ABSTRACT
        The development of fluency in beginning readers is a
gradual process that often involves different oral strategies such as
word-by-word reading, pointing to words, and reading aloud to
oneself. A review of research related to these behaviors and to
corresponding spelling behaviors suggests a number of implications
for instruction, including the following: (1) disfluent oral readers
may need to point as they read, but silent readers should not need to
point because they have sufficient oral fluency; (2) reading in
groups should be oral for beginning readers; (3) reading rate is a
reliable and easily obtained indicator of fluency and is closely
related to reading accuracy; and (4) diagnostic teaching should
include a sampling of invented spellings and an analysis of the
synchrony between stages of reading and spelling. Both fluency and
expression can be promoted through the use of relatively easy
material. (FL)

Disfluent Oral Reading and Spelling Development

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Running Head: Reading fluency and stages of spelling

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ABSTRACT

The development of reading fluency is a gradual process which often entails strategies which make for a disfluent oral presentation. Disfluent oral reading, fingerpointing, and reading aloud to oneself are the most characteristic behaviors of beginning readers. In this paper, research related to these reading behaviors and the corresponding spelling behaviors is discussed. An understanding of the synchrony between reading and spelling development informs the teacher as to the appropriateness of these reading behaviors for particular students. Implications for instruction are presented.

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A synchrony exists between developmental stages of reading and writing. This paper examines three reading behaviors associated with beginning reading: disfluent reading, reading aloud, and fingerpointing. Recent research in verbal planning (Brown, 1901; Deese, 1964; Gee and Grosjean, 1983) and word knowledge (Henderson and Beers, 1960; Henderson, 1981) makes it possible to understand these three reading behaviors, and the parallels between reading and writing development.

Stage theorists recognize that the movement from one stage to another is a gradual process, that the boundaries between specific stages are fuzzy ones, and that there are psychosocial dimensions which affect achievement. In reading development the movement from one stage to another is a quiet process, quiet because students may not speak directly, or reflect verbally upon their achievements. Signs of growth may go undetetected until the changes in students' behaviors are obvious. For example, first grade teachers often observe children learning to read "all in one day."

A Prerequisite to Beginning Reading - Concept of Word

While it may appear that a miracle has taken place when a student moves from prereading to beginning reading, (Henderson, 1981), it is possible to follow this progress by assessing the student's tacit knowledge of concept of word. Concept of word may be defined as the ability to make the

spatial-temporal match between what is seen and what is said in a line of text. This ability to track (Henderson, 1981) has been defined operationally by Morris (1981) as the ability to point accurately to the words of a memorized text. Concept of word may be thought of as a type of metalinguistic awareness which is learned tacitly, implicitly, or without conscious reflection, through numerous interactions with familiar texts. In terms of providing opportunities for practicing tracking, there is little difference between the Puritans' use of the familiar prayers on the horn books and the modern use of dictations as part of the Language Experience Approach (Henderson, 1981; Stauffer, 1980).

This ability to track a line of text is related to phonemic segmentation (Morris, 1980). The student who has attained concept of word is a beginning reader who can proceed to a stage of word mastery. Sight words can be collected, and phonic generalizations can be assimilated.

Once the stage of beginning reading is achieved the child becomes a word-by-word reader, tends to point to the words as he reads, and will tend to read aloud to himself.

Why do these behaviors occur?

Why would a student choose these behaviors? Before considering the answer, it is a mistake to think that these behaviors are inefficient for the beginning reader. Levels of efficiency are tempered by development, and behaviors that are efficent for a mature reader are not necessarily

efficient ones for the beginning reader. The developmental reader does not choose inefficient strategies; it is important, therefore, to consider these behaviors along a developmental continuum.

Word-by-Word Reading. Clay (1979) has said that in word-by-word reading there are slight breaks between each word. What seems more accurate to say is that the oral reading of beginning readers is often disfluent and unexpressive (Bear, 1982). Although there may be many nonsentential pauses, there are times when pause placements follow syntactic structures with pauses at the end of sentences or at the er⁴ of introductory clauses, and there are times when phrase₋ are read as a group. Disfluent oral reading may sound monotonic, "staccatoish", and lacking in expression for emphasis. The rate for this type of disfluent oral reading is well below 100 words per minute even in familiar materials such as personal dictations, or texts used in repeated readings. The most disfluent, frustration-type reading may be no faster than thirty-five words per minute.

Eye movement research has shown that the beginning reader's eye-voice span is shorter than the mature reader's, and that movement through text is haltingly slow (Levin and Addis, 1979). The beginning reader is generally unable to hold phrase or sentence units together, and without this broader picture, it is difficult to read fluently and with good expression. Bear (1982) found that some beginning readers tried to read expressively, but were unable to do so.

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It sounded as if they were emphasizing particular words, without a cohesive phrasal structure to support the expression. The problem with the disfluent oral reading of the beginner is not one of comprehension, in most cases, but rather one of verbal planning. The disfluent beginning reader is too busy reading words to plan for the oral presentation of phrases and sentences. It is suggested that the beginning reader will not forge a visual perceptual span, and will not be able to make a steady and fluent movement through text which would permit an acceptable oral rendering until a qualitative change in word knowledge occurs.

Fingerpointing. The finger is used by beginning readers to hold a place in the text. Some beginning readers point to each word as they read, while others mark the general spot, and the pointing finger trails a bit or moves a word or two ahead. As a general policy, many teachers have discouraged fingerpointng. However, fingerpointing may be considered an appropriate behavior for the disfluent beginning reader. Gradually, as oral reading becomes more fluent, fingerpointing subsides, and the reader may place a finger in the left margin, on the next line down in order to mark a place for return sweeps.

Even the mature reader may resort to fingerpointing when there are special demands placed on verbal planning during oral reading, demands in terms of the difficultiy of the text or in terms of sociolinguistic factors. For example, using the eye-voice span, performers may mark their place with a

finger before making eye contact with the audience.

Reading Aloud to Oneself. In a recent review of research on oral reading, Allington (1984) noted that the effects of instructional techniques make it difficult to know whether or not oral reading is a behavior inherent to beginning reading. In studies by Bear (1982, 1985), however, it was found that first grade beginning readers from a variety of instructional backgrounds tended to read aloud to themselves during quiet reading time. Teachers have observed that when students begin to read fluently, they tend to stop reading aloud to themselves (Bear, 1985).

Why is oral reading the mode of choice of beginning readers? Danks and Fear (1979) suggest that oral reading promotes the conjoining of syntactic junctures. Schrieber (1980), and C. Chomsky (1970) have described the development of reading fluency as a move away from a linear graphic read-out, to a greater dependence on morphological and syntactic information. Reading aloud may buy the beginning reader more processing time, promoting an easier passage through the text. The time that reading aloud provides may be enough to hold sentential boundaries together syntactically and semantically. Oral reading is an aid to the reader who has difficulty holding the text together at the sentence level. When difficulties arise, the mature reader buys time in a similar fashion by running through the subvocalizaton routine more slowly than usual, (Brown 1981).

When should these behaviors cease?

When a student reads relatively easy texts with good fluency, (90-100 words per minute), and with moderate expression, (with sentential pauses, and occasional _falling, end phrase intonation contours), the fingerpointing and reading aloud largely disappear. In most cases, it is best to wait on development before taking steps to extinguish these behaviors; the time to encourage silent reading, and reading without a finger is when the student has already taken steps in these directions.

Further indications of when a student should read more fluently and without fingerpointing is obtained by analyzing invented spellings, for there is a significant relationship between stages of spelling and stages of reading development (Bear 1982, 1985; Morris and Perney, 1984). Invented spellings reflect underlying orthographic awarenesses, and based on a spelling analysis, a stage of word knowledge and spelling can be determined, (Henderson and Beers 1980; Henderson 1981, 1985; Invernizzi, 1985). And thus, a time schedule to gauge progress and plan reading and writing instruction is created. This schedule becomes an important tool to the diagnostic teacher in making daily decisions regarding reading, writing, and spelling instuction.

The parallels between reading and spelling development are illustrated in Figure 1. This developmental model begins with Prereading and the Preliterate Stage of spelling (A). Point B shows that the student who has acquired a concept of word is most likely in the Prephonetic Stage of spelling (B).

The student at point C in this model continues as a disfluent oral reader, but has a more stable concept of word, collects sight words more easily, and enters the Letter Name Stage of spelling. There is a particularly strong relationship between the Letter Name Stage of spelling and disfluent oral reading among first graders in the seventh month of the school year, (Bear, 1982). Reading rate among 40 first graders was inversely related to Letter Name spelling, (r = -.72, p < .001).In addition, there is a significant relationship between stages of spelling and other reading behaviors including fingerpointing and reading aloud to oneself. Bear (1985) found that among 96 first, second, and third graders, a spelling by stage assessment was related to fingerpointing, general evaluations of fluency, (r's = .54 and .53 respectively, p's < .001). The linear read-out of the disfluent oral reader is similar to the spelling strategy used by the Letter Name speller. In Letter Name spelling, each letter represents a distinct sound, and there are no abstract markers for long vowels; e.g., "time" will be spelled TIM. The student in the Letter Name Stage of spelling is likely to be a disfluent oral reader.

Conversely, the student who is solidly in the next stage of spelling, the Within-Word Pattern Stage, is apt to be a more fluent and expressive oral reader, who tends not to point, and who has adopted silent reading as the mode of choice during independent reading (D). The verbal planning which is so necessary to a fluent and expressive oral

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presentation is similar to the spelling strategy used by the student in the Within-Word Pattern Stage. The base, CVC, short vowel patterns are mastered and the student moves away from a strict, linear match between graphemes and phonemes. For example, "time" may be spelled correctly, or as TIEM; in each case there are more letters than sounds. The ability to mark sounds abstractly signifies a more complex, cognitive manipulation of the orthography.

What can be done to promote reading fluency?
Concluding Implications

A steady hum of voices can be heard during sustained silent reading in the first grade classroom, and it appears that silent reading, free of head movement and lip movement is impossible for beginning readers. The type of reading instruction one chooses to offer is tempered by the student's development, and this paper has suggested a frame for thinking about the development of reading fluency. A number of implications for instruction seem to follow:

1. Disfluent oral readers may point as they read; silent readers (excluding heavy subvocalizers) do not need to point.

2. The reading in groups should be oral for beginning readers. The intermittent oral reading in round-robin reading is unsatisfactory as it disrupts fluency, and does not allow the same dynamic feedback. When students begin to read silently on their own, the reading in reading groups can be done silently, except when there's a clear purpose, i.e.,

reading aloud to confirm a prediction or reading a piece which has been practiced.

3. Reading rate is a reliable and easily obtained indicator of fluency, and is closely related to reading accuracy. While it is important to analyze oral reading errors for insights into synatatic and semantic processing, oral reading rate provides a global look at the efficiency of the student's verbal planning. It was for good reason that Gray (1967) included a measure of rate in his tests.

4. Diagnostic teaching should include a sampling of invented spellings and an analysis of the synchrony between stages of reading and spelling. The student in the Letter Name Stage of spelling is likely to read disfluently, fingerpoint, and read aloud. Mismatches between stages must be analyzed carefully. If a student is solidly in the Within-Word Pattern Stage of spelling, and is still reading disfluently, the student is probably not reading in material at an Independent level. This student is no longer a beginning reader, and is in danger of becoming a word caller. In difficult materials, reading fluency is lost in the mire of miscalled words. Fluency and expression can be promoted by using relatively easy material. The movement across these stages is gradual. Therefore, support materials and techniques (dictations, pattern books, and choral reading) should be phased-out gradually.

The research reported here draws on a theory of reading proposed by Brown (1981) which is based on real time and

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acknowledges a "biological-neurological matrix" (Brown: 440).
The act of reading is differentiated from conscious
reflection on the meaning of the text. According to Brown,
once the icon is obtained, attention is directed to a lexical
parser subroutine. Lexical parsing is related to word
knowledge, and involves an interaction along a number of
dimensions; i.e., articulatory-motor plans, prosodic, and
morphological knowledge. The more efficient the parsing, the
more rapidly the reader can monitor higher levels of
linguistic organization. If word recognition is slow, more
processing time (5-20 seconds) may be derived through a
subvocalization loop, or in the case of the beginning reader,
an oral reading routine. Conversely, the quicker the lexical
access, the more easily higher levels of analysis are
obtained and the student can plan the reading in "larger
units" (Huey, 1968: 116). It is suggested that in the act of
reading, the Letter Name speller is likely to invoke the
articulatory loop and the prosodic system to support word
recognition and for extra support in holding the text
together at a phrasal level. It is likely that the prosodic
system disambiguates syntactic transformations; (and here,
the prosodic system may be considered linguistic), (Deese,
1984). On the other hand, the student in the Within-Word
Pattern Stage of spelling has acquired a knowledge of English
orthography which disambiguates words sufficiently to allow
for a visual perceptual span which promotes verbal planning
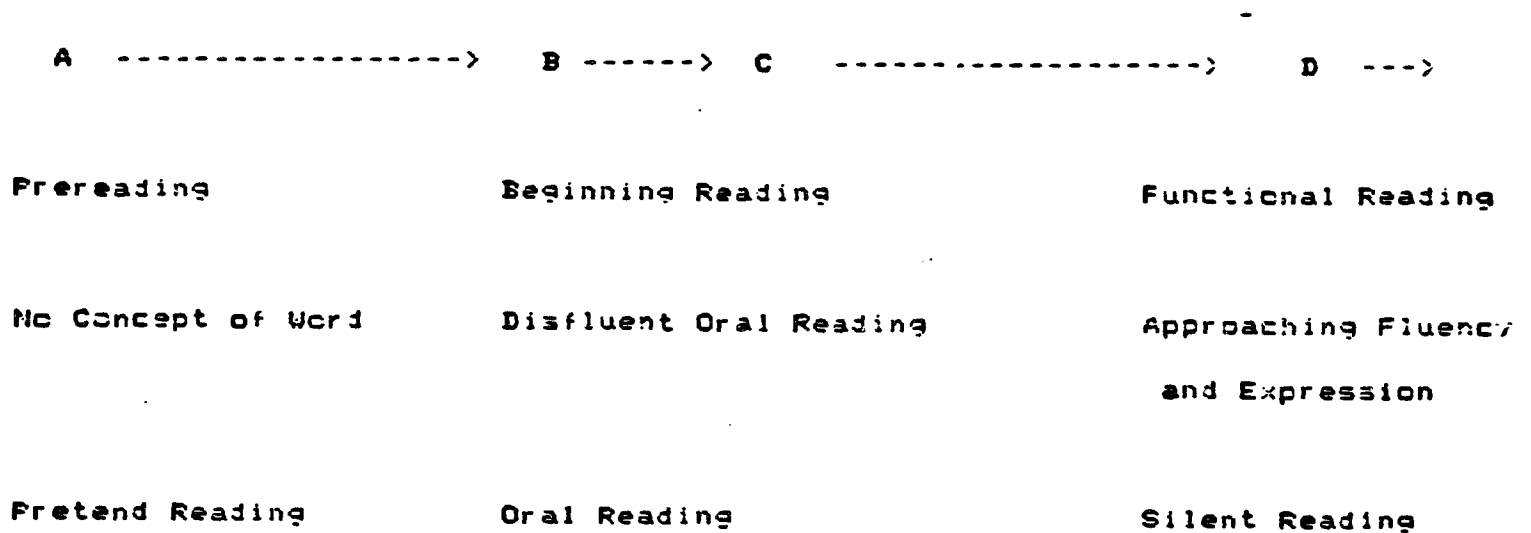at a phrasal level.

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READING

A ------------------> B ------> C ------------------> D --->

Prereading   Beginning Reading   Functional Reading

No Concept of Word   Disfluent Oral Reading   Approaching Fluency

                                                              and Expression

Pretend Reading   Oral Reading   Silent Reading

SPELLING

A ------------------> B ------> C ------------------> D --->

Preliterate   Pre-   Letter   Within-Word

                        Phonetic   Name   Pattern

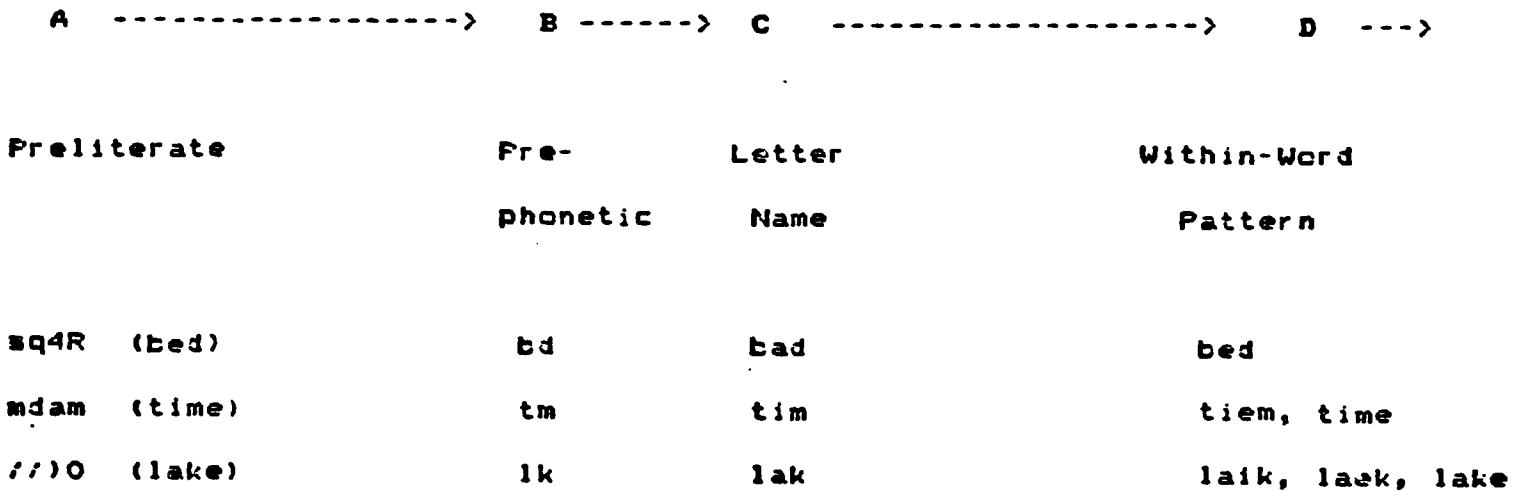| Preliterate		Pre-Phonetic	Letter Name	Within-Word Pattern
sq4R	(bed)	bd	bad	bed
mdam	(time)	tm	tim	tiem, time
//)O	(lake)	lk	lak	laik, laek, lake

Figure 1

Stages of Reading and Spelling