CENTER ON INSTRUCTION

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2006

The Scientific Underpinnings of Current Recommendations for Reading Instruction in Grades K-3

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CENTER ON INSTRUCTION

K-12 Literacy Seminar for Regional Centers

First, some discussion of our purpose at this meeting

1. To discuss the nature of the work we plan to do in providing technical assistance and training to states to increase their capacity to support improved literacy outcomes in their districts and schools.

   Should go beyond “interpretation of the law” or assistance in complying with technical requirements of the law

   Should help them acquire expertise in the communication and implementation of research based policies and practices in their schools

More discussion…..

2. What is the role of the content centers and what is the role of the regional centers in accomplishing these purposes?

Regional centers are to work directly with states (including central DOE staff and regional support staffs)

Content centers are to develop materials and provide training that will help the Regional Centers provide research-based guidance to states

Still more discussion…..

3. What existing expertise and experience do we bring to these tasks?

   What is the experience/expertise of staff of the regional centers in literacy instruction and assessment?

   What is the experience/expertise of staff of the content centers in literacy instruction and assessment?

   - Reading
   - Special Education
   - ELL

Final discussion points…..

4. Do we have any serious differences of opinion about the critical elements of research-based instruction in reading?

   K-3 Instruction

   Adolescent Literacy

5. What are the most immediate needs and challenges of the regional and comprehensive centers in accomplishing their purposes?

Something we call agree on…

4. Do we have any serious differences of opinion about the critical elements of research-based instruction in reading?

   K-3 Instruction

   Adolescent Literacy

5. What are the most immediate needs and challenges of the regional and comprehensive centers in accomplishing their purposes?

   Discuss at the end of the day

The Four most important current recommendations for reading instruction in K-3

1. Essential knowledge and skills for learning to read should be taught <u>systematically</u> and <u>explicitly</u> in grades K-3. This instruction should encompass at least the areas of phonological awareness, phonics, fluency, vocabulary, and comprehension

2. Students should be encouraged, and provided engaging opportunities to read for practice, information, and pleasure as much as possible. Extensive reading practice is essential

The Four most important current recommendations for instruction

3. We should begin systematically assessing reading growth in kindergarten, and this should be a continuous process as students learn to read

4. We must have systems and resources in place to provide more <u>intensive instruction</u> and <u>supported practice</u> opportunities for students who are less well prepared, or have less ability, for learning to read

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What is Phonological Awareness?

Word Level

Syllable Level

Onset-Rime Level

Phoneme Level

A functional definition of phonemic awareness:

it involves the ability to notice, think about, or manipulate, the individual sounds in words.

Torgesen, J.K., & Mathes, P. (2000). *A Basic Guide to Understanding, Assessing, and Teaching Phonological Awareness*. Austin, TX: PRO-ED.

Words are composed of strings of phonemes. A phoneme is the smallest unit of sound in a word that makes a differences to its identity

big

dig

bog

bin

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How does Phonemic Awareness contribute to reading development?

The It helps children understand phonics instruction—to make sense out of the way letters represent sounds in words

It makes it possible to generate possibilities for words in context that are only partially "sounded out."

Liberman, I.Y., Shankweiler, D., & Liberman, A.M. (1989). The alphabetic principle and learning to read. In Shankweiler, D. & Liberman, I.Y. (Eds.), *Phonology and reading disability: Solving the reading puzzle*(pp.1-33). Ann Arbor, MI: U. of Michigan Press.

In order to begin to use the alphabetic principle in reading, children must have knowledge and skill in three areas:

1. Letter-sound knowledge

2. Basic phonological awareness

3. Ability to use context to help identify words once they are partially decoded phonetically.

Share, D. L., & Stanovich, K. E. (1995). Cognitive processes in early reading development: A model of acquisition and individual differences. *Issues in Education: Contributions from Educational Psychology, 1,* 1-57.

The boy _____the dog in the woods.

The boy ch ___ the dog in the woods

What is "Phonics"?

It is a kind of knowledge

Which letters are used to represent which phonemes

It is a kind of skill

Pronounce this word…

blit fratchet

Why is it important for children to acquire good phonemic decoding skills (phonics) early in reading development?

Because learning to read involves *everyday* encounters with words the child has <u>never before seen in print.</u>

Phonemic analysis provides the <u>most important single clue</u> to the identity of unknown words in print.

The most efficient way to make an “accurate first attempt” of the identity of a new word is:

First, do phonemic analysis and try an approximate pronunciation

Then, close in on the exact right word by selecting a word with the right sounds in it, that also makes sense in the passage

Ch. 10, *Preventing Reading Difficulties in Young Children*, National Research Council, 1998

Good phonemic decoding skills help children become <u>accurate</u> and <u>independent</u> readers

ca
cat
cát
1) Animal Letter
2) Merged
3) Letter

What is Reading Fluency?

"Fluency is the ability to read text quickly, accurately, and with proper expression"
National Reading Panel

The most common method of measuring reading fluency in the early elementary grades

Measuring the number of accurate words per minute a child can read orally

December, 3rd Grade

Correct word/minute=60

19th percentile

The Surprise Party

My dad had his fortieth birthday last month, so my mom planned a big surprise party for him. She said I could assist with the party but that I had to keep the party a secret. She said I couldn't tell my dad because that would spoil the surprise.

I helped mom organize the guest list and write the invitations. I was responsible for making sure everyone was included. I also addressed all the envelopes and put stamps and return addresses on them…..

December, 3rd Grade

Correct word/minute=128

78th percentile

The Surprise Party

My dad had his fortieth birthday last month, so my mom planned a big surprise party for him. She said I could assist with the party but that I had to keep the party a secret. She said I couldn't tell my dad because that would spoil the surprise.

I helped mom organize the guest list and write the invitations. I was responsible for making sure everyone was included. I also addressed all the envelopes and put stamps and return addresses on them…..

The Broad Context for thinking about fluency…..

"One of the great mysteries to challenge researchers is how people learn to read and comprehend text rapidly and with ease. A large part of the explanation lies in how they learn to read individual words. Skilled readers are able to look at thousands of words and immediately recognize their meanings without any effort."

Ehri, L. C. (2002). Phases of acquisition in learning to read words and implications for teaching. In R. Stainthorp and P. Tomlinson (Eds.) *Learning and teaching reading.* London: British Journal of Educational Psychology Monograph Series II.

How does fluency develop?

To be a fluent reader, a child must be able to recognize most of the words in a passage "by sight"

These are iNTirEStinG and cHallinGinG times for anyone whose pRoFEshuNle responsibilities are rEelaTed in any way to liTiRucY outcomes among school children. For, in spite of all our new NaWLEGe about reading and reading iNstRukshun, there is a wide-spread concern that public EdgUkAshuN is not as eFfEktIve as it shood be in tEecHiNg all children to read.

The report of the National Research Council pointed out that these concerns about literacy derive not from declining levels of literacy in our schools but rather from recognition that the demands for high levels of literacy are rapidly accelerating in our society.

How does fluency develop?

To be a fluent reader, a child must be able to recognize most of the words in a passage "by sight"

Children must correctly pronounce words 5-10 times before they become "sight words"

Children must make accurate first attempts when they encounter new words, or the growth of their "sight word vocabulary" will be delayed—they will not become fluent readers

Words likely to be encountered for the first time in first grade

animal

faster

happy

never

time

sleep

rabbit

Words likely to be encountered for the first time in second grade

amaze

beach

comfortable

example

interesting

grease

stiff

sweep

3rd Grade comprehension passage

_____the middle _____, it was the _____for a _____ to wear his full set of _____ whenever he _____ in _____ – even in times of_____! When a _____ believed he was _____ friends, he would _____ his _____. This _____ of _____ showed that the _____ felt _____ and safe.

3rd Grade comprehension passage

During the middle ages, it was the custom for a knight to wear his full set of armor whenever he appeared in public – even in times of peace !
When a knight believed he was among friends, he would remove his helmet. This symbol of friendship showed that the knight felt welcome and safe.

Two main influences on the development of reading fluency

Growth in the number of words that can be recognized “by sight” at a single glance

Growth of automatic comprehension processes that speed up word recognition through expectancy effects

Development of reading fluency requires massive amounts of meaningful reading

Jenkins, J.R., Fuchs, L.S., van den Broek, P., Espin, C., & Deno, S.L. (2003). Sources of individual differences in reading comprehension and reading fluency. *Journal of Educational Psychology,* 95, 719-729.

Why is fluency important?

Because it provides a bridge between word recognition and comprehension.

“Fluency, it seems, serves as a bridge between word recognition and comprehension. Because when fluent readers are able to identify words accurately and automatically, they can focus most of their attention on comprehension.

They can make connections among the ideas in the text and between the text and their background knowledge. In other words, fluent readers can recognize words and comprehend at the same time.

Less fluent readers, however, must focus much of their attention on word recognition…The result is that non-fluent readers have little attention to devote to comprehension” (Osborn, Lehr, and Hiebert, 2003)

Vocabulary: The Broad Context…..

"Of the many compelling reasons for providing students with instruction to build vocabulary, none is more important than the contribution of vocabulary knowledge to reading comprehension. Indeed, one of the most enduring findings in reading research is the extent to which students' vocabulary knowledge relates to their reading comprehension."

Lehr, F., Osborn, J., Hiebert, E.H. (2004). Focus on Vocabulary, San Francisco: Pacific Resources for Education and Learning.

How does vocabulary contribute to the acquisition of reading comprehension?

The obvious way – knowing the meanings of the words in text in necessary to understand the message being conveyed.

Less obvious ways --

- Vocabulary contributes to the development of phonemic awareness
- Vocabulary contributes more accurate decoding of words whose printed form is unfamiliar
- Vocabulary contributes to reading fluency because it leads to more accurate reading practice

Bringing Words to Life

Isabel Beck

M. McKeown

L. Kucan

Guilford Press

Big ideas from “Bringing Words to Life”

First-grade children from higher SES groups know about twice as many words as lower SES children

Poor children, who enter school with vocabulary deficiencies have a particularly difficult time learning words from “context”

Research has discovered much more powerful ways of teaching vocabulary than are typically used in classrooms – generalization to reading comprehension

A “robust” approach to vocabulary instruction involves directly explaining the meanings of words along with thought-provoking, playful, interactive follow-up.

Can be downloaded at:

www.prel.org

What we know about the factors that affect reading comprehension

Proficient comprehension of text is influenced by:

Accurate and fluent word reading skills

Oral language skills (vocabulary, linguistic comprehension)

Extent of conceptual and factual knowledge

Knowledge and skill in use of cognitive strategies to improve comprehension or repair it when it breaks down.

Reasoning and inferential skills

Motivation to understand and interest in task and materials

What are reading comprehension strategies?

"Comprehension strategies are procedures that guide students as they attempt to read and write"

(Report of the National Reading Panel, 2000)

- Generating questions or thinking aloud
- Connecting background knowledge & predicting
- Constructing visual representations
- Summarizing

What is meant by explicit instruction?

"Explicit instruction is instruction that does not leave anything to chance, and it does not make assumptions about skills and knowledge that children will acquire "on their own." (Torgesen, 2004)

Examples

Showing students how phonemes can be blended to form words

Directly teaching letter-sound associations

Explaining and showing students how to use visual imagery to enhance comprehension

What is meant by systematic instruction?

Instruction guided by a comprehensive scope and sequence

Instruction in all critical skills and knowledge

Careful and systematic review to insure mastery and retention

The Four most important current recommendations for instruction

3. We should begin systematically assessing reading growth in kindergarten, and this should be a continuous process as students learn to read

4. We must have systems and resources in place to provide more intensive instruction and supported practice opportunities for students who are less well prepared, or have less ability, for learning to read

Systematic assessments of reading growth: Big Ideas

Screening assessments that identify children who are lagging behind in growth of critical skills

Progress monitoring in growth of critical reading skills for all children during the year to help plan instruction

Diagnostic assessments to help provide additional information useful for focusing and planning instruction

End of year outcome assessments in the critical elements of reading growth –is the child on track to read at grade level by third grade-how effective is our program?

A data management system that supports the use of assessment information in planning instruction

Screening or Progress monitoring assessment
Correct words per minute
96
80
64
48
32
16
Sept
Dec
Feb
May

Evaluating Response to Instructional Efforts

- Evaluating student's response to intervention

The Four most important current recommendations for instruction

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4. We must have systems and resources in place to provide more intensive instruction and supported practice opportunities for students who are less well prepared, or have less ability, for learning to read

Where do our most significant challenges lie?

A central problem in reading instruction arises, not from the absolute level of children's preparation for learning to read, but from the diversity in their levels of preparation

(Olson, 1998)

What are the most important ways children are diverse-when it comes to learning to read?

1. They are diverse in their talent and their preparation for learning to read words accurately and fluently

2. They are diverse in their oral language knowledge and abilities-vocabulary, world knowledge, reasoning/inference making

3. They are diverse in their abilities to manage their learning behaviors and their motivation to apply them selves to learning to read

The Many Strands that are Woven into Skilled Reading

(Scarborough, 2001)

Reading is a multifaceted skill, gradually acquired over years of instruction and practice.

What are the primary areas most likely to need intervention to prevent reading difficulties?

1. Interventions to improve phonemic awareness, letter knowledge, phonemic decoding, and reading fluency-emphasis on application to text

The development of proficient reading skill: the ideal developmental path and course of intervention

K 1 2 3 4 5 6 7 8 9 10 11 12

Alphabetic Principle and other word reading strategies

"School based preventive efforts should be engineered to maintain growth in critical word reading skills at roughly normal levels throughout the elementary school period"

(Torgesen, 1998)

There are serious consequences that follow from getting a slow start in learning to read….

Poor readers get less reading practice from the beginning of first grade

Mean words read by each child in reading sessions at three points in the year

Biemiller, 1977-78

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K 1 2 3 4 5 6 7 8 9 10 11 12

Alphabetic Principle and other word reading strategies

Acquisition of Fluency

What are the primary areas most likely to need intervention to prevent reading difficulties?

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2. Interventions to improve vocabulary, background knowledge, thinking/reasoning, and active comprehension strategies-applications to text

Language

Meaningful Differences
in the Everyday Experience of Young American Children
Betty Hart & Todd R. Risley
Foreword by Lois Bloom

Hart and Risley (1995) conducted a longitudinal study of children and families from three groups:

- Professional families
- Working-class families
- Families on welfare

Interactions

Hart & Risley compared the mean number of interactions <u>initiated</u> per hour in each of the three groups.

Interactions

Hart & Risley also compared the mean number of minutes of interaction per hour in the three groups.

Cumulative Language Experiences

Cumulative Language Experiences

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The development of proficient reading skill: the ideal developmental path and course of intervention

K 1 2 3 4 5 6 7 8 9 10 11 12

Alphabetic Principle and other word reading strategies

Acquisition of Fluency

Development of Vocabulary, Knowledge and Thinking Skills

What are the primary areas most likely to need intervention to prevent reading difficulties?

1. Interventions to improve phonemic awareness, letter knowledge, phonemic decoding, and reading fluency-emphasis on application to text
2. Interventions to improve vocabulary, background knowledge, thinking/reasoning, and active comprehension strategies-applications to text
3. Interventions to help students become more engaged in learning and do more reading with materials at the right level and within an accountability framework

The development of proficient reading skill: the ideal developmental path and course of intervention

K 1 2 3 4 5 6 7 8 9 10 11 12

Alphabetic Principle and other word reading strategies

Acquisition of Fluency

Development of Vocabulary, Knowledge and Thinking Skills

Development of attitudes—-----motivation, interest, curiosity

The Big Ideas: A summary

1. Explicit and systematic instruction in the critical knowledge and skills required for proficient reading

2. Extensive practice activities that are both supervised and independent as well as engaging

3. Reliable and valid assessments beginning in Kingergarten

4. Resources devoted to increasing intensity and power of instruction for students lagging behind

Evidence from one school that we can do substantially better than ever before

School Characteristics:

70% Free and Reduced Lunch (going up each year)

65% minority (mostly African-American)

Elements of Curriculum Change:

Movement to a more balanced reading curriculum beginning in 1994-1995 school year (incomplete implementation) for K-2
Improved implementation in 1995-1996

Implementation in Fall of 1996 of screening and more intensive small group instruction for at-risk students

Hartsfield Elementary Progress over five years

Proportion falling below the 25th percentile in word reading ability at the end of first grade

Screening at beginning of first grade, with extra instruction for those in bottom 30-40%

Average Percentile for entire grade (n=105)

1995	1996	1997	1998	1999
48.9	55.2	61.4	73.5	81.7

Hartsfield Elementary Progress over five years

FCAT Performance in Spring, 2003

The Challenge of the "vocabulary gap"

This gap arises because of massive differences in opportunities to learn "school vocabulary" in the home

We are still learning about the conditions that must be in place to substantially reduce the 'vocabulary gap" by third grade.

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Thank You

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