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ABSTRACT
                Even though reading is a complex process, cognitive
psychologists generally agree that reading is an active thinking
process. Four aspects of the interactive view of reading can help
define this process: (1) readers use both what they know and
information from the text to construct meaning; (2) readers elaborate
what and how they read; (3) readers continually monitor their
understanding to see if it makes sense; and (4) readers use the
situational context to focus their purposes and frame their attitude
toward the literacy event. The interactive model of reading can form
a framework for analyzing reading difficulty. Reading difficulty
occurs when one of the aspects of the reading process is excluded for
an extended period of time. When there is a mismatch between the
students' reading behaviors and reading instruction, readers use
compensatory strategies to construct meaning. With each of the four
aspects of the interactive model of reading, reasons for reading
difficulty can be explained in terms of an interaction between
student behaviors and classroom instruction, thus illustrating the
powerful influence teachers and schooling have on remedial reading.
(Two figures representing the interactive reading model and a model
of reading difficulty are included; 38 references are attached.)
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The Interactive Model of Reading:
Deciding How Disability Occurs

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Interactive Reading Defined

Even though reading is a complex process, cognitive
psychologists generally agree that reading is an active
thinking process. Four aspects can help define this process.
First, readers use both what they know (reader-based
inferencing) and information from the text (text-based
inferencing) to construct meaning.   Readers anticipate what
the text will say by thinking about what they know. They use
this hypothesis as well as the textual information to
actively construct meaning (Pearson & Johnson, 1978). This
process is interactive because a pattern is synthesized based
on information provided simultaneously from several knowledge
sources (Stanovich, 1986). These knowledge sources such as
the features and meaning of words, sentence organization and
the overall textual organization are used in combination with
readers' prior grammatical and topic knowledge to facilitate
understanding (Stanovich, 1986).

A second aspect of the reading process is that readers
elaborate what and how they read (McNeil, 1987; Wong, 1982).
As they read they say "Hey, I can remember this because it is
like. . ." They make connections that help them remember and

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interpret <u>what</u> and <u>how</u> they are reading. These new
connections become part of what readers know. Thus, reading
becomes a major tool for acquiring new information. Through
extensive reading students not only allocate attention to
comprehending the text but also to elaborating the strategier
they use to construct meaning.

A third aspect is that readers continually monitor their
understanding to see if it makes sense (Baker and Brown,
1984). When their interpretation does not make sense, a
buzzer goes off in their heads and they vary their strategies
to remove difficulties in interpreting meaning. Readers
continually check their understanding through self-questions
that direct the use of fix-up strategies. Then they reread
to remedy their misunderstanding or check their own prior
knowledge.

Likewise, a fourth aspect is that readers use the
situational context to focus their purposes and frame their
attitude toward the literacy event (Harste, Woodward and
Burke, 1984; Winograd and Smith, 1987). Different situations
affect what readers perceive as important, how information
sources are combined, what is elaborated, how the text is
monitored, and the students' perceptions about the literac.'
event.

The model below shows these four aspects of the reading
process as they continuously interact while readers construct
meaning.

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<u>Insert Figure 1 here</u>

Effective readers coordinate sources of information (personal knowledge and the text), elaborate meaning and strategies, check their understanding (revising when necessary), and use the context to focus their reading. When readers experience difficulty, they rely on their strengths to remedy these difficulties thus eliminating a need to use strategies interactively. However, when any one of these aspects is excluded for a period of time, students may fail to develop as effective readers.

How Reading Disability Occurs

Basically, all readers use their strengths to solve problems in text interpretation, however, sometimes these strengths result in compensatory behaviors that inhibit rather than enhance meaning construction (Stanovich, 1986). When readers encounter difficulty, they shift away from a deficit and use compensatory behaviors. If readers habitually use these compensatory behaviors, their reading becomes ineffective. The interactive model of reading can form a framework for analyzing reading difficulty. Reading difficulty occurs when students 1) frequently overrely on a single information source rather than combining sources, 2) continuously read difficult text limiting elaboration of content and strategies, 3) habitually read without monitoring meaning resulting in passive reading, and 4) define the

context of reading as a failure situation.

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Insert Figure 2 here

Reading difficulty occurs when one of these aspects is
excluded for an extended period of time. When there is a
mismatch between the students' reading behaviors and reading
instruction, readers use compensatory strategies to construct
meaning. The problem does not lie solely within the student;
but is impacted by the instruction they receive. This
instruction can enhance or inhibit the reading performance of
problem readers.

Failure to Coordinate Sources of Information. At the onset
of reading, students learn to coordinate sources of
information. Often, however, remedial readers experience a
deficit in either a skill such as phonic knowledge or an
ability such as visual memory that causes them to shift away
from an information source (Stanovich, 1986). "Poor
beginning readers. . .seem to rely on one available source of
information rather than integrating all available cues"
(Allington, 1984b, p. 847). These readers experience
difficulty because they do not coordinate sources of
information. For example, readers who have difficulty with
phonic knowledge may rely on reader-based strategies rather
than decoding print. Initially, the strategy of relying on
reader-based inferencing is effective, particularly when

readers have a wealth of knowledge about a topic. However, as these readers encounter more unfamiliar topics and avoid using text-based strategies, their text interpretation becomes increasingly muddled. Thus, their overreliance on reader inferencing (their strength) becomes a weakness.

For example, Andy entered first grade with poor phonemic awareness as many potential poor readers do (Juel, 1988). This particular weakness inhibited his understanding of the phonetic system which affected his learning in the basal reader program that was used in the classroom. Therefore, Andy used his strength of background knowledge to figure out words. When this didn't work, he made up the text as he read by looking at the pictures. This problem is not major, but if he continues to use his own knowledge without checking the words in the text, his reading will become less accurate and he will not progress. On the other hand, Kris, a text-based reader, learned phonics easily and, like some problem readers (Allington, 1984b, Paris & Myers, 1981), though reading was accurately calling a string of words. She believed the meaning was found in the text but as textual information became more complex and needed interpretation, she found that she could no longer simply repeat a string of textual facts to indicate her understanding. This problem is not major, but if she continues to read text without constructing meaning, her reading will not progress.

In _ineffective_ programs, Andy and Kris don't receive

instruction that shows them how to integrate information
sources. In many special programs the "whole thrust is to
identify weaknesses and concentrate on problems instead of
focusing on strengths and consciously supporting those
strengths" (Martin, 1988). Teachers focus on isolated skills
building on a deficit in a decontextualized instructional
setting. Without anyone suspecting (after all they have
reached criterion on the isolated skill assessments), Andy
and Kris are asked to read texts that are too difficult.
When they read texts that are too difficult, their reading
problems become more complex and they cease to elaborate
content or strategies.

Failure to Elaborate Content and Strategies. When readers
are placed in difficult texts for a majority of instructional
time, they expend their energy constructing a hazy model of
meaning and have no experience elaborating the content or the
strategies they use to construct meaning. Remedial readers
are often placed in materials beyond their reading level
(Gambrell, Wilson and Gnatt, 1981; Juel, 1988). When this
happens, the gap between what readers know and what they are
asked to read widens and they cannot elaborate either what or
how they are reading. Instead, they increasingly rely on
their strengths making sense of text only infrequently.

For example, Andy does elaborate content adding some new
information to his background knowledge. But his inattention
to the words on the page and the increased difficulty of the

text, causes Andy, like other similar readers (Juel, 1988), to cease thinking about words and he therefore does not elaborate a system for decoding new words. His background knowledge is the only source of information that he uses to remedy problems in text interpretation. Rather than integrating information sources and elaborating how these sources are used in combination, Andy continues using ineffective strategies wondering how other students read with such ease. His reading becomes slower and less accurate, thus reading word-by-word like other poor readers (Allington, 1984b, Paris & Myers, 1981).

For readers like Andy and Kris, the reciprocal relationship among cognitive skills that occurs for effective readers is inhibited because they allocate thinking solely to hazy meaning construction. In one study, researchers found that measures of phonological awareness, decoding speed, vocabulary, listening comprehension, and abstract problem-solving were only weakly correlated to reading performance in the first grade; however, these abilities were highly correlated to reading performance by fifth grade (Stanovich, Cunningham & Feeman, 1984). Similar trends were reported in a longitudinal study by Juel (1988). With her group of poor readers, the impact of listening comprehension, phonemic awareness, and word recognition on reading performance increased during the first four years of schooling. According to Stanovich (1986), good readers process the

graphic information so automatically, that comprehension is enhanced because these readers are free to attend to higher levels of the comprehension process, poor readers who are word-bound have less attention available for higher levels of the comprehension process like elaborating the content or their strategies for meaning construction. As students progress through reading development, the interaction between the text and what they know becomes rapid and automatic, thus allowing readers to use more of their thinking capacity to elaborate the relationships between textual meaning and personal knowledge. They also allocate attention to comprehending the topic as well as the strategies for meaning construction. In essence, fluency allows students to elaborate the relationships in textual meaning and the strategies they use to derive this meaning. When remedial readers have extended reading experiences where they cannot read fluently, they become unaware of the strategies they use and, in fact, are unable to elaborate vocabulary meaning which would, in turn, increase contextual knowledge and facilitate word identification (Stanovich, 1986). Reading problems, then become more complex when the difference between what poor readers can read with comprehension and what they are asked to read in the classroom is so great they cannot make sense of their reading. These students solve this problem by overrelying on their strength and failing to integrate information sources or elaborate strategies,

therefore, they become increasingly less active because
nothing makes sense.

In the approach to classroom reading instruction that
has been prevalent in the last decade, teachers have
overrelied on workbook pages to reinforce reading skills at
the expense of reading extended passages and whole stories
(Anderson, et. al. 1985). In fact, Allington (1984a) found
that children in high reading groups read 10 times as many
word as children in low reading groups. In this study, first
graders in low reading groups read silently a total of 60
words during the five-day sample period. That is only 12
words a day. No one can elaborate meaning and strategies
when they read only 12 words a day. Likewise, Juel (1988)
found that the poor readers read less than half as many words
each year as the good readers. These poor readers also read
text at the 80% accuracy rate while the good reader seldom
encountered words they could not read. Perfetti (1985, p.
248) explains this phenomena "The low-achieving reader
starts out behind. . .and falls farther behind as his reading
experiences fail to build the rich and redundant network that
the high achieving reader has." This problem, the need for
extended practice, is coupled with an increasing passive
response to reading situations.

<u>Failure to Monitor Meaning and Strategies</u>. When students
rely on their strength and cease to elaborate their
strategies, they develop a less active stance toward text.

Their continual failure precludes the spontaneous use of
reading strategies. Subsequently, the infrequent use of
strategic reading results in a set of disorganized strategies
and failure to check reading understanding (Bristow, 1985).
They tend to lack strategies that good readers use naturally
(Davey, 1989; Johnston & Winograd, 1985; Paris & Myers, 1981)
and remain "unconvinced of the importance or necessity of
using strategies" even when demonstrated (Paris & Oka, 1989,
p. 34). When asked questions, they merely respond with, "I
don't know." They are not really lazy or defiant; they
really don't know how to remedy the problem situation. They
did read the text and a buzzer went off in their head telling
them what they were reading was not making sense, but they
didn't know how to remedy this situation. Instead, they
"tend to reproduce inappropriate text segments or provide no
response" (Davey, 1989, p. 696), change their predictions
less often relying on their initial prediction (Maria and
MacGinitie, 1982), and keep this prediction even when it is
no longer supported by the text (Baker and Brown, 1984).
Since these readers have little experience constructing
meaning, they passively read words without actively
questioning their understanding. Likewise, these passive
behaviors have been reported during oral reading. Poor
readers generally make fewer self-corrections than good
readers (D'Angelo, 1982). According to Clay (1985),
proficient readers typically correct those errors that change

meaning but pay little attention to those oral reading errors
that do not change meaning. Remedial readers, however, do
not distinguish between their errors that affect meaning and
those that do not because they read without checking
meaning. Thus, in both comprehension and oral reading,
remedial readers have been found to be a less actively engage
in reading.

In the skills approach that has dominated education for
the last two decades, mastery of specific skill in tasks that
involve small segments of language has been the norm
(Anderson, et.al., 1985). Content of the remedial program
has been specific skill packets and workbooks where progress
is monitored by right and wrong answers to questions
requiring one word responses that measure one skill at a
time. When reading is reduced to mastering a skill that
readers lack, they increasingly define the context of reading
as a failure situation. Thus, their passive reading behavior
magnifies and they cease to try when completing school tasks
that require reading.

Failure to Appropriately Interpret the Situational Context.

Continual failure during literacy events leads students
to overrely on their strength, cease to elaborate the content
and their strategies, become passive toward their own meaning
construction and, finally, define all literacy events as
failure situations resulting in decreased effort. They
attribute their failure to lack of ability which "they

believe is a fixed entity. . .and which they have little of"
(Johnston & Winograd, 1985, p. 283). Because we have focused
on skills that students' didn't have, students have judged
themselves as not able to learn to read. They are generally
unaware of their own strategy use, and think to themselves,
"I will not try, because if I try and fail again, I am
admitting I am dumb." They are not really belligerent, but
the presupposition that they will fail leaves them no
alternative but to define the context of all reading
situations as failure situations reducing their self-
confidence (Bristow, 1985; Johnston & Winograd, 1985).
Manipulating both success and failure in reading experiences,
Butkowsky and Willows (1980) found that poor readers in the
fifth grade were less likely to attribute success to ability,
and more likely to attribute it to luck or task ease than
were the better readers. Thus, readers who have had
prolonged difficulty seem to exhibit an eroding motivation in
achievement situations that increases their probable failure.
This repeated failure coupled with criticisms from parents
and teachers contribute to the continued belief that "I'm not
able to learn to read", thus, decreasing their motivation.

Studies of teacher-student interactions show that
teachers do treat remedial readers differently from achieving
students. For instance, when listening to children read
teachers often interrupt poor readers at the point of error
and prompt with word-level prompts while letting more

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achieving students continue to the end of the sentence
(Allington, 1980). Likewise, low achieving students receive
a higher percentage of literal level questions while their
achieving counterparts are asked inferential and critical
questions (Pearson, 1983). Furthermore, teachers often give
remedial readers the answer or ask more achieving students
rather than giving prompts or hints as to how the student
might answer the question (Johnston & Winograd, 1985). Many
are excused from difficult assignments and placed in
remedial or special classes where they cannot interact with
achieving peers (Will, 1986). These situations contribute to
the remedial readers' growing feeling that, when reading,
they will fail.

For example, suppose Andy and Kris still haven't
received the necessary kind of instruction they need, thus
their presupposition that "I can't read" indicating that
reading is a stable ability rather than a strategic process
affects all their literacy events. No longer can simply
changing the text level, adjusting the technique or adding
strategy instruction change this negative attribution toward
literacy, but instruction must begin with focusing on
redefining the context of reading and reading ability for
both Andy and Kris. Children, like Andy and Kris, "may never
persist long enough at a task to discover that success may,
in fact, be possible, . . . (they' may never spontaneously
discover that they do possess the capacity to achieve

outcomes that exceed their expectations" (Butkowsky &
Willows, 1980, p. 419).

Because we have focused on skills that students' didn't
have and have repeatedly tested these skills on criterion
referenced tests, these remedial readers judged themselves as
poor readers, reducing their motivation. They think to
themselves, "When reading is doing a skill that I don't have
the ability to do, then how can I believe that reading is a
situation where I can succeed?" Likewise, the use of norm-
referenced evaluation by teachers tends to reward those
students with above-average ability. The lower ability
students try hard, but they do not meet the standard created
by those students who learn easily and quickly. Soon
students with slightly below average ability on school
related tasks realize that a high level effort is not a
guarantee of success. Some of these students, many of whom
are remedial readers, decide that if they cannot learn to
read then they can avoid a sense of failure and regain their
self-worth by simply not trying. They appear indifferent
toward their own learning and teachers label them
unmotivated. According to Raffini (1988), "they are highly
motivated to protect their sense of self-worth" in the face
of failure. Because of these two school situations and the
remedial readers' continual failure, Andy and Kris develop a
fuzzy notion of both success and failure. They attribute
their failure to being dumb, a characteristic that cannot be

changed, and they cease to expend effort. When they do succeed, they maintain that it was because of the easy materials or the teachers' effort rather than their own.

Summary

In this paper, four aspects of the interactive view of reading were explained along with the compensatory behaviors remedial readers use. With each of these four aspects, reasons for reading difficulty were explained in terms of an interaction between student behaviors and classroom instruction, thus illustrating the powerful influence teachers and schooling have on remedial reading.

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Figure 1

INTERACTIVE READING

Combine Text Knowledge
and
Personal Knowledge
↑

Elaborate
Content and   ◄─────── READING ───────►   Monitor
Strategies   Meaning
                                                    and
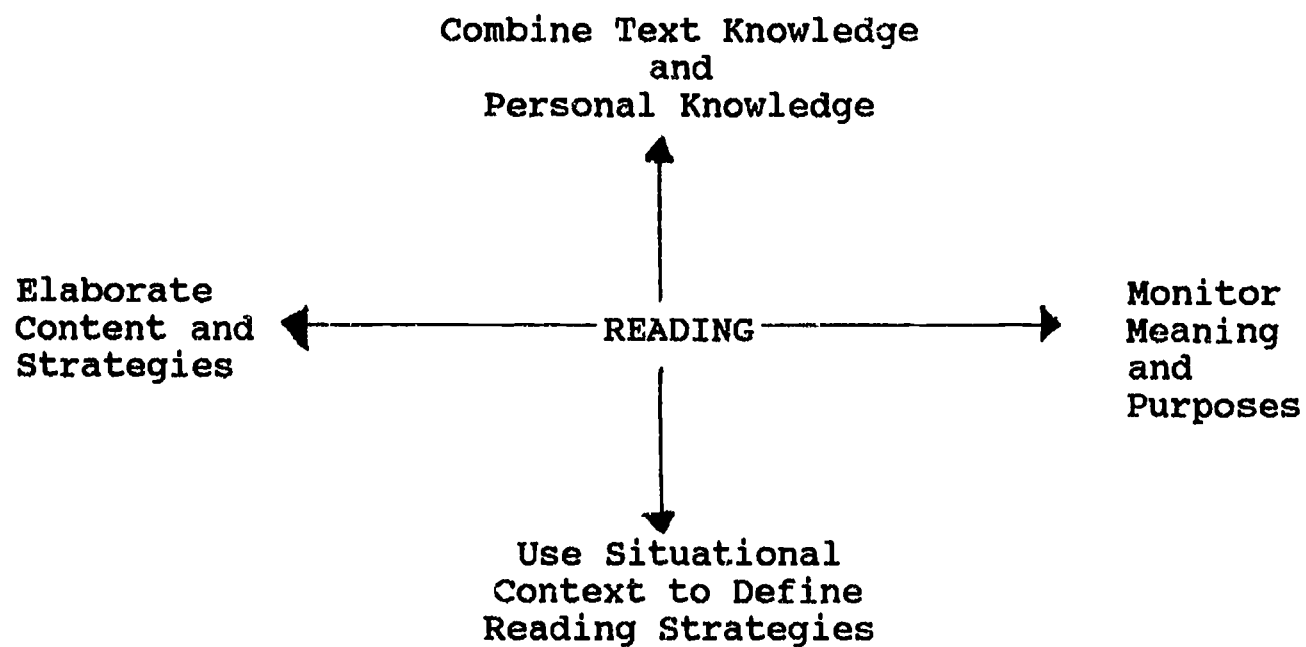   ↓   Purposes

Use Situational
Context to Define
Reading Strategies

Figure 2

READING DIFFICULTY

```
                          Overrely on a
                        Single Information
                             Source
                                ▲
                                |
Frequently Read                 |                  Passively
Difficult Text                  |                  Read
Limiting       ◄────────── READING DIFFICULTY ──────► Text without
Elaboration                                          Checking
                                                     Meaning
                                |
                                |
                                ▼
                    Define the Context of Reading
                        as a Failure Situation
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