk

      5. wing - How did the bird break his <u>wing</u>? wing

      6. quit - The runner <u>quit</u> after two laps. quit

6. WE ARE NOW GOING TO USE DIGRAPHS. THEY ARE COMBINATIONS OF
   CONSONANTS WHICH WHEN PUT TOGETHER MAKE A SOUND DIFFERENT
   THAN EITHER ONE USED ALONE. FIND THE SECTION ON YOUR
   ANSWER SHEET THAT HAS A RECTANGLE OR LONG BOX NEXT TO FIVE
   BLANK LINES. (pause) ON THE BLANK LINE AFTER THE NUMERAL
   ONE, PLACE THE WORD CHILL.

   The test administrator then gives the appropriate sentence
   for the word chill and repeats the word a second time. The
   same procedure is used for the remaining four words.

Word List

   C. Level III - (vowels with consonant digraphs)

   1. chill - The ice will chill the melon.   chill

   2. swish - I heard the sound swish as the   swish
                 ball went past my ear.

   3. whip   - Why did he break the boy's whip? whip

   4. smith - A smith works with metal.   smith

   5. twitch - His eye has a twitch.   twitch

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7. WE ARE NOW GOING TO ADD ENDINGS TO LONG VOWEL WORDS. THE

   NEXT GROUP OF WORDS I DICTATE WILL ALL USE THE LONG VOWEL

   FORM OF THE LETTER <u>a</u>. FIND THE SECTION ON YOUR ANSWER

   SHEET THAT HAS A HOUSE NEXT TO SIX BLANK LINES. (pause)

   ON THE BLANK LINE AFTER THE NUMERAL ONE, PLACE THE WORD

   <u>SHADES</u>.

   The instructor then gives the appropriate sentence for the
   word <u>shades</u> and repeats the word a second time. The same
   procedure is used for the remaining five words.

Part III - Vertical Word Processing - Indirect Structural
                                                    Processing

<u>Word List</u>

   A. Level IV - Inflectional Endings - Long Vowel Words

      1. shades - Did he raise the <u>shades</u> yet?   shades

      2. shading - The tree is <u>shading</u> the plants.   shading

      3. shaded - The lady was <u>shaded</u> by the tree.   shaded

      4. shady   - Dad found a <u>shady</u> spot.   shady

      5. shadier - That side is <u>shadier</u> in the   shadier
                   afternoon.
      6. shadiest- This side is <u>shadiest</u> in the   shadiest
                   morning.

8. WE ARE NOW GOING TO ADD ENDINGS TO SHORT VOWEL WORDS. THE

   NEXT GROUP OF WORDS I DICTATE WILL ALL USE THE SHORT VOWEL

   FORM OF THE LETTER i. FIND THE SECTION ON YOUR ANSWER SHEET

   THAT HAS A SUN BEXT TO SIX ANSWER BLANKS. (pause) ON THE

   BLANK LINE AFTER THE NUMERAL ONE, PLACE THE WORD TRIMS.

The test administrator then gives the appropriate sentence
for the word trims and repeats the word a second time. The
same procedure is used for the remaining five words.

Word List

   B. Level IV - Inflectional Endings - Short Vowel Words

      1. trims   - He trims the tree with popcorn.   trims

      2. trimmer - Did she use the trimmer on her hair? trimmer

      3. trimmest- She is the trimmest girl in   trimmest
                   the class.

      4. silken - The old lady used a silken   silken
                        thread for her gown.

      5. picket - The man painted the picket fence.   picket

      6. trimmed - When was the edge of the lawn   trimmed
                   trimmed?

9. WE ARE NOW GOING TO ADD BEGINNINGS AND ENDINGS IN THE FORM
   OF SUFFIXES AND PREFIXES TO LONG VOWEL WORDS. THE NEXT GROUP
   OF WORDS I DICTATE WILL ALL USE THE LONG VOWEL FORM OF THE
   LETTER a. FIND THE SECTION ON YOUR ANSWER SHEET THAT HAS A
   MAN NEXT TO ELEVEN ANSWER BLANKS. (pause) ON THE BLANK
   LINE AFTER THE NUMERAL ONE, PLACE THE WORD DEGRADING.

   The test administrator then gives the appropriate sentence
   for the word degrading and repeats the word a second time.
   The same procedure is used for the remaining ten words.

Word List

C. Level IV - Prefixes and Suffixes - Long Vowel Words

   1. degrading   - He did a degrading job.   degrading

   2. degradedly   - He spoke degradedly to the boy. degradedly

   3. degradation - She lived a life of degradation. degradation

   4. ungraded   - Ungraded schools are a new idea. ungraded

   5. retrograde   - He acted in a retrograde manner. retrograde

   6. gradual   - His pace was very gradual.   gradual

   7. gradually   - The water rose gradually.   gradually

   8. graduates   - Tom graduates today.   graduates

   9. gradualness - Because of the gradualness of   gradualness
                     the hill, we went up.

  10. gradient   - What is the gradient between   gradient
                     the two inclines?
  11. biodegradable - This detergent is biodegradable.

                                             biodegradable

10. WE ARE NOW GOING TO ADD BEGINNINGS AND ENDINGS IN THE FORM
OF PREFIXES AND SUFFIXES TO SHORT VOWEL WORDS. THE NEXT GROUP
OF WORDS I DICTATE WILL ALL USE THE SHORT VOWEL FORM OF THE
LETTER i. FIND THE SECTION ON YOUR ANSWER SHEET THAT HAS A
DIAMOND NEXT TO THIRTEEN ANSWER BLANKS. (pause) ON THE BLANK
LINE AFTER THE NUMERAL ONE, PLACE THE WORD PREDICT.

The test administrator then gives the appropriate sentence
for the word predict and repeats the word a second time. The
same procedure is used for the remaining twelve words.

Word List

D. Level V - Prefixes and Suffixes - short vowel words

1. predict   - Whom do you predict will win?   predict

2. predictive - His statement was predictive.   predictive

3. predictable- The outcome was predictable.   predictable

4. predictiveness - The predictiveness of his
                         acts was obvious.   predictiveness

5. restrict   - Why did they restrict him?   restrict

6. restrictively - His work was done   restrictively
                  restrictively.

7. inflict   - Did they inflict that wound?   inflict

8. convicted   - When was he convicted?   convicted

9. constriction - She had a feeling of   constriction
                  constriction.

10. dictation   - Who took the dictation?   dictation

11. dictionary - It isn't in the dictionary.   dictionary

12. picturing   - He should try picturing   picturing
                  the word.

13. victorious - The army was victorious.   victorious

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Directions For Scoring The Test

A. The Student Answer Sheet

The instructor checks the responses on the Student Answer Sheet. The number of correctly spelled words produces the Raw Score. The Raw Score is placed on the appropriate line on the Student Answer Sheet. The date of the test should always be indicated. This data is then transferred to the Individual Progress Chart.

B. The Individual Progress Chart

The student's name, grade, raw score and date of test administration are placed on the Individual Progress Chart(IPC). The Raw Score is a conventional spelling score (number of correct responses). It is the quality of response, however, not the quantity alone which gives the Diagnostic Word Processing Test its unique character, since the student must get all items in each section correct before a section can contribute to a Pre- or Post-Test Pattern (and a word count tally).

If a student correctly spells all of the 6 consonant blend words on the test, he gets credit for all boxes at Level II throughout the fifteen stage categories. If a student correctly spells all of the 5 consonant digraphs as they are dictated, he receives credit for all boxes at Level III throughout the fifteen stage categories. If all of the words in the section on inflected endings to long vowel words are 100% correct, the student gets credit for all boxes at Level IV in the long vowel categories. The same applies for adding inflected endings to short vowel words. Finally, at Level V, the same procedure is used for both long and short vowel sections. The word count in each credited word box is tallied and placed in the proper place under Word Count.

Only the numerals I - V can be used on the blank lines under the heading Vertical Word Processing since there are only five levels of spelling difficulty. The information provided in this area allows for an assessment of the qualitative growth in spelling ability. An attempt is made to determine if a student, as a result of instruction, has learned to operate at a higher level of spelling competency.

Information in the section under the heading Horizontal Word Processing is used to indicate growth in vowel discrimination by means of additionally secured vowel categories, determined by subtracting the pre-count from the post-count. Each box represents a vowel category. There are 75 vowel categories covered by the Diagnostic Word Processing Test.

A red pencil is used to plot the word processing capacity of the individual student before instruction (after the Pre-Test). Red lines are drawn in the manner of a bar graph around the boxes where the Pre-Test indicates the individual has been successful. This information constitutes the Pre-Test Pattern.

A blue pencil is used to plot the Post-Test Pattern. The blue area represents the area of progress. Gains in both horizontal and vertical processing ability are easily observed. In addition to showing increased power in word processing ability, the progress area yields a word count, which, when added to the word count in the red area, yields a new Estimated Minimum Competency (EMC). The EMC is defined as the number of words for which the student has exhibited a learning potential for processing in spelling (encoding), and by extension, in reading (decoding). The two statements at the bottom of the Individual Progress Chart will contain the student's current Estimated Minimum Competency.

Please read The Case of John Doe for an additional explanation in the correct manner of marking and evaluating the Individual Progress Chart.

Interpretation of Results

The Pre-Test Pattern

The correct words in the Pre-Test Pattern indicate those word categories which provide the basis for initial instruction. If a student can spell the word den correctly, for example, he is, at the very least, ready for instruction in the specific category from which this word was taken. He has demonstrated by his correct response that he has the processing potential for mastering all of the 45 words contained in the category comprising Level I - Stage 2. Instruction may then be initiated. After all of the words have been mastered to the extent that the student can write each from dictation, a word category may be considered to have been secured. The instructor may then move on to a second category, proceeding either horizontally or vertically, depending on the student's pre-test pattern of correct responses as shown on his Individual Progress Chart.

If the pre-test pattern offers the instructor a choice, the authors suggest proceeding vertically within the framework of a controlled vowel. If more than one student composes an instructional group, the instructor may first teach the categories represented by the test items which all of the students have responded to correctly. After concluding that particular unit of instruction, the teacher has the option of either continuing to instruct the entire group as a whole, or individualizing to meet the specific needs of individuals or smaller clusters within the entire group.

Mastery of categories in which all or most words have been secured is the key to the development of spelling mastery. The authors feel strongly that the teaching of spelling is best achieved through categorization. It is their belief that categorization is the prime strategy for teaching both the encoding and decoding of words. In effect, the learner SPELLS HIS WAY TO READING. Reading and writing reinforce each other, just as listening reinforces speaking. When print is involved, the use of related categories of words provide the best instrument for maximizing internal associations.

When the same words are used in instruction, spelling and reading reinforce each other in precisely the same manner that speaking reinforces listening. Improvement in listening ability is integrally related to the development of secure and facile feedback coming from the production of oral output. This is the basic tenet of active listening. So also is mastery of reading and spelling best achieved through the integration of secure and facile feedback between the sensory mechanisms controlling the expression and reception of speech and print.

Interpretation of Results

The Post-Test Pattern

Information obtained from post-testing yields a Post-Test Pattern. This pattern gives information in six areas useful in determining a student's word processing ability.

1. Raw Score

The number of correct words on the Post-Test is placed on the Student Answer Sheet. This Raw Score is compared with the number of correct words on the Pre-Test. The difference between the two scores constitutes growth in spelling in the number of words used in the Diagnostic Word Processing Test. With some very severely disabled students, this may be the only immediate indication of growth. The Raw Score constitutes the conventional scoring of a spelling test. The Raw Score is also placed on the Individual Progress Chart under Raw Scores.

2. Word Count

If the Post-Test shows that additional categories can be credited, a blue pencil is used to outline them on the Individual Progress Chart. The area between the blue line (Post-Test) and the red line (Pre-Test) contains boxes (categories) with the number of words they represent. The categories outlined in red indicate the potential number of words the student was credited with processing initially. This is the Pre-Test Word Count and should be entered under Word Counts.

The number of words in the area between the red line and the blue line are added to the Pre-Test word count. The new number obtained gives a Post-Test word count. This score is placed under Word Counts on the blank line after the word Post.

As a minimum indicator, the Post-Test word count shows the number of words for which a student has indicated a new readiness for learning to spell. As a maximum, the Post-Test word count shows the number of words the student may well have already learned to spell after instruction.

When the Pre-Test word count is subtracted from the Post-Test word count, the difference obtained is considered to be a strong indicator of growth in spelling.

3. Vertical Word Processing

   Look at the area between the red and blue lines. Does this
   area include a higher level of difficulty? If so, place the
   new Level designation in the blank under Post under the head-
   ing Vertical Word Processing. If the new Post Level designa-
   tion is only for long vowel words, designate it as such. If
   the new Post-Level designation is only for short vowel words,
   indicate that also.

   The difference between the Pre and Post Vertical Word Process-
   ing Levels is not subtracted, but rather indicates growth in
   readiness for words at higher levels of difficulty. A change
   in the student's status in the vertical word processing hier-
   archy is a powerful change in processing since it reflects
   frequently a change in all fifteen categories of vowel process.

4. Horizontal Word Processing

   Look at the areas between the red and blue lines on the Indi-
   vidual Progress Chart. Does this area include additional
   vowel categories (boxes)? If so, add the newly credited boxes
   to the Pre-Category count and put that sum on the blank line
   after Post-Category Count. A change in the student's status
   in the horizontal word processing categories indicates a growth
   in readiness in vowel discrimination, at the very least. And
   at the most, it indicates mastery in vowel discrimination.

5. Total Word Processing - (Estimated Minimum Competency)

   Look at the last line at the bottom of the Individual Progress
   Chart. This statement will reflect the student's present total
   word processing ability. Fill in the blanks with the appropri-
   ate information. You now have an indication of new readiness
   for developing spelling mastery and you now have an indication
   of growth in word categorization, which is in the truest sense,
   true spelling ability.

6. Future Instruction

   Look at the area between the red and blue lines. Future in-
   struction involves securing the categories in this area. (see
   Exhibit F) If an additional level has been credited on Post-
   Testing, consider the use of vertical word processing over
   horizontal word processing as an instructional strategy.(see
   Exhibit F)

Interpretation of Results

<u>The Case of John Doe</u>

Look at the Individual Progress Chart for John Doe.(Exhibit A)
The circled areas are the Pre-Test Pattern, usually delineated in
red. The crosses represent the Post-Test Pattern, usually delinea-
ted in blue. The seemingly uneven growth pattern shown here was de-
liberately chosen from the pilot groups because of its apparent ir-
regularity. In this case, John missed two items on the Pre-Test at
Level II and thus did not receive any horizontal credit for the en-
tire level. There is a very positive aspect to such a result, for
future instruction will not proceed at higher levels until Levels
I and II have been <u>secured</u>.

The result of the Pre-Test was to establish a word count of
564 words, that is, the potential number of words able to be mas-
tered as a result of the correct responses given on the Pre-Test.
Instruction was begun with those stage categories. In this way,
the instructor attempted to <u>secure</u> the Level I word categories in
which John had already demonstrated success. All of the words at
Level I in Stages 2,4,5,6,7,8,9,10,11,12 and 13 were taught first.
Next the student was taught all of the Level I words in the cate-
gories missed on the Pre-Test, that is, Stages 1,3,14 and 15.

Having accomplished these objectives, the instructor returned
to Stage 2 and began to teach vertically. The student was taught
the beginning and ending blends of all words at Stage 2, Level II
(76 words). Instruction continued vertically through the 29 conso-
nant digraphs found in Stage 2 at Level III. John Doe finished the
instructional year in Stage 2 at Level IV. Notice the horizontal
pay-off of his work at Levels III and IV, as indicated by his ach-
ievement on the Post-Test. He received credit for Level III com-
pletely and part of Level IV for short vowels.

The following Post-Test interpretation and diagnosis can be
made from the information contained on the IPC:

1. The instructor can add the number of words to the Pre-
   Test word count that he knows John can spell as a result
   of instruction. In this case, he can add the 76 words
   at Level II from Stage 2, the 29 words at Level III from
   Stage 2, the 183 words at Level IV from Stage 2 and the
   151 words from Level I in Stages 1,3,14 and 15.

2. John can write from dictation all 564 words in the Pre-
   Test word count. It is now no longer assumed readiness
   since they were taught and learned. To this number can
   be added the 439 words from the additional categories
   which the instructor selected for instruction in Stage 2.

3. The Post-Test word count of 2546 includes more than
    the number of words taught and learned by John Doe.
    It is a number which signifies at the very least, the
    number of words John is ready to learn, and at the very
    most, the number of words he may already be able to
    spell.

4. The Post-Test word count includes all the words in the
    vowel categories credited at the Pre-Test(circles) and
    at the Post-Test(crosses), a number amounting to 2546
    words.

5. The 1982 word difference is the growth in readiness
    for spelling resulting from instruction in categorical
    word processing activities.

6. The change in vertical word processing ability is
    dramatic, if uneven. The student is developing the
    demonstrated ability to move up to work in the more
    complex word processing procedures found at Levels
    IV and V.

7. As a result of the information contained on the Post-
    Test and from the success achieved by the instructor
    in his teaching, that John Doe has demonstrated a
    significant growth in vowel discrimination on both
    the auditory and visual levels. It is clear also that
    John has demonstrated an ability to deal successfully
    with words involving inflections (Level IV) and roots,
    prefixes and suffixes (Level V).

John Doe is a seventh grade boy with a severe reading and
spelling disability.

Instructional Strategies

How to teach spelling when using vertical and horizontal techniques

1. Remove all chance of creating Frustration Produced Anxiety through the use of Non-Assumptive Teaching.(see Contents)

2. Develop Total Linguistic Function (listening-speaking-reading--writing) by always having the learner read back what has been placed on paper. The pattern for remediation is Listening, Writing, Reading and Speaking.

3. Try to Secure word categories regardless of whether or not the words are in the learner's spoken vocabulary. (For Levels I-III)

4. Process words vertically until the student is no longer fully successful. The vowel is a primary problem in spelling and reading. Avoid shifting from one vowel to another. Stay with the same vowel construction until the learner demonstrates a breakdown in vertical processing progress in using the vowel with individual consonants, consonant blends, consonant digraphs, inflected endings or affixes.

5. When horizontal word processing is used, try to use contrasting as an instructional technique. (see Exhibit E)

6. When processing words vertically, use Direct Phonic Processing procedures for Levels I through III. (see Exhibit G)

7. When teaching words from Levels I - III, secure categories whenever possible by reorganizing existing categorical groupings. Use the following headings:

   a) common root(word family) - at-bat-cat-fat-etc.
   b) common blend - flab-flag-flack-flap-flat- etc.
   c) common digraph - shack-shad-sham-etc.
   d) part of speech - noun,verb,edjective,etc.
   e) alphabetical sequence - bit,fit,hit,kit,lit,etc.
   (prepare student's thoroughly when using categories d and e)

8. When processing words, use Indirect Structural Processing procedures for Levels IV and V. (see Exhibit G)

9. When teaching words at Levels IV and V, secure specific and significant vowel categories by varying categorical groupings. Use the following categorical headings:

a) common inflected ending - tapping, letting, sitting, hopping, running, etc.
b) common prefix - subtract, subject, submissive, etc. subjugation, etc.
c) common suffix - contraction, protection, eviction, concoction, reduction, etc.
d) part of speech - noun, verb, adjective, edverb, etc.
e) alphabetical sequence - destructive, contractor, objection, protective, etc.
f) type s endings (plural, possessive, verb)- commissioners, missionary's, refines, etc.
(prepare students thoroughly when using d, e and f)

10. When teaching words at Levels IV and V, categorize by spelling roots and use word building. (see Exhibit D)

11. Useful Teaching Technique - when a student misspells a word that shares a category with one or more words, have the student write all of the words within that category. For example, if a student misspells the word hatch, have him write all of the words sharing that category, that is, atch - batch, catch, hatch, latch, match, patch, etc. (the word watch may be included since it shares the same visual pattern)

12. Keep a running count of all words spelled. Students will be motivated dramatically as they understand the dimensions of what they are learning to do.

While the Diagnostic Word Processing Test was specifically designed to accompany the Spelling Mastery Programs, it can be used initially with any linguistic or phonic program presently in use. In addition, individual instructors may prepare their own word categories to fit specific instructional settings. (A listing of commercial products appears in Exhibit B)

Non-Assumptive Teaching

The theoretical rationale for the existence of this type of diagnostic spelling test, lies in the belief that problems in encoding and decoding which exist long after they should normally been expected to disappear, are due to frustration produced anxiety. Conscious and unconscious frustration are formed after days, weeks and years of failure in a no-escape, anxiety provoking instructional situations. Anger, apathy, forgetting, avoidance and confused fixated responses are the outward signs of constant academic failure. Learning problems cannot be irradicated by teachers or specialists unless they learn to become adept at removing this crippling anxiety.

Non-Assumptive teaching is a proven technique for removing anxiety. This form of academic therapy produces a pay-off so rapid that not only can the academic functioning of the learner be noticeably improved, but dramatic and immediately observable changes in the emotional tone of the student frequently take place.

Categorizing, contrasting and word building are three major aspects of non-assumptive teaching. Humans learn to function by developing the ability to categorize. Somehow, educators appear to have forgotten this when they developed programs for instruction in written language which dealt with each word as a separate and unique entity. Failure to assist immature learners to develop secure associative processing with the broadest and most easily learned categories was replaced by instruction in categories containing the least categorical members of the English language, words such as who, was, their, only, etc. (see Exhibit C) The strain on immature members of the primary grade audience has resulted in failure and frustration for millions.

Contrasting is a principal mechanism developed by humans permitting constant reinforcement in developing linguistic facility. It allows for the establishment of secure multi-sensory processing capacities which can serve as a "hedge" against the chronic forgetting that ensues when failure and frustration are experienced. (see Exhibit E)

Word building and the processes it encompasses, insures that the learner is starting with the known and progressing through the gradual integration of discrete language units toward ever-increasing linguistic sophistication. (see Exhibit D)

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INDIVIDUAL PROGRESS CHART

The LAURITA-TREMBLEY Diagnostic Word Processing Test

Name _____

DOB _____   School _____   Grade _____

	Raw Scores	Word Counts	Vertical Word Processing	Horizontal Word Processing
Test Dates				
Post Test ____	Post ____	Post ____	Post ____	Post Category Count ____
Pre- Test ____	Pre- ____	Pre- ____	Pre- ____	Pre-Category Count ____
Instruction ___	Gain ____	Diff. ____		Additional Categories ____

The Five Levels Of Spelling Difficulty	The 15 Stages – Minimum number of possible words for each objective														
	1 ee	2 e	3 a-e	4 a	5 i-e	6 i	7 o-e	8 o	9 u-e	10 u	11 ai	12 ea	13 ie,y	14 oa	15 ue
Level V: Structural processing with inflected endings, prefixes and suffixes.	1356	998	1409	657	1043	680	785	483	875	620	324	345	358	64	193
Level IV: Structural processing with inflected endings.	150	183	192	331	150	425	97	217	77	426	102	199	63	93	21
Level III: Phonic processing with vowels and consonant digraphs.	13	29	16	36	14	41	9	18	0	39	4	17	4	8	1
Level II: Phonic processing with vowels and blends of consonants.	28	76	42	104	30	91	30	43	13	101	28	31	13	14	7
Level I: Phonic processing with vowels and individual consonants.	33	45	87	76	63	66	58	75	24	75	30	43	9	25	6

Pre-test indicates that _____ can process _____ words in _____ categories up to Level _____.

Post-test indicates that _____ can process _____ words in _____ categories up to Level _____.

NOTE: Use red pencil for pre-test scores and blue pencil for post-test scores.

THEORETICAL RATIONALE

A New Perspective Of English Orthography And Its Effect Upon Speech To Print Relationships

LITTLE KNOWN ABOUT HOW THE BRAIN PROCESSES WORDS

The question of how the human mind develops the capacity to deal with print, would seem to be basic to any discussion of the act itself. And yet, there are woefully few answers available, no matter how deeply one delves. At present, no one can state with even a moderate degree of certitude, precisely how <u>thought</u> is trans- lated into <u>sound</u> and then into <u>word</u> <u>symbols</u> for processing by the human species, on either the oral or graphic print levels.

SPECIFIC SEQUENCES EXIST IN PRINTED LANGUAGE

Whatever the answer may turn out to be, concerning the <u>how</u> of word processing, if indeed one is ever forthcoming, there are several things we do know enough about now to allow for clearer thinking than has been evident to this point in time. What we do know with certainty is that words are composed of specific sequen- ces of alphabetic symbols, each bearing an essential relationship with its spoken counterpart. Printed and spoken language are inex- tricably interwoven as bearers of thought in symbolic form.

SENSORY APPARATUS DIFFERENTIATES THE TWO FORMS OF VERBAL EXPRESSION

What differentiates these two forms of expressive human out- put, are the very different media used by the speaker or writer to express internalized meanings in externalized form. They are media whose limitations are bounded by the parameters of the sensory ap- paratus used in their production and reception.

INTERRELATIONSHIP BETWEEN THESE TWO FORMS OF VERBAL RESPONSE IS MISUNDERSTOOD

Because of the closeness of the bond existing between these two expressive forms, and the lateness of our understanding concern- ing their true neural character, it is now readily apparent that a monumental error in interpretation has been made concerning the pre- cise nature of that relationship. It is an error involving the di- rectness of the sound to symbol relationship existing between the media used to express speech and print, an error having both quali- tative and quantitative ramifications.

DISCUSSION OF THE MISUNDERSTANDING WILL BRING CHANGE

It is hoped that a discussion of both aspects of this faulty initial, and largely continuing, misinterpretation will pave the way for the development of a new and more logical perspective of the nature of the alphabetic medium and its relation to speech. Acceptance of the new direction to be offered has the potential to radically change perceptions, not only of those responsible for the development of the instructional procedures used to teach language to children and adults, but perhaps even to a broadening of our understanding of the evolutionary nature and progressive development of of both speech and print as expressive symbolic media.

THE RELATIONSHIP BETWEEN SOUND AND LETTER IS DIRECT AND SELF-EVIDENT

That there _is_ a direct relationship between the individual media elements themselves, the sounds and letters, is self-evident and needs no further elucidation. The individual letters of the alphabet are directly related to individual speech sounds, albeit with certain _apparent_ imperfections, as in _sign_, _knock_, _sure_, _phone_, etc.

THE SEQUENTIAL NATURE OF SOUND AND LETTER COMBINATIONS IS SELF-EVIDENT

Equally self-evident is the sequential nature of the sound and symbol relationship which each medium uses in the organization of meaningful groupings of oral and printed symbols, however imperfect this sequential relationship may at times _appear_ in our present state of limited understanding of such words as, _field_, _break_, _feud_, _doesn't_, etc.

THE RELATIONSHIP BETWEEN SOUNDS AND LETTERS IS DIRECT BUT NOT ALWAYS TOTALLY CONSISTENT

There is, in reality, only one area open for meaningful discussion concerning the sound to symbol relationship itself, which governs the production of spoken and printed language. That area involves both the _apparent_ lack of precision in individual sound to symbol relations, as in the various pronunciations of the letter _c_ in _Jack_, _chip_, _ice_, etc., and the equally _apparent_ absence of an observable overall consistency in words such as, _was_, _their_, _laugh_, _tough_, etc.

INCONSISTENCIES NEED NOT BE EXPLAINED

However, once again, no attempt will be made here to specifically explain even a small part of these apparent individual inconsistencies, for it is believed no such attempt is necessary. Enough time and energy has already been expended in what it is now hoped

will be perceived to have been a largely fruitless and self-defeating activity. Justification for this position lies in the undeniable truth that the human species, both individually and collectively, does in fact possess the capacity to store and retrieve all of the words available in our print systems, to a greater or lesser degree.

THE HUMAN BRAIN IS ABLE TO DEAL WITH INCONSISTENCIES CATEGORICALLY

The human brain does indeed have the capacity to deal with the most glaring examples of apparent orthographic disharmony. It must be accepted that if even a single member of the human species demonstrated the capacity to learn to spell all, or most, of the millions of words which have been cataloged in our unabridged dictionaries, it would be ample evidence of an underlying categorical unity present in the medium itself, one able to be dealt with through the neural processes inherited by man as a species. The existence of such an individual skill would indicate the presence of an inate potential which would allow all other members of the species, as inheritor of that same neural structuring capacity, to learn how to process printed symbols in precisely the same way each of us learns to deal with the species-specific problem of learning to speak.

BOTH FORMS OF VERBAL EXPRESSION HAVE CATEGORICAL UNITY

All too often in discussions revolving around the supposed irregularity of the English orthographic system, sight is lost of a contradiction which is inherent even in these discussions themselves. How is it possible for a graphic medium, one having the breadth and flexibility able to be observed in the vast and ever growing treasury of printed expression open to all of us, to at one and the same time be considered as lacking in at least as much harmony and unity as is present in the spoken medium from whence print flows? How would it have been possible for the collective and individual human mind to have learned to respond to an invention of its own creative construction, if that creation were lacking in some form of categorical structure of the type able to be observed in all other human creations, a structure essential as an underlayment for the continuity of internal and external exchange?

OUR PRINTED LANGUAGE IS STRUCTURALLY CONSISTENT

The answer to these questions is, that the medium is, and can only be conceived as being, structurally consistent. It is categorically perfect and thus able to be perceived and responded to initially by human sensory processing systems, and in time, by the more abstract formal processing systems evolved by man for higher level symbolic activity.

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THE RELATIONSHIP BETWEEN SOUND AND SYMBOL NEED NOT BE DIRECT TO BE CATEGORICALLY PERFECT

The problem of learning how to spell with ease and accuracy, lies not in the medium, but rather in us and our faulty understanding and interpretation of the essential structure of that medium itself. In the beginning, the first attempts made to explain the external structure of the medium, were necessarily made without a clear awareness of the internal processing mechanisms used by the brain to deal with either concrete or abstract reality. It was this faulty initial effort to explain linguistic structure, concomitant with the development of equally flawed instructional procedures, which was to lay the foundation for the monumental confusion which has resulted, and continues to result, in increasingly less successful efforts to teach children and adults to deal with all aspects of print. We are presently exhausting our energies as we persist perseveratively in the effort to effectuate a perfect relationship between sound and symbol with media which are not able, nor need, to be so bonded together.

THE NEED FOR BETTER UNDERSTANDING THE RELATIONSHIP BETWEEN LANGUAGE AND THE SURVIVAL OF OUR TECHNOLOGICAL SOCIETY IS REAL

Perhaps the most significant aspect of the problems associated with the widespread language insufficiency observable today, concerns the extent to which we, as a people, have the capacity to recognize the need for a better understanding of the underlying systems governing the production of printed language. Our continued survival as an advanced technological society may depend upon our speedy and successful response to this problem.

THE ESSENTIAL RELATIONSHIP BETWEEN SOUND AND PRINT IS DIRECT AND SEQUENTIAL

At present, since we can without hesitation state only that, first, there _is_ an essential relationship between speech and print in the individual letter and sound elements produced in both media, and second, that there is a sequential character observable in that initial sound to symbol relationship resulting in the production of words, then that is the point at which discussions must begin.

PERCEPTION OF STRUCTURE MUST CHANGE

Not all of the work that has been done in the past must of needs be discarded in the development of new perceptions. However, what is preserved must be examined carefully and continually tested thoroughly to insure that new errors are not made in the name of another new scientific approach to language study, however valid it may be at the outset. It is our _perception_ of the essential un-

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derlying structure that must change, to allow previously unobserved
organizations of letter symbols to be reobserved and processes in-
ternally by the brain.

THE VOWEL IS PRIMORDIAL

The initial requisite in the development of a new perspect-
ive must be the recognition of the vowel as having had prime signi-
ficance in the evolution of our present speech and print systems.
It is around the vowel that the near infinity of variation observ-
able in the millions of word sequences able to be pronounced in
English revolves. Such significance should not come as a surprise
and should have been recognized long since, for it is the sound of
the vowels which were of necessity first emitted by our earliest
human ancestors, long before they had even developed even the rudi-
mentary beginnings of an expressive symbolic speech capacity. The
sounds of the vowel require no specific sequence of oral events for
their utterance, other than that of having the oral cavity and lips
in a position to allow for the release of internal pressures gener-
ated in the chest cavity. They continue to be the first sounds e-
mitted by the human baby as he makes his entry into society with
a primal scream.

CONCEPT OF IRREGULARITY SHOULD BE DISCARDED

A second requisite, essential for a clearer understanding of
our print system, requires the discarding of a pernicious idea, one
which has never had validity. It is the idea that we can somehow
consider certain of our printed words as being irregular, and as
such, treated neurally in a manner qualitatively different from all
other words. Such a conception lays the groundwork for the estab-
lishment of an unrealistic and illogical mind set, one which in
time results for some in the attempt to store all incoming letter
combinations as individual meaning bearers with their own unique
and non-categorical sequence.

The intent here is to make the point that words, as a cate-
gory, are all processed at the internal level through the operations
of the brain, functioning through the aegis of its complex cellular
system. This system depends upon the central nervous system for its
expressive and receptive needs. Thus, all words, be they regular,
or what is referred to as irregular, receive the same "neural
treatment" as they are processed within the brain. It is the auth-
ors belief, that since all the entities we respond to as words are,
in truth, treated in the same manner, they must contain within their
external structure, a regularity which the brain can respond to
consistently and thus store for immediate retrieval. Admittedly,
this structure may be difficult to apprehend in some words, but it
is there nevertheless, functioning at the unconscious level beyond
our present level of conscious awareness.

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SUPPOSED IRREGULARITIES DIFFER ONLY IN THE DIRECTNESS OF THE SOUND RELATIONSHIP AND THE CONSISTENCY OF THEIR SEQUENCE

All graphic symbols, both collectively, as the sum total of words available at any given time in the English language, and individually, as the twenty-six alphabetic symbols contained in the English orthographic system, must of necessity be perceived in a manner consistent with the neural association and transfer systems which the human species has evolved for such symbolic activity. Supposed irregularities in words are not, in truth, different or unique in their essence as combinations of letter symbols bearing a symbolic meaning. They differ only in their accidentals, those relating to the preciseness of the sound to symbol relationship, and/or the sequence of the elements used.

THERE ARE NO IRREGULAR WORDS

All words, both those we refer to as regular, and those referred to as being irregular, are composed of a set of line and curve segments which have evolved in time and space into a universally agreed upon alphabet. The differences determining regularity are quantitative, not qualitative, with the result that there are no truly irregular words, only those which are more or less categorically precise.

SOME WORD CATEGORIES ARE BROAD AND SOME ARE NARROW

Words must be perceived of initially as being combinations of sound, able to be produced by human beings, and which stand for the multiple aspects of both concrete and abstract reality, combinations which are eminently categorical in their essence. At the graphic level of expression, the sound to symbol relationship may result in words readily able to be perceived in broad linguistic categories, such as fat-cat-hat,etc., or hate-date-fate,etc. They may also appear at this same level as letter combinations which are atypical and less able to be categorized readily, such as in was, their, laugh, bough, etc. Nevertheless, these latter words are in truth categorical. They are examples of extremely limited categories, in some cases perhaps the only example, which are evolutionary remnants whose linguistic relatives have passed into a state of non-use.

EARLY READING DUE TO PERCEPTION OF CATEGORICAL UNITY

Acceptance of the two requisite principles already stated, constitutes an essential minimum required for the development of a new perspective of the categoricality of our print medium. The positing of such an underlying categorical unity appears to be the only logical way to explain the capacity of developing human chil-

dren to manifest the clear ability to process and read a signifi-
cant portion of our printed language system, not only during the
early months and years of their schooling, but in a multitude of
well attested cases, to demonstrate such an ability long before
their entry into the formal school environment. Such cases lend sub-
stantial support to the existence of an underlying categorical un-
ity within the graphic print system, one able to be perceived at the
unconscious level and closely allied there neurally to the internal
processing systems used by these same children in the development
of a substantial speaking vocabulary during the earliest months and
years of their infancy.

ATYPICAL WORDS ARE MORE EASILY RETRIEVED IN A VOWEL CENTERED SYSTEM

Once one observes the all-encompassing nature of the system
able to be constructed when the vowel becomes the essential element
in the processing system, the ability of the developing learner, to
absorb an increasingly large number of apparently atypical words
into his reading and writing vocabularies, becomes far more under-
standable and logical. In a vowel centered structuring system,
these atypical words are able to be perceived and processed, not as
unique and qualitatively different examples of symbolic expression,
but rather as members of categories which, although having a limi-
ted value and use, are nevertheless categorical and thus able to be
stored away for retrieval in precisely the same manner as all other
more common and useful combinations of letter symbols.

LEVELS OF DIRECTNESS IN SPEECH AND PRINT

In the following explanation of a vowel centered linguistic system
to serve as the base underlying the English orthographic system,
one which it is believed will eventually allow virtually the entire
English language to be placed into specific and logical categories,
it is essential that certain distinctions be clearly understood and
adhered to. These distinctions involve the levels of directness in
the relationship that exists between speech and print.

DIRECT AND INDIRECT SOUND SYMBOL RELATIONSHIPS

In considering the causes underlying the present confusion
concerning the explanations presently given to account for the
great difficulty millions of learners face in developing spelling
fluency, perhaps the most obvious is <u>the failure of virtually every
current spelling system to explicate clearly, and then reinforce
for students, the difference between words bearing a direct, or
phonic, sound to symbol relationship, and those in which the rela-
tionship is indirect, or structural.</u> Just as the development of
spoken language travels a course from the utterance of single sound

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elements, to single syllables, to multi-syllabic combinations of spoken syllables, so also does the graphic system follow such a course. Graphic word construction travels from individual letter units, to single structural units of more than one letter, to combinations of multi-structured units.

EDUCATORS MUST UNDERSTAND THE SEQUENCE OF WORD DEVELOPMENT

In bringing a sense of order to English orthography, one which will help learners to integrate increasingly complex combinations of graphic symbols into understandable and retrievable catagorical systems, through the unconscious formation of internal cell associations, it is essential that this sequence of development be firmly established and understood. Not only is awareness necessary on the part of students and teachers, but also by those who construct instructional materials, since the bulk of our citizens do, in fact, develop their spelling skills by exposure to school instructional programs.

THE LEVELS OF WORD PROCESSING EXPLAINED

In English, all words can initially be categorized as fitting into two broad, yet distinct, levels of word processing: those which are able to be processed directly, as single unit combinations of sound groupings, such as hat, rain, was, etc.; and those which can be processed indirectly, or structurally, as combinations of already formed roots, to which have been added inflections, prefixes and suffixes, such as jumper, remain, subtraction, etc. These two levels of primary and secondary word process are referred to as The Direct or Phonic Level of Process, and The Indirect or Structural Level of Process.

TWO LEVELS FURTHER SUBDIVIDED

Within the confines of these two levels it is possible to construct groupings into which virtually all English words can be fitted categorically. The parameters of these categorical groupings appear at this time to be finite and thus able to eventually be listed in their totality for comprehensive computorized study. These two process levels can be further subdivided, with the primary level having three distinct sub-levels of direct phonic process, and the secondary level having at least two distinct sub-levels of indirect process. These Five Levels of Process Difficulty can be defined and exemplified as follows:

THE FIVE LEVELS OF PROCESS DIFFICULTY

A. Direct or Phonic Processing Levels

    Level I - This Level involves phonic processing of words consisting of vowels and individual consonants. examples: need, pet, lake, cat,etc.

    Level II - This Level involves phonic processing of words consisting of vowels and blends of consonants. examples: sleep, spent, slave, stamp, etc.

    Level III- This Level involves phonic processing of words consisting of vowels and consonant digraphs. examples: wheel, check, bathe, smash, etc.

B. Indirect or Structural Processing Levels

    Level IV - This Level involves structural processing of words consisting of structural units able to be formed from the first three processing levels used in combination with inflections. examples: meeting, rested, shady, faster, etc.

    Level V - This Level involves structural processing of words consisting of structural units able to be formed from words used at the forst three levels of process in combination with both affixes and inflections. examples: disagreeable, inventively, engagements, commander.

VERTICAL AND HORIZONTAL WORD PROCESS CATEGORIES

In a graphic processing system which is vowel centered, words are able to be categorized further into two distinct directional sequences, the vertical, as illustrated above in The Five Levels of Process Difficulty, and the horizontal sequence. The horizontal sequence can be observed in the examples listed after each of the Five Levels of Process Difficulty. The ability to process words having a categorical relationship is only possible when the underlying principle is the vowel. It is the vowel, or the vowel with its signal, which becomes the essential categorical element permitting words to be processed logically in both a horizontal and a vertical direction. Fifteen specific vowel categories have already been completed, categories which are referred to as Stages. (1) The fifteen stages arranged in their horizontal sequence at Level I are:

HORIZONTAL ORGANIZATION - Level I

Stage 1 -	ee (need)		Stage 9	u-e	(mule)
Stage 2 -	e (pet)		Stage 10	u	(bug)
Stage 3 -	a-e (lake)		Stage 11	ai	(rain)
Stage 4 -	a (cat)		Stage 12	ea	(team)
Stage 5 -	i-e (five)		Stage 13 -	ie,y	(pie, my)
Stage 6 -	i (sit)		Stage 14	oa	(coat)
Stage 7 -	o-e (rope)		Stage 15	ue	(sue)
Stage 8 -	o (hot)				

Stages 1 through 4 are arranged in terms of their vertical sequence as follows:

VERTICAL ORGANIZATION _ Levels I through V, Stages 1 through 4

	Stage 1 (ee)	Stage 2 (e)	Stage 3 (a-e)	Stage 4 (a)
Level I -	need	pet	lake	cat
Level II -	sleep	spent	slave	stamp
Level III -	wheel	check	bathe	that
Level IV -	meeting	rested	shady	faster
Level V -	disagreeable	inventively	engagements	commander

DIRECT PHONIC PROCESSING AT LEVELS I, II AND III

It must be clearly understood by all that the only words which should be considered as having a direct sound to symbol relationship, and thus able to be synthesized as combinations of individual sound symbols, are those constructed of a single graphic syllable, or more precisely, a single structural unit, such as run, late, speed, etc., or non-meaningful units, such as ect (sect) and unch (bunch). Words possessing a single syllable when processed at the oral level, such as played, jumped and talked, do not optimally respond to direct processing and should not be so dealt with.

INDIRECT STRUCTURAL PROCESSING

Because of the underlying structure of the English print system, one necessarily bearing a direct neural association with the oral symbols used to express speech, consideration of polysyllables as having a direct sound to symbol relationship is unparsimonious, and thus uncharacteristic of our human neural processing systems. It is believed that it is this very type of instruction, that which teaches students to use direct or phonic principles in the solution of polysyllabic structures possessing only an indirect

sound to symbol relationship, which lies at the root of most cases of spelling inadequacy. The only polysyllabic words which occasionally lend themselves ideally to direct phonic processing are words which are not really true examples of the polysyllable. They are words which should more accurately be considered as combinations of two or more individual word units connected artificially, words commonly referred to as compound words, such as fireman, mailman, airport, etc.

INFLEXIBLE USE OF PHONIC APPROACHES CONFUSE

To understand the pernicious and debilitating effects of instructing children to use phonic, or combined phonic-structural analytic procedures, in dealing with polysyllables, such as faster, dining and invention, it is important to consider the effects of such instruction.

DIRECT PHONIC PROCESSING OF MULTI-SYLLABIC WORDS IMPEDES DEVELOPMENT OF FACILE GRAPHIC EXPRESSION

Following the present rules of syllabicate processing, each of these words is analyzed into its individual component parts as they are pronounced on the spoken level of expression, i.e., fas ter, di ning and in ven tion. The result are relationships between speech and print which do indeed have validity at the oral level of process in terms of their syllabicate discreteness as pronounced syllables. It should be clear, however, that although such processing serves the ends dictated by the demands placed upon oral language production from an evolutionary standpoint, it ill serves the needs of the graphic medium which must be processed, not by the combined uses of the auditory and oral sense systems working in concert, but rather by the combined use of the auditory, oral, visual and kinesthetic-tactual sense systems, an evolutionary development involving the harmonization of these systems for the purpose of graphic symbolic expression, a development which was extremely late in making its appearance in human society.

THE EVOLUTION OF THE PRINTED WORD

Print is not simply speech placed on paper as it is simplistically considered by too many. It is that and a great deal more. It is a system made possible through the processes of evolution, occurring over time and space, as man learned how to represent his thought expressively, in a sequence proceeding, first, through drawings and carvings directly representative of reality (drawings and carvings found in early man's cave homes on walls and bone fragments), second, through drawings indirectly representative of reality (late Egyptian hieroglyphs, Chinese pictographs and Sumerian cunieform), third, through non-representative symbolic expressions of concretely representative reality (oral symbols and related

graphic symbols used to stand directly for the sounds or names associated with various aspects of reality, as in man, dog and tree), and finally, to the development of an alphabetic system consisting of abstract non-representative symbols able to graphically represent the totality of man's interior thought (graphic symbols which have only an indirect sound to symbol association with the abstractions they represent, as in justice, democracy and vindictiveness).

RELATIONSHIP BETWEEN PRINTED WORD AND ITS MEANING IS DESTROYED BY ORAL SYLLABICATION

In the three examples given, there are no realities, either concrete or abstract, even remotely representative of the ideas contained within the elements of their graphic syllabicate make-up, when the division is based on their oral pronunciation, rather than on their essential graphic integrity as meaning bearers - fas ter, di ning and in ven tion.

SPELLING SHOULD BE TIED TO MEANING AND STRUCTURE

The more accurate manner of considering these three common words, albeit a manner not directly related to their oral syllabicate pronunciation, is to represent them indirectly in terms of their structural make-up, that combination of related letter units containing the core meanings held within their totality - fast er, din(é) ing and in vent ion. When viewed in this manner, spelling becomes an activity intimately tied to meaning and structure, rather than one bound by the limitations imposed by the evolutionarily prior medium of speech.

THE ENGLISH PRINT SYSTEM CONTAINS A NUMBER OF ESSENTIAL SYLLABIC UNITS

To elaborate upon this idea of direct phonic and indirect structural relationships, consider the word (syllabic unit) act. At the primary direct level of process, it responds precisely to phonic processing both synthetically and analytically, since it is composed of three specific sound symbols in a specific and unchanging sequence. It is an example of one of the two most basic graphic syllabic units in the English orthographic system, that is, a vowel carrying the short sound value followed by two consonants, as in act, est, ill, ong and unt. The second basic graphic syllabic unit consists of a vowel and its signal carrying the long sound value and appearing in combination with a single consonant, as in ate, eel, ide, one, ule, ain, and oam.

MANY DECODING AND ENCODING PROBLEMS RESULT FROM A MISAPPLICATION OF DIRECT WORD PROCESSING PROCEDURES TO POLYSYLLABIC WORD UNITS

Once a unit, such as act, has been processed graphically,

through a direct association and transfer of its three sequentially
consistent root elements with its meanings and pronunciation count-
erpart on the oral level, a direct association has been made. Pro-
cessing all other polysyllables containing the unit act by direct
means rather than indirectly, in words such as acting, faction, dis-
tractibility, etc., is an unparsimonious expenditure of the brain's
energies. It is being posited here and elsewhere (2), that such
an illogical response to print may result in a form of fragmentation
with concomitant anxiety, a condition leading to either or both,
faulty word processing for reading(decoding) and faulty word process-
ing for writing and spelling (encoding).

WORDS CONTAINING ESSENTIAL SYLLABIC UNITS ARE CATEGORICAL RELATIVES

Once the developing human brain has perceived the essential
sequence and character of the individual elements in the unit act,
and has related them directly for decoding and encoding purposes,
all words containing that graphic structural unit should be consid-
ered as categorical relatives and stored away for associative re-
call and retrieval, to be used again when either the sound or the
graphic appearance of that elementary unit is perceived in an orally
or graphically produced context.

UNDERSTANDING THE CATEGORICAL FAMILIAL UNIT ACT-TABLES I AND II

Table I contains the major portion of words able to be con-
structed by the addition of prefixes, suffixes and inflections to
the graphic symbolic unit act. Table II contains the major portion
of words able to be constructed by the addition of individual or
blends of consonants to the graphic syllabic unit act, and the sub-
sequent addition of affixes and/or inflections. In toto, these two
Tables constitute a listing of the words considered as comprising
the categorical familial unit constructed around the structure act.
As will be seen, they constitute a significant body of words which
respond totally to indirect structural processing, with no trace of
irregularity in their spelling.

CURRENT SPELLING INSTRUCTION CONDITIONS LEARNERS TO CONSIDER WORDS AS SPECIFIC AND UNIQUE LETTER SEQUENCES UNRELATED TO THE BROADER LINGUISTIC STRUCTURE AS A WHOLE

Because of errors of understanding made during the development
of spelling instructional approaches in the past, programs which
failed to recognize the essential relationship between external sym-
bolic systems and internal brain function, education continues to
persist in fragmenting learners during the crucial early stages of
their symbolic development. Instead of assisting them to develop
and reinforce consistent direct external sound to symbol relation-
ships for internal association with their neural counterparts,

learners are literally conditioned to consider words, not as units related to larger categorical systems, but rather as individual and unique sequences of letter elements which may or may not have a perfect sound to symbol relationship.

DEVELOPMENT OF SECURE SPELLING ABILITY IS STIFLED

The establishment of secure internal processing abilities, enabling the learner to develop initially an unconscious, and eventually a more conscious awareness of the categorical nature of the print symbolic processes, is effectively stifled in literally millions of cases. Expecting children to learn these sequences in isolation, and then store them away for immediate recall, <u>prior to the establishment of a set of secure categorical processing procedures related directly to the internal neural systems used to process speech</u>, is folly. It is the establishment of such a perseverative mind set, one which allows for storage and retrieval only by considering the uniqueness of words, rather than through a conscious or unconscious recognition of their categorical likenesses, which results in the development of faulty word processing procedures for print.

CONSIDERING WORDS AS REGULAR OR IRREGULAR RATHER THAN CATEGORICAL STIFLES ABILITY TO GENERALIZE

<u>Continuation in the naive expectation that immature learners, or those who have been frustrated by years of anxiety and failure, could conceivably perceive and respond individually to the fine distinctions which exist between words which are referred to as regular, and those referred to variously as irregular, sight words, spelling demons, etc., and thus store each individually, is to be unrealistic and illogical.</u> To hold such a view is to be unaware of the neural character of the symbolic systems that allow humans to generalize about their associations of concrete sensory reality with abstract reality, that ability which in essence defines the human species and differentiates him from all other forms of life. In qualitative and quantitative terms, it is his symbolic ability which not only places man at the pinnacle of evolutionary development, but also makes him ultimately responsible for the survival of his own, and perhaps all other life forms.

It is the supreme irony that this same symbolic aptitude which man has evolved over countless eons, has, at one and the same time, provided him with an equivalent capacity to so disturb and disrupt the ecologic harmony of his planet, that he could in time make life on that planet cease to be a viable reality.

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Table I - Lists of words involving the word structure act with affi[xes]

Affix Endings	act	react	preact	retroact	interact	counteract	enact	reenact	inact	deact	exact	inexact
	act	react	preact	retroact	interact	counteract	enact	reenact			exact	inexact
s	acts	reacts	preacts	retroacts	interacts	counteracts	enacts	reenacts			exacts	
ing	acting	reacting	preacting	retroacting	interacting	counteracting	enacting	reenacting			exacting	
ed	acted	reacted	preacted	retroacted	interacted	counteracted	enacted	reenacted			exacted	
or	actor	reactor		retroactor			enactor				exactor	
ors	actors	reactors		retroactors			enactors				exactors	
ion	action	reaction	preaction	retroaction	interaction	counteraction		reenaction	inaction		exaction	
ions	actions	reactions	preactions	retroactions	interactions	counteractions		reenactions			exactions	
ionism	actionism	reactionism										
ionary	actionary	reactionary										
ionaries	actionaries	reactionaries										
ionable	actionable											
ionably	actionably											
ive	active	reactive	preactive	retroactive	interactive	counteractive	enactive		inactive			
ively	actively			retroactively		counteractively			inactively			
iveness	activeness			retroactiveness					inactiveness			
ivity	activity			retroactivity					inactivity			
ivities	activities											
ivist	activist											
ivists	activists											
ivism	activism											
ivate	activate	reactivate							inactivate	deactivate		
ivates	activates	reactivates							inactivates	deactivates		
ivating	activating	reactivating							inactivating	deactivating		
ivated	activated	reactivated							inactivated	deactivated		
ivator	activator									deactivator		
ivators	activators									deactivators		
ivation	activation	reactivation							inactivation	deactivation		
ivations	activations									deactivations		
ual	actual											
ually	actually											
ualness	actualness											
uality	actuality											
ualities	actualities											
ualize	actualize											
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ualizing	actualizing											
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ualization	actualization											
ure							enacture					
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ment							enactment	reenactment				
ments							enactments	reenactments				
able							enactable				exactable	
uate	actuate											
uates	actuates											
uating	actuating											
uated	actuated											
uator	actuator											
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uary	actuary											
uaries	actuaries											
uarial	actuarial											
uarially	actuarially											
ory		reactance*	preactory				enactory					
ance		reactance										
ances		reactances										
ly											exactly	inexactly
ness											exactness	inexactness
itude											exactitude	inexactitude

Table II - Root words involving the letter category <u>act</u> with
initial consonants, blends of consonants and affixes

bact	factorizing	fractured	lact	compactness
bacteremia	factorized	fractural	lactic	impact
bacteria	factorization	fractious	lactate	impacts
bacterial	factorizations	fractiously	lactates	impacting
bacterially	faction	fractiousnes	lactating	impacted
bacteriology	factions	infract	lactated	impaction
bacteriological	factional	infracts	lactation	
bacteriologically	factionist	infracting	lactalbumen	pract
bacteriolysin	factionists	infracted	lactam	practicable
bacteriolysis	factionism	infractor	lactary	practicably
bacteriolytic	factionary	infractors	lactase	practicability
bacteriophage	factual	infraction	lacteal	practically
bacterioscopy	factually	infractions	lactean	practicall
bacterioscopical	factious	refract	lacteous	practicality
bacterioscopically	factiously	refracts	lactescence	practicalities
bacterioscopist	factitious	refracting	lactescency	practice
bacteriostatic	factitiousness	refracted	lactescent	practices
bacterium	factice	refractor	lactiferous	practicing
bacterizes		refractors	lactoflavin	practiced
bacterizing	fract	refraction	lactogenic	practicer
bacterized	fracted	refractional	lactometer	practitioner
bacterization	fraction	refractive	lactoscope	practitioners
bacteroid	fractional	refractively	lactose	impracticable
bacteroidal	fractionate	refractiveness		impracticably
	fractionates	refractivity	mact	impracticability
fact	fractionating	refractories	mactation	impractical
facts	fractionated	refractorily		impractical
factor	fractionize	refractoriness	pact	impracticalness
factors	fractionizes		pact	impracticality
factory	fractionizing	jact	pacts	
factories	fractionized	jactation	compact	tact
factorial	fractionization	jactitation	compacts	tact
factorize	fracture		compacted	taction
factorizes	fractures		compactly	tactual
	fracturing			tactually
				tactless

tactlessly	tractility	contract	distractive
tactlessness	tractarian	contracts	distraction
tactful	tractarians	contracting	distractions
tactfully	tractarianism	contracted	extract
tactfulness	abstract	contractedly	extracts
tactic	abstracts	contractedness	extracting
tactics	abstracting	contractor	extracted
tactical	abstracted	contractors	extractor
tactically	abstractedly	contractive	extractors
tactician	abstractedness	contraction	extractive
tacticians	abstracter	contractions	extraction
tactile	abstractly	contractable	extractions
tactility	abstractness	contractible	extractable
intact	abstractive	contractableness	extractible
intactness	abstraction	contractibleness	protract
contact	abstractions	contractibility	protracts
contacts	abstractionist	contracture	protracting
contacting	abstractionists	contractures	protracted
contacted	abstractionism	contractile	protractor
contactor	attract	contractility	protractors
contactors	attracts	detract	protractive
contactual	attracting	detracts	protraction
	attracted	detracting	protractions
tract	attractor	detracted	protractile
tract	attractors	detractor	retract
tracts	attractive	detractors	retracts
tracting	attractively	detractive	retracting
tracted	attractiveness	detraction	retracted
tractor	attraction	detractions	retractor
tractors	attractions	detractory	retractors
traction	attractable	distract	retractable
tractive	attractableness	distracts	retractation
tractable	attractability	distracting	retraction
tractably	attractile	distracted	retractile
tractability	unattracted	distractedly	retractility
tractate	unattractive		retractive
tractile			

subtract
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subtractions

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How To Obtain Accountability In Reading
And Spelling Programs

How well can a school administrator and a teacher judge the effectiveness of their reading and spelling programs? The two most common ways presently in use are, first, evaluating the personality of the teacher and, second, reviewing the end of year test gains. At present, end of the year test gains are derived from normative data, although the use of criterion referenced testing is gaining rapidly in popularity.

Consider teacher personality as a common assessment procedure. The remedial reading or spelling teacher loves kids. The kids love her. Classroom teachers consult with him. Parents are happy. And this is as it should be. Teacher personality is a powerful subjective influence in evaluating a reading and spelling program. But it can fail in individual cases. Increasingly, administrators are hearing grumbling comments, such as,"Mr./Mrs. Jones is a nice person, but in three years he/she hasn't taught my child to read or spell!"

What about those spring test gains with normative data as evaluative criteria? Pre- and post-testing has historically been used to evaluate total reading and spelling gains in individual students. Gains from pre-post testing usually are positive but still the unending parade of students needing help goes on year after year. In fact, the usual pre-post-testing with normed tests is now so suspect that criterion referenced testing is being used to compliment, if not replace them altogether. Norm referenced tests are easily used for judging both total program and individual student progress. However, criterion referenced tests appear to the authors to be generally more suitable for assessing individual progress. Although it appears on the surface more comprehensible to state that the average gain in Reading Class A was 8 months, far more specific and useful information is contained in a statement such as the following: Class A received a total of one year of instruction. Of the nine students in the class, seven mastered the consonant digraph <u>sh</u> when it appears at the beginning of a word; five mastered the consonant digraph <u>sh</u> when it appears at the end of a word; seven mastered the consonant digraph <u>ch</u> when it appears at the beginning of a word: etc.

Criterion referenced assessment procedures, while much more informative than norm referenced tests, have two very basic drawbacks. The first is the well-recognized regression factor. For example, John appeared to recognize the <u>sh</u> drawback when he saw it

at the beginning of a word when he was tested last spring, but this October he needs instruction all over again. He forgot it.

The second drawback relates to the test items themselves. Criterion referenced testing is behavioristic and requires a set of objectives, usually presented in a hierarchical order. Several years ago, the New York State Education Department attempted to collect all of the objectives possible for the teaching of reading. The result was a document called SPPEDS. It cited approximately 2000 individual objectives. The effect was mind boggling. While it was not the intent of the project organizers to insist that all 2000 objectives should be used to teach reading, the thought of such an instructional event had to cross the minds of all those involved in the teaching decoding.

If all 2000 objectives were not needed to teach effectively, however, which ones were? SPPEDS was a laborious and in many ways commendable attempt to systematize the teaching of reading, and by extension, spelling. Its effect however, was to exacerbate the present chaotic state of reading and spelling and cause even further disturbance and upset to those involved in instruction.

But why? If one considers carefully the objectives in SPPEDS, many may also be considered as possible test items for use on a criterion referenced test. These items contain the skills assumed to result in reading and spelling proficiency. To demonstrate this point, the reader is asked to examine Exhibit H This exhibit shows four objectives taken from SPPEDS. These objectives are well accepted procedures for the teaching of reading. Do you feel that any of these objectives will actually teach students to recognize words? We all know how much time is spent in reading classes carrying out these and similar activities to develop "reading skills."

The rationale for Objective 1 might be that young children who are not ready for reading also have difficulty following directions. Thus, it seems logical that if a child is trained to follow directions, he will improve his readiness for reading. With older children, the rationale might go like this. Letters in words follow a sequence. Words in a sentence follow a sequence. Therefore, sequential memory must be trained to improve reading ability. Unfortunately, there is no clear validity for either rationale.

Objective 2 in Exhibit H certainly appears logical enough. The usual rationale goes like this. Since it has been found in many studies that early readers entering kindergarten knew letter names, the learning of letter names by all children will insure their ability to recognize words when they see them. But does it? Many feel it is the sound-symbol relationship, not the name-symbol relationship that counts in learning to read. The authors have found that problem readers generally know the letter names better than they know the letter sounds. In fact, knowing the letter name at times appears to be a liability when dealing with a remedial stu-

they know the letter sounds. In fact, knowing the letter name may at times be a liability when dealing with remedial students. Ask the student for the first sound he hears in the word meet, and he frequently gives a letter name and not a sound. Such students have generally developed a significant amount of anxiety about the precise meaning of the terms letter name and letter sound.

Objective 3 involves a well recognized activity carried out in remediation sessions. But does such an activity teach reading? In a recent Reading Research Quarterly (1), a study conducted with 108 second graders stated that training in syllabication did not result in reading gains.

Objective 4 again reflects well accepted teaching practice. And yet we must ask, Do we teach a student what the prefix sub- means before we teach him to subtract in arithmetic? Think of words such as between, agree, and refuse. Did you, the reader, learn the meaning of the prefixes in these words before learning how to use the words themselves? Learning the meaning of prefixes and suffixes may be, and probably is, of interest to students with an established degree of verbal sophistication. Teaching the meanings of affixes does not necessarily help the word recognition skill of below average readers. If one is going to be thorough in teaching such a skill, one must also teach all of the variations of both meaning and appearance possible when a prefix such as sub is used, as in succeed(sub ceed), suffer(sub fer), suggest(sub gest), summon(sub mon), support (sub port), suspend(sub pend), etc.

Where does all of this leave us?

Clearly, we must be sure our objectives are valid and that they will produce results. Clearly, when working with students we want objectives that produce a fast pay-off. Look at Exhibit I If a primary purpose of of teaching reading and spelling is to increase the number of words a student can read, wouldn't objectives like these make more sense? Achieving objectives such as these is possible when a word processing organization which controls the vowel is used. A student simply cannot complete an objective without increasing his word recognition ability. This form of organization requires the grouping of words into families(categories), as in a linguistic or phonic approach, but then it proceeds vertically through the sequence of difficulty levels as far as the learner will, or can, go. The few cuing words (who, were, any, their,etc.) which are not taught within the categories themselves can be stated in the objective. The five Levels of Difficulty, encompassing virtually the entire English language, are explained in detail in the Introduction and Rationale of the Laurita-Trembley Word Processing Test. The reader should become familiar with these levels before proceding further.(See pages 4, 37, 64 and 65)

Look at Exhibit J It contains a monthly chart (January), for 128 secondary students. Each stage is a vowel category. The Roman numerals under the heading <u>Levels</u>, represent each of the five Levels of Difficulty. Each box represents a vowel category or stage. Notice the numbers 1/33 at Stage 1 for Level I. This is interpreted to mean that one student successfully learned to write(spell) all 33 words from dictation during the month of January. Look at Stage 2, Level I. An interpretation of the numbers 30/1350 tells us that 30 students out of 128 participating students mastered all 45 words in this category. The number 1350 is derived by multiplying the 30 students by the number of words mastered(45).

As one glances down the Level I column for January, it can be seen that a total of 4,698 Level I words were mastered with 100% accuracy by 71 students. If one scans horizontally, across the five total word boxes, the number of words processed and mastered at each of the five difficulty levels are indicated. Below this, the number 36,040 is indicated. This number represents the total number of words processed and mastered by the 128 students during the month. If this total is divided by the number of students participating in the program, an average number of words per student can be derived. <u>To know and be able to state that 128 students successfully mastered an average of 232 words during a specific month is an interesting piece of educational information.</u> <u>In effect, such information can be used as an index of monthly growth.</u>

Look at what else can be done with such specific data. The students in this program represent one teacher and five teaching assistants. Let us assume that the salaries for these personnel comes to $46,000 dollars. There are ten months in the year. If the total cost of the program ($46,000) is divided by ten, we find that it costs $4,600 per month to run the program. If the number of words mastered during the month is divided by the monthly cost of the program, a figure representing cost per word can be derived. In terms of the program cited in Exhibit C, it could be stated that it cost 16 cents per word for each word mastered during January.

At this point, let us review what has been discussed. Learning to read and spell can be considered to be a categorical act. If in the teaching of these essential language skills the categories discussed here are used, and the rate of learning accelerates, a fresh view of program accountability can be considered. Using categories of words for the development of reading and spelling fluency, the administrator and/or teacher knows the following at the end of each month:

    a) The number of words each student has learned.
    b) Precisely which words were learned by each student.
    c) The number of words learned at each of the five
       Levels of Difficulty.

d) The total number of words learned each month by
   all students in the program.
e) The average number of words learned by each
   student per month.
f) The monthly cost of each word learned by students
   in the program.

Acceptance of such a rationale allows for a new look at the means used to judge the success of a reading program. Compare this form of monitoring pupil progress with norm referenced tests and existing criterion referenced tests of reading skills presumed to teach reading and spelling. Compare the information gathering system possible with the use of the Diagnostic Word Processing Test with that of existing testing programs. At best, normative tests derive their validity from random samplings of grade level materials. Compare the logic and versatility inherent in the seventy-five word categories containing 15,000 words which the Spelling Mastery Program offers, with existing programs that assume proficiencies without a consideration of just what these proficiencies are or even how information about the proficiencies is gathered.

And finally, if the reader is not concerned with accountability and program value exclusively, the authors ask this question. If the major purpose of reading and spelling programs for students is to increase their proficiency in word recognition (reading) and written recall (spelling), why not use objectives which specifically and quantitatively reflect the objectives of such a premise?

1. Canney,George and Schreiner,Robert. "A Study of the Effectiveness of Selected Syllabication Rules and Phonogram Patterns for Word Attack" READING RESEARCH QUARTERLY, IRA, Vol.XII,No.2. 1976-1977

EXHIBIT A

Individual Progress Chart of John Doe

INDIVIDUAL PROGRESS CHART

The LAURITA-TREMBLEY Diagnostic Word Processing Test

Name _John Doe_   DOB _9/15/65_   School _Lakeland Junior High_ Grade _7_

Test Dates	Raw Scores	Word Counts	Vertical Word Processing	Horizontal Word Processing
Post Test _6/20/79_	Post _39_	Post _2546_	Post _I, III + Part of IV_	Post Category Count _35_
Pre- Test _9/15/78_	Pre- _10_	Pre- _564_	Pre- _I_	Pre-Category Count _11_
Instruction _9 mos._	Gain _29_	Diff. _1982_		Additional Categories _24_

The Five Levels Of Spelling Difficulty	The 15 Stages - Minimum number of possible words for each objective														
	1 ee	2 e	3 a-e	4 a	5 i-e	6 i	7 o-e	8 o	9 u-e	10 u	11 ai	12 ea	13 ie,y	14 oa	15 ue
Level V: Structural processing with inflected endings, prefixes and suffixes.	1356	998	1409	657	1043	680	785	483	875	620	324	345	358	64	193
Level IV: Structural processing with inflected endings.	150	183	192	331	150	429	97	217	77	426	102	199	63	93	21
Level III: Phonic processing with vowels and consonant digraphs.	13	28	16	36	14	41	9	16	0	19	4	17	6	8	7
Level II: Phonic processing with vowels and blends of consonants.	28	76	42	104	30	91	30	43	13	101	28	31	13	14	7
Level I: Phonic processing with vowels and individual consonants.	33	(45)	47	(76)	(63)	(66)	(58)	(75)	(24)	(75)	(30)	(43)	(9)	15	8

Pre-test indicates that _John_ can process _564_ words in _11_ categories up to Level _I_.

Post-test indicates that _John_ can process _2546_ words in _35_ categories up to Level _I, 3 + Part of 4_.

NOTE: Use red pencil for pre-test scores and blue pencil for post-test scores.

EXHIBIT B

List of publishers selling commercial products which can be used
with THE LAURITA-TREMBLEY DIAGNOSTIC WORD PROCESSING TEST.

The Johnny Right To Spell Program - by R.E.Laurita and
                                              P. Trembley

Academic Therapy
P.O.Box 899
1539 Fourth Street
San Rafael, CA 94901

The Spelling Mastery And Diagnostic Reference Kit
      by R.E.Laurita and P. Trembley

Special Child Publications
4535 Union Bay Place N.E.
Seattle, WA 98105

The Spelling Mastery And Diagnostic Reference Kit
      by R.E.Laurita and P. Trembley

L&T Educational Materials
P.O.Box 403
Yorktown Heights, NY 10598

AVKO Word Families
AVKO Word Families in Sentence Context
AVKO Sequential Spelling

AVKO Educational Research Foundation
3084 West Willard Road
Birch Run, MICH 48415

Any linguistic or sequential phonics series may be used for the
lower levels of word processing.

EXHIBIT C

Categorization by Vowel Form (Levels 1 - 3)

Stage 6 - <u>i</u> (sit)

<u>Level I</u> - A Vowel With Individual Consonants

<u>ib</u>	<u>ick</u>		<u>id</u>		<u>ig</u>		<u>ill</u>		<u>im</u>		<u>in</u>	
bib	Dick	sick	bid	kid	big	pig	bill	mill	dim	Kim	bin	pin
fib	kick	Rick	did	lid	dig	rig	dill	pill	him	rim	din	sin
jib	lick	tick	hid	rid	fig	wig	fill	rill	Jim	Tim	fin	tin
rib	Nick	wick			jig		hill	sill		vim	gin	win
	pick						Jill	till				
							kill	will				

<u>ip</u>		<u>iss</u>	<u>it</u>		<u>ix</u>
dip	rip	hiss	bit	lit	fix
hip	sip	kiss	fit	pit	mix
lip	tip	miss	hit	sit	six
nip			kit	wit	

<u>Level II</u> - A Vowel With Blends Of Consonants (beginning)

<u>l blends</u>		<u>r blends</u>		<u>s blends</u>		<u>misc. blends</u>	
glib	flip	crib	trim	spin	skim	twig	quill
slick	slim	grin	trip	spill	skin	twin	quilt
click	flit	grim	trick	splint	skip	twist	squid
clip	split	grip	frill	stiff	skill	quit	squint
slip	splint	drip	brick	stick	skid	quiz	wrist
		drill	brisk	still	swig	quick	knit
				strip	swim		

<u>Level III</u> - A Vowel With Consonant Digraphs (beginning)

<u>ch</u>	<u>sh</u>	<u>th</u>	<u>wh</u>
chill	ship	thrill	whim
chip	shift	thrift	whip
chimp	shim	thick	whiff
chin	shin	thin	which
	shrill		
	shrimp		

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Teaching by Word Building   (Levels 4 - 5)

Levels IV and V - Words with Prefixes, Suffixes and Inflectional
              Endings

agree	disagree	degree	free
agrees	disagrees	degrees	frees
agreeing	disagreeing		freed
agreed	disagreed		freeing
agreement	disagreement	decree	freely
agreements	disagreements	decrees	freedom
agreeable	disagreeable	decreed	
agreeably	disagreeably	decreeing	see
agreeability	disagreeability		seeing
agreeableness	disagreeableness		unseeing

feeble	discreet	sweet	redeem
feebly	discreetness	sweetly	redeems
enfeeble	indiscreet	sweetness	redeemed
enfeebles	indiscreetly	sweeten	redeeming
enfeebled		sweetening	redeemable
enfeebling		sweeteners	unredeemed
enfeeblement		unsweetened	unredeeming
			unredeemable

need	exceed	succeed	proceed
needle	exceeds	succeeds	proceeds
needles	exceeded	succeded	proceeded
needled	exceeding	succeeding	proceeding
needling	exceedingly		proceedings
needler		speed	
needed		speeds	
needing		speeded	
needless		speeding	
needlessly		speedy	

cheer
cheers
cheerful
cheerfully
cheerless
cheerlessly

EXHIBIT E

Contrasting For Vowel Discrimination

Level I - Vowels with individual consonants

ee	e	a-e	a	i-e	i
1. feed	1. fed	1. fade	1. fad	1. side	1. hid
2. need	2. Ned	2. made	2. mad	2. ride	2. did
3. weed	3. wed	3. wade	3. sad	3. wide	3. lid
4. Reed	4. red	4. bade	4. had	4. hide	4. rid
5. peek	5. peck	5. Jake	5. Jack	5. pike	5. pick

Level II - Vowels with blends of consonants

ee	e	a-e	a	i-e	i
1. bleed	1. bled	1. blade	1. blank	1. slice	1. milk
2. sleep	2. slept	2. slate	2. slat	2. slide	2. slid
3. glee	3. glen	3. glade	3. glad	3. glide	3. glib
4. speed	4. sped	4. spade	4. gasp	4. spice	4. spin

Level III - Vowels with consonant digraphs

ee	e	a-e	a	i-e	i
1. cheer	1. Chet	1. chase	1. match	1. chime	1. chin
2. cheek	2. check	2. chaste	2. hatch	2. chide	2. chip
3. sheer	3. shed	3. shade	3. shad	3. shine	3. shim
4. sheen	4. shell	4. shame	4. sham	4. shrine	4. shin
5. three	5. then	5. bathe	5. than	5. thine	5. thin
6. wheel	6. when	6. whale	6. wrath	6. while	6. whip

Level IV - Primary Level words with inflectional endings

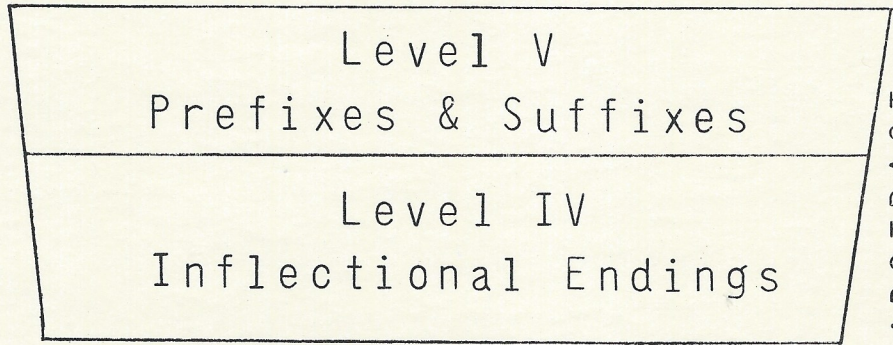| ee	e	a-e	a	i-e	i
sweeping	checking	racing	dragging	hiking	thrilling
needed	netted	traded	chapped	filed	picked
sweeper	checker	racer	batter	driver	sicker
deepest	reddest	latest	dampest	ripest	dimmest
deepen	shredded	shaven	waxen	ripen	silken
sleepy	penny	wavy	Daddy	slimy	skimpy
sleepier	messier	wavier	grassier	grimier	windier
sleepiest	messiest	waviest	sandiest	grimiest	hilliest

INSTRUCTIONAL NOTE: Place a number over each vowel. Dictate words with learned vowel constructions and ask the student to write the word under the correct number. Dictate in sequence to limit the possibility of errors. First, dictate a word to be placed under No.1, then No.2, etc. The authors suggest that the instructor aske the student to vocalize the correct number before writing the word.
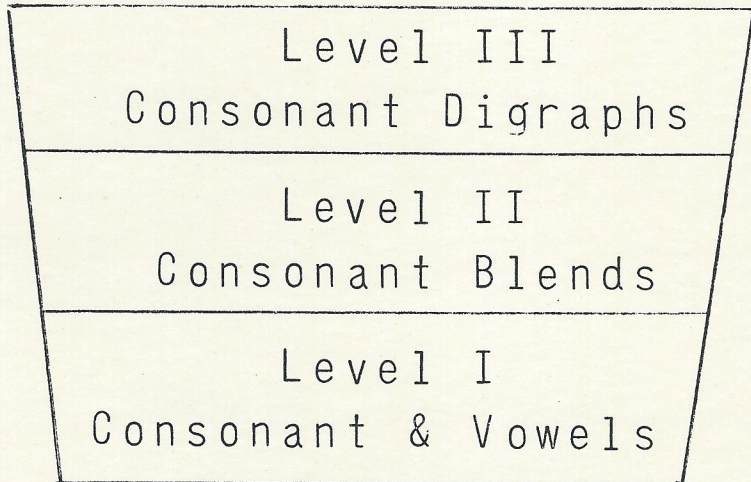
FIVE LEVELS OF WORD CONSTRUCTION

Level V

Prefixes and Suffixes

a	able
dis	ment
pre	ly

Level IV

Inflectional Endings

s, ed, ing, er, est,
en, y, ier, iest

Level III

Consonant Digraphs

sh, ch, wh and th

Level II

Consonant Blends

Beginning & Ending

r, l, s

Level I

Consonant & Vowels

VC	CVV	CVC
at	see	sat

VERTICAL WORD PROCESSING

FIVE LEVELS OF WORD CONSTRUCTION

(Implications for General Teaching Approaches)

Teaching Approaches using Indirect Structural Processing

| Level V |
| Prefixes & Suffixes |
| Level IV |
| Inflectional Endings |

Teaching Approaches using Direct Phonic Processing

| Level III |
| Consonant Digraphs |
| Level II |
| Consonant Blends |
| Level I |
| Consonant & Vowels |

ABSTRACT

CONCRETE

VERTICAL WORD PROCESSING

EXHIBIT H

Project SSPED - Four Sample Objectives

1. Given 2 or more directions orally, the student follows them in the same sequence.

2. Given an upper case manuscript letter visually, the student says the name of the letter.

3. Given a word visually, the student designates its syllables.

4. Given a prefix visually, the student designates its meaning.

EXHIBIT I

Vertical Word Processing
Four Sample Objectives

1. Given 33 Level I words by dictation, words having the ee
   vowel construction, the student will provide the correct
   graphic representation.

2. Given 28 Level II words by dictation, words having the ee
   vowel construction, the student will provide the correct
   graphic representation.

3. Given 13 Level III words, by dictation, words having the ee
   vowel construction, the student will provide the correct
   graphic representation.

4. Given 6 cuing words by dictation (I, can, is, in, are, to,),
   the student will provide the correct graphic representation.

NOTE: These objectives have been adapted from those appearing on
      the INDIVIDUAL SPELLING FOLDER which is an integral part
      of the Spelling Mastery Program.

Monthly Monitoring Chart   N - 128

JANUARY	LEVEL I	LEVEL II	LEVEL III	LEVEL IV	LEVEL V
Stage 1 ee	1/33			1/150	5/410
Stage 2 e	30/1350	26/1976	28/812	29/5307	7/2142
Stage 3 a-e	34/2958	38/1596	33/528	38/7296	30/3270
Stage 4 a			2/72	2/662	5/1280
Stage 5 i-e				2/300	1/686
Stage 6 i	2/132	2/182	5/205	4/1700	1/275
Stage 7 o-e	1/58	1/30	2/18	3/291	3/1350
Stage 8 o	2/150	2/86	2/36	1/217	
Stage 9 u-e					
Stage 10 u	1/75		1/39	1/426	
Stage 11 ai					
Stage 12 ea					
Stage 13 ie					
Stage 14 oa					
Stage 15 ue					
Total number of words per level	4698	3870	1710	16,349	9413
Total number of words	36,040				
Average number of words per student	282				

NOTE: Each box represents a vowel category. The first number in
each box represents the number of students completing the
category. The second number represents the total number of
words that have been processed with 100% accuracy by the
students completing the category. Only selected words were
used at Level V due to the great number of words possible
of representation at that most complex level of spelling.

EXHIBIT K

Definitions for terms used in Spelling Mastery Programs

1. FRUSTRATION PRODUCED ANXIETY - An abnormal state of mind resulting from prolonged failure in no-escape situations involving print. Anger, Apathy, Forgetting and Fixation (continuously making the same errors) are the manifestations of this deviant mind state.

2. NON-ASSUMPTIVE TEACHING - The process used to eliminate Frustration Produced Anxiety. Initial instruction assumes no mastery, then proceeds at the student's pace, thus allowing for constant success.

3. TOTAL LINGUISTIC FUNCTION - The complete and facile use of all the integrated areas of expressive and receptive language, including Listening, Speaking, Reading and Writing.

4. ORTHOGRAPHIC STRUCTURALISM - A system of word processing which permits the English language to be organized into categories built around individual vowel categories, with each category having five ascending Levels of Difficulty.

5. THE ORTHOGRAPHIC SUBSTRUCTURE - Levels I, II and III of each vowel category in which all single syllable words are organized in terms of their membership in specific vowel categories.

6. THE ORTHOGRAPHIC SUPERSTRUCTURE - Levels IV and V of each vowel category in which all polysyllabic words are organized in terms of their membership in specific vowel categories in terms of their root element, as in ect - infect, protect, inspect, connect, elect, circumspect, etc. At these levels, the English language explodes both in terms of its quantity and its quality, an explosion that allows man to represent his most abstract thought in alphabetic form.

7. SECURING A CATEGORY - A category of English words is secured when a student can listen, write, read and say all words in a vowel category at one of the five levels.

8. VERTICAL WORD PROCESSING - This type of word processing involves the use of categorical processes with both decoding(reading) and encoding(writing-spelling) vertically through the five Levels of Difficulty:

ee	e	a-e	a
need	pet	male	tap
sleep	spent	grade	stand
wheel	chest	shape	bath
bleeding	mended	shaver	snappy
cheerful	insects	debatable	inactivity

9. HORIZONTAL WORD PROCESSING - This type of word processing involves the use of categorical processes with both decoding (reading) and encoding(writing-spelling) <u>across</u> each individual Level of Difficulty:

	Stage 1 (ee)	Stage 2 (e)	Stage 3 (a-e)	Stage 4 (a)
Level I -	need	pet	male	tap
Level II -	sleep	spent	grade	stand
Level III -	wheel	chest	shape	bath
Level IV -	bleeding	mended	shaver	snappy
Level V -	cheerful	insects	debatable	inactivity

10. DIRECT PHONIC PROCESSING - Instructional techniques appropriate for Levels I, II and III which allow the learner to process words by associating orthographic sounds with letter forms directly. It is a multi-sensory approach to spelling, one which assists the learner in developing a combined visual-auditory-kinesthetic-tactual approach to the printed word.

11. INDIRECT STRUCTURAL PROCESSING - Instructional techniques appropriate for Levels IV and V which allow the learner to process words by integrating essential elements of polysyllabic word forms, that is, roots, prefixes suffixes and inflections. It is a system of word processing which grows out of those sound to symbol processes used at the first three levels of word process.

12. LEVELS OF DIFFICULTY - The five ascending levels of complexity of word structure in the English orthographic system. The five levels are:

    Level I   - a vowel with individual consonants - feed,let, hate, tap, etc.
    Level II - a vowel with blends of consonants - speed,sled, brake, fast, etc.
    Level III - a vowel with consonant digraphs - sheep, chase chase, bath, etc.
    Level IV - complete words with inflected endings - sleepy, stepping, traced, fatter, etc.
    Level V   - complete words or roots used in combination with inflections, prefixes and suffixes - agreement, reflective, debatable, compassion,etc.

13. ROOT ELEMENT - At Level V, the Root Elements associated with the vowel structure <u>ee</u>(Stage 1) are: <u>ee</u>(agreement), <u>eeb</u>(enfeeble), <u>eed</u>(exceedingly), <u>eem</u>(unseemly), <u>eer</u>(cheerfully) and <u>eet</u> (indiscreet). A Root Element is a visual element occurring at Level V of the Orthographic Superstructure which allows for the development of Indirect Structural Processing procedures. At Levels I, II and III of Spelling Mastery programs, this element is referred to only as a vowel sub-category and resembles what is called in some systems a word family. All Level V words in Spelling Mastery are organized and categorized in terms of their root element.

14. MODELING - The appropriate technique to use with limited cetegory words, such as, their, what, once, etc. The student is allowed to copy directly from a model until the word form has been learned and the student feels sufficiently confident to reject the model and rely upon his own internal model.

15. CONTRASTING - An instructional technique used to assist the learner in developing the ability to make appropriate responses to vowel elements by a pairing of related vowel forms, such as ee and e, a-e and a, i-e and i, o-e and o, u-e and u, etc. The technique may be applied in the following manner:

1	2	3	4
ee	e	a-e	a
feet	pet	late	hat
meet	let	gate	rat

Dictate words with learned vowel constructions and ask the student to write the word under the correct number. The authors suggest that the instructor ask the student to vocalize the correct column number before writing the dictated word. Such a procedure lessens the possibility of error and the elicitation of anxiety in the presence of printed symbols.

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Notes Concerning the

Laurita – Trembley Diagnostic Word Processing Test

By Donald L. Potter

May 5, 2015

Mr. Raymond Laurita sent me this test about a decade ago.

Mr. Laurita was known as The Spelling Doctor because of his expertise in the field of reading and spelling instruction. He published a very informative and interesting newsletter on issues relating to spelling from the perspective of Orthographic Structuralism and Information Processing, as presented in his magnum opus, *Orthographic Structuralism: The New Spelling*. I am planning to publish a scanned version of this work in the near future. Much of his work was inspired by Donald Hebb's *The Organization of Behavior*.

Over the years, I have been privileged to publish a number of his essays on spelling and reading instruction. These essays are still available on my website and are highly recommended.

1. "A Critical Examination of the Psychology of the Whole Word Method"
2. "Basic Sight Vocabulary: A Help Or A Hindrance?"
3. "Frustration and Reading Problems"
4. "Spelling as a Categorical Act"
5. "A Plea to Restore Reading as a Spoken Activity"
6. "Vertical Word Processing: A New Approach For Teaching Written Language to The Learning Disabled Adolescent." Phillip W. Trembley. MA.
7. "Reversals: A Response to Frustration?"
8. "Understanding the Significance of the Individual Letters of the Alphabet in the Development of Full Literacy."
9. "Rehearsal: A Technique for Improving Reading Comprehension." (Teaching Teenagers)
10. "Errors Children Make." This 1967 article is the essence of wide experience and sound judgment.
12. "Spelling Problems Resulting from the Deletion of the Second Consonant in Root Forms."
13. "Cessation of Spelling Newsletter." On June 21, 2006, Mr. Laurita ceased publication of his popular Spelling Newsletter.
15. "The Spelling Doctor's Credo"
16. *The New Spelling: Orthographic Structuralism.* This is Ray's Magnum Opus. I am scanning the book. It will be published one chapter at a time until the work is complete.