

The Challenge of Fluent Reading for Older Children with Reading Difficulties

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The Social and Political Context for research on conditions required for remedial effectiveness for fluency:

The recently published report of the President's Commission on Special Education indicated that:

Special education has become one of “the most important symbols of American compassion, inclusion, and educational opportunity....”

However, it must be revitalized to produce better learning outcomes in the children it serves.

The ultimate test of the value of special education is that, once identified, children close the gap with their peers.

Examine outcomes from six clinical or experimental studies of remedial interventions with children from 10-12 years of age experiencing reading difficulties

Three samples of severely disabled children with beginning word level skills around the 2nd percentile

Two samples of moderately disabled children with beginning word level skills around the 10th percentile

One sample of mildly impaired children with beginning word level skills around the 30th percentile.

Instructional Effectiveness Measured by Outcomes in Four Areas

Phonemic Decoding Accuracy -- skill at using sound-letter relationships to decode novel words

Text reading accuracy -- Accuracy with which individual words are identified in text

Text reading fluency -- speed of oral reading of connected text

Reading Comprehension -- accuracy with which meaning is constructed during reading

Outcomes measured in standard scores. An improvement in standard score means that a child is improving his/her reading skills compared to average readers. On all the measures used here, 100 is average.

A study of intensive, highly skilled intervention with 60 children who had severe reading disabilities

Children were between 8 and 10 years of age

Had been receiving special education services for an average of 16 months

Nominated as worst readers: at least 1.5 S.D's below grade level

Average Word Attack=69, Word Identification=69, Verbal IQ=93

Randomly assigned to two instructional conditions that both taught “phonics” explicitly, but used different procedures with different emphasis

Children in both conditions received 67.5 hours of one-on-one instruction, 2 hours a day for 8 weeks

Children were followed for two years after the intervention was completed

Time x Activity Analyses for an approach with very strong emphasis on phonemic awareness and phonemic decoding(LIPS)

Phonemic Awareness and
Phonemic Decoding

85%

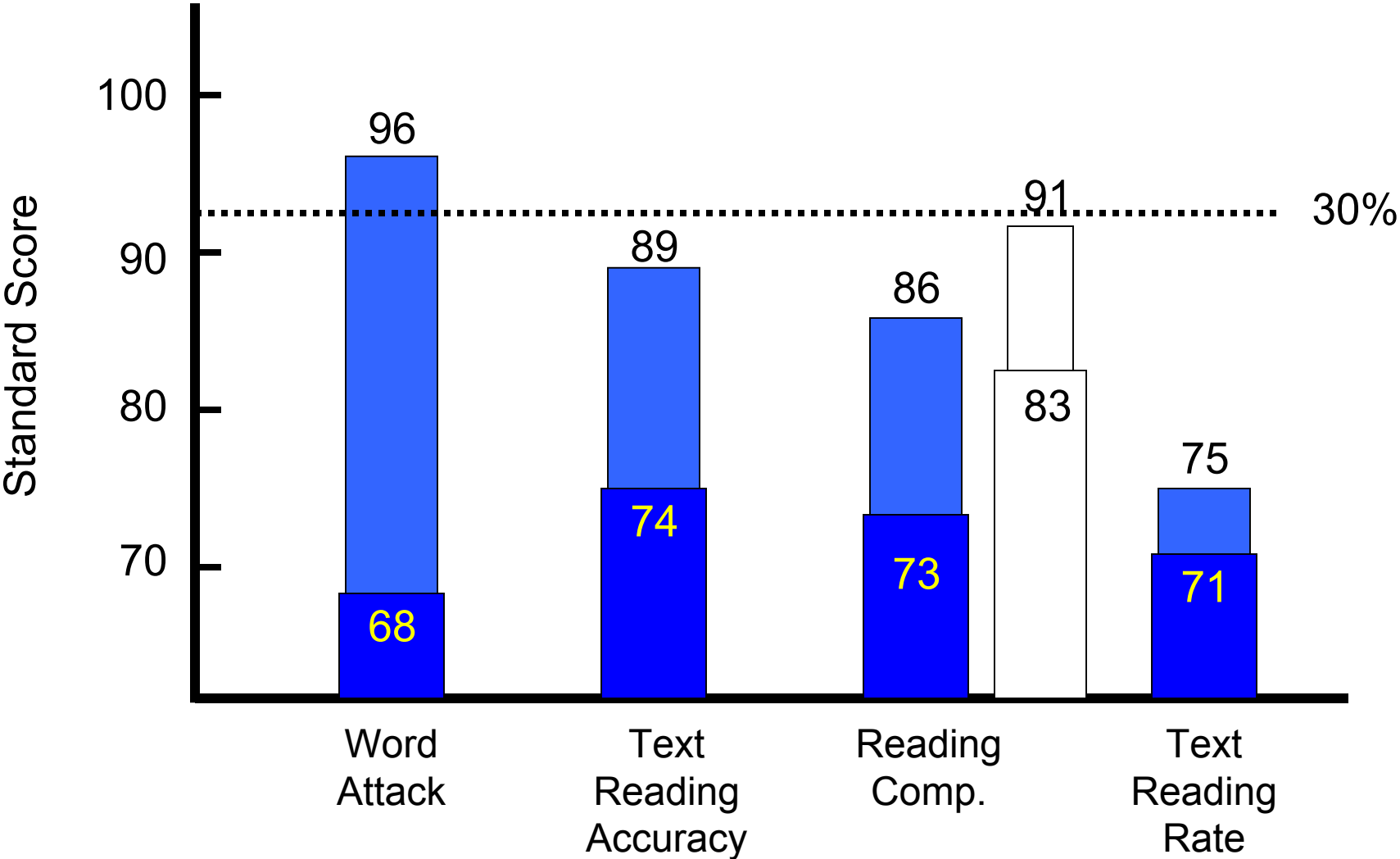
Sight Word Instruction

10%

Reading or writing
connected text

5%

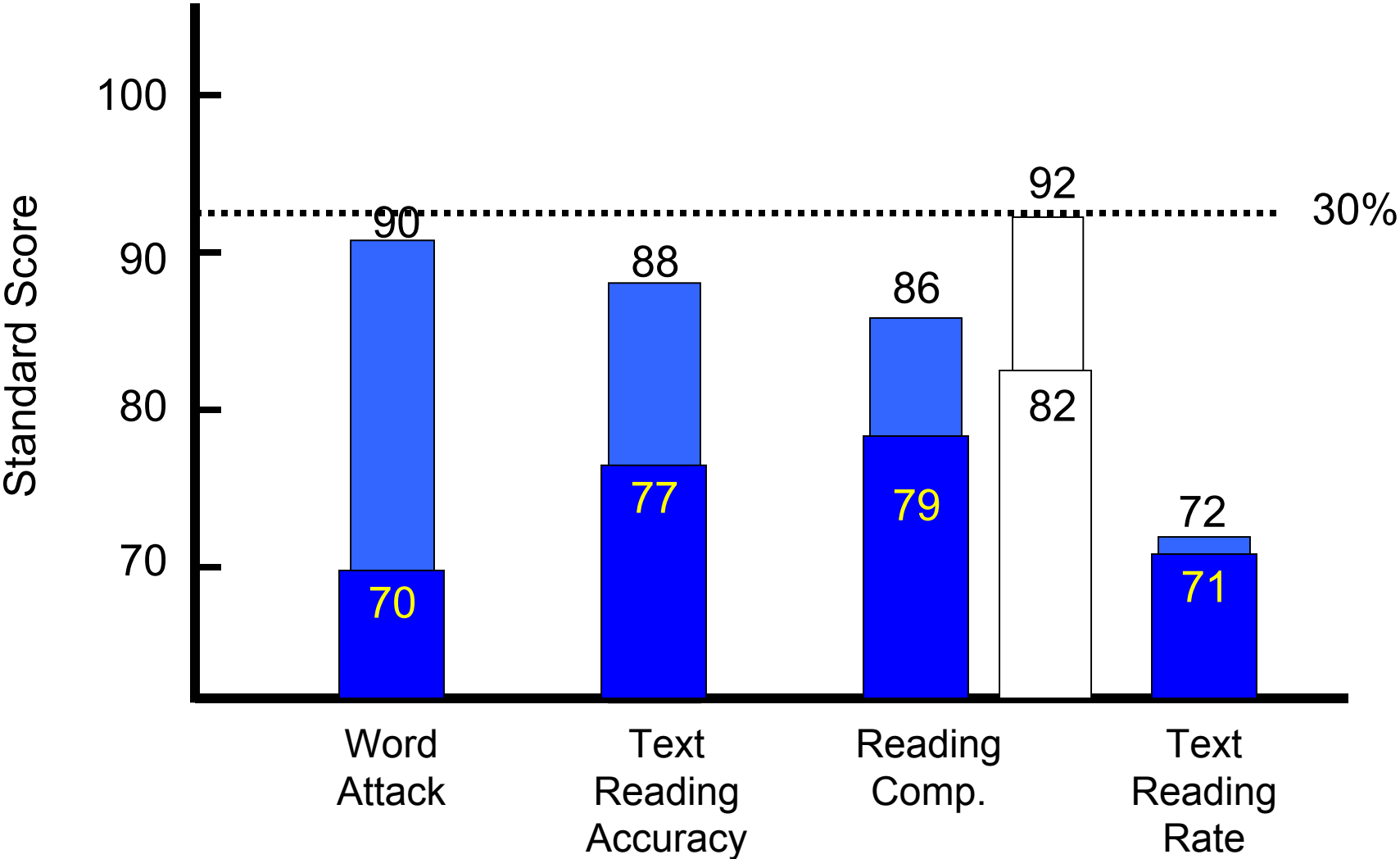
Outcomes from 67.5 Hours of Intensive Intervention-LIPS



Time x Activity Analyses for an approach that emphasized guided reading of text with online correction and feedback (EP)

	<u>LIPS</u>	<u>EP</u>
Phonemic Awareness and Phonemic Decoding	85%	20%
Sight Word Instruction	10%	30%
Reading or writing connected text	5%	50%

Outcomes from 67.5 Hours of Intensive Intervention-EP



Oral Reading Fluency was much improved on passages for which level of difficulty remained constant

Absolute change in rate from pretest to posttest.

Most difficult
passage

Pretest -- 38 WPM, 10 errors

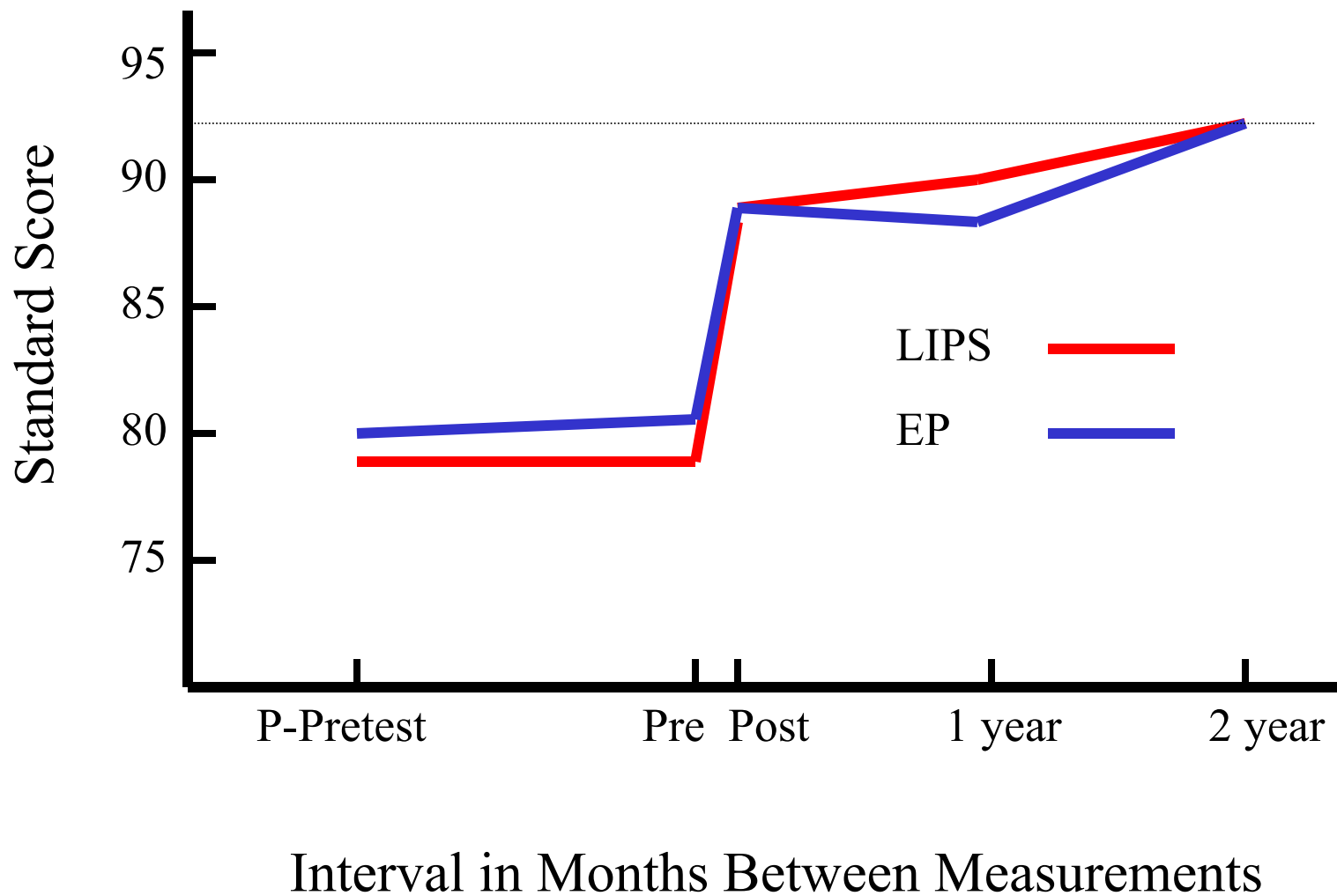
Posttest -- 101 WPM, 2 errors

Next most difficult
passage

Pretest -- 42 WPM, 6 errors

Posttest -- 104 WPM, 1 error

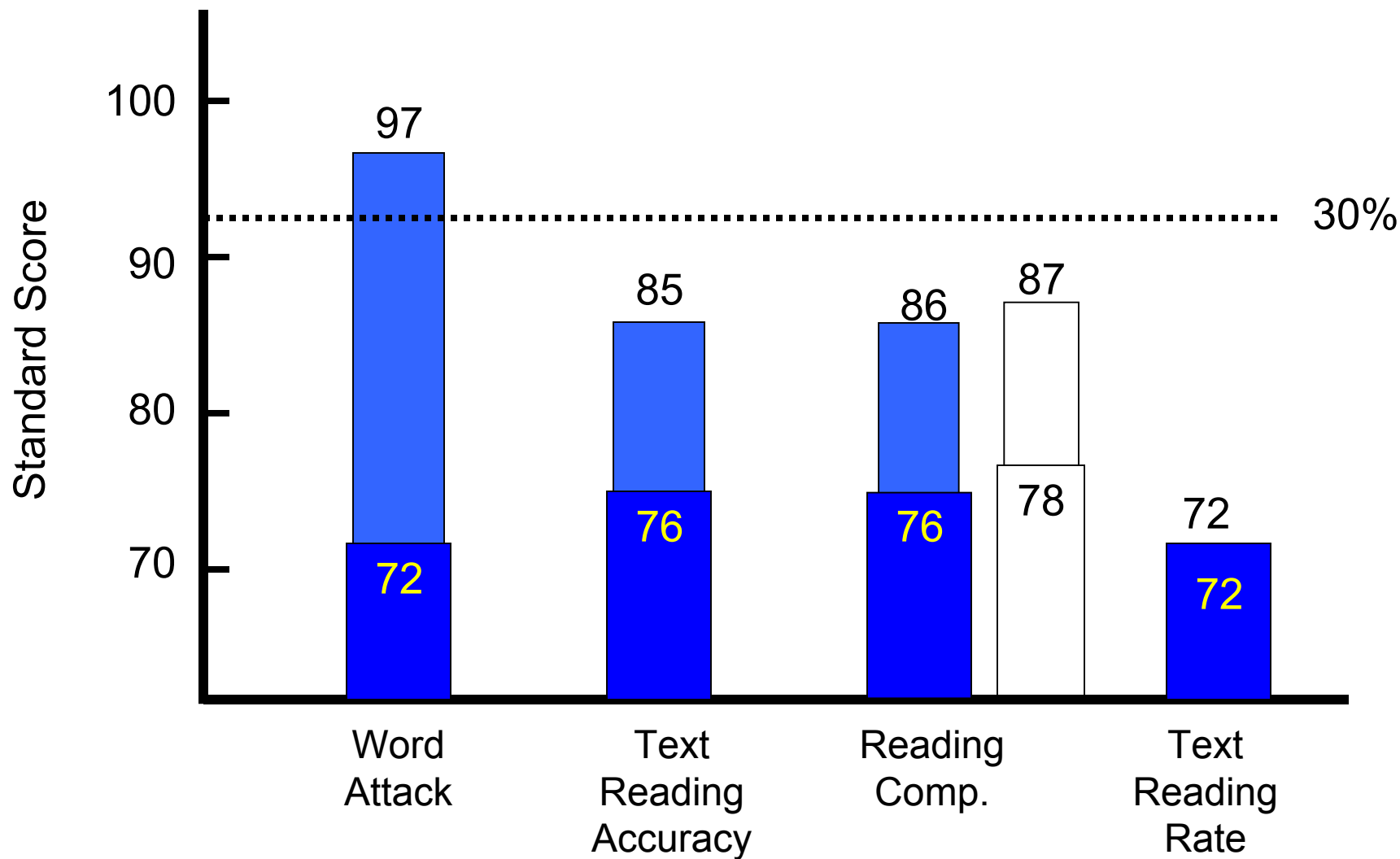
Growth in Total Reading Skill Before, During, and Following Intensive Intervention



Major differences between Accuracy and Accuracy + Fluency Groups

	<u>Accuracy</u>	<u>Accuracy + Fluency</u>
First 33 Hrs. 1:1	LIPS	LIPS
Next 50 Hrs. 1:1	LIPS	70% LIPS, 30% Fluency
Next 50 Hrs. Sm. Grp.	Extended LIPS Comprehension V V Accuracy Oriented Text practice	Comprehension--V V Repeated reading practice with text and word drills

Outcomes from 133 Hours of Intensive LIPS + Fluency+ Comprehension Intervention



A Brief Description of the Spell/Read P.A.T. program

Distribution of activities in a typical 70 minute session:

40 minutes -- Phonemic awareness/phonics

20 minutes -- shared reading

7 minutes -- writing about what was read

3 minutes -- wrap up

Systematic instruction in phonic elements beginning with mastery of 44 phonemes at single syllable level through multi-syllable strategies. Fluency oriented practice from beginning of instruction. Discussion and writing to enhance comprehension.

A Clinical Sample of 48 Students aged 8-16

Middle and upper-middle class students

Mean Age 11 years

79% White, 67% Male

Received 45-80 hours (mean=60) hours of instruction

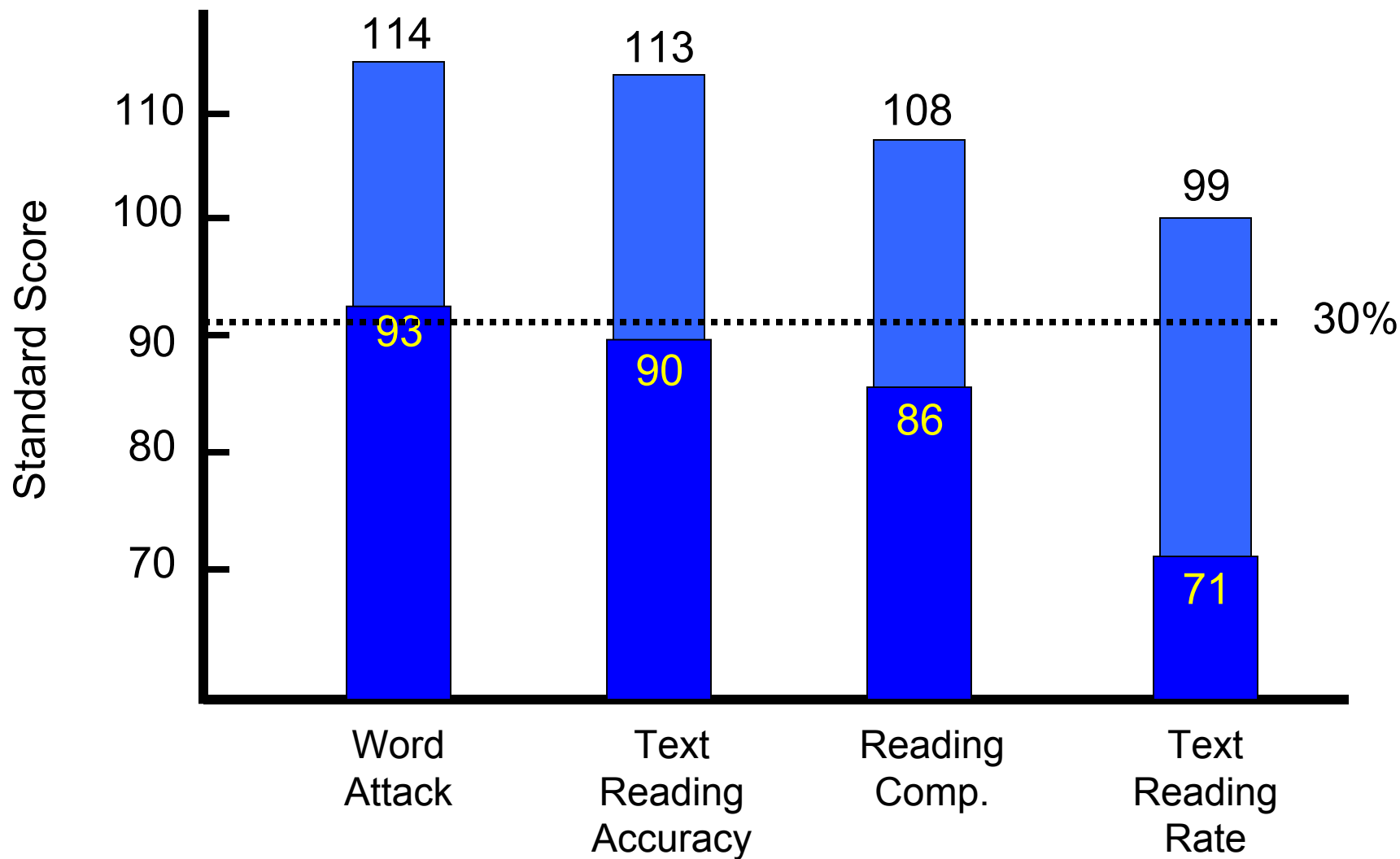
Intervention provided in groups of 2-4

Remedial Method: Spell Read P.A.T.

Mean beginning Word Identification Score = 92

Children with word level skills around the 30th percentile

Outcomes from 60 Hours of Small Group Intervention with upper middle class students--Spell Read



A Middle School Sample of 14 Students aged 11-14

Working class students

Mean Age 12 years

39% White, 64% Male

Received 37-58 hours (mean=51.4) hours of instruction

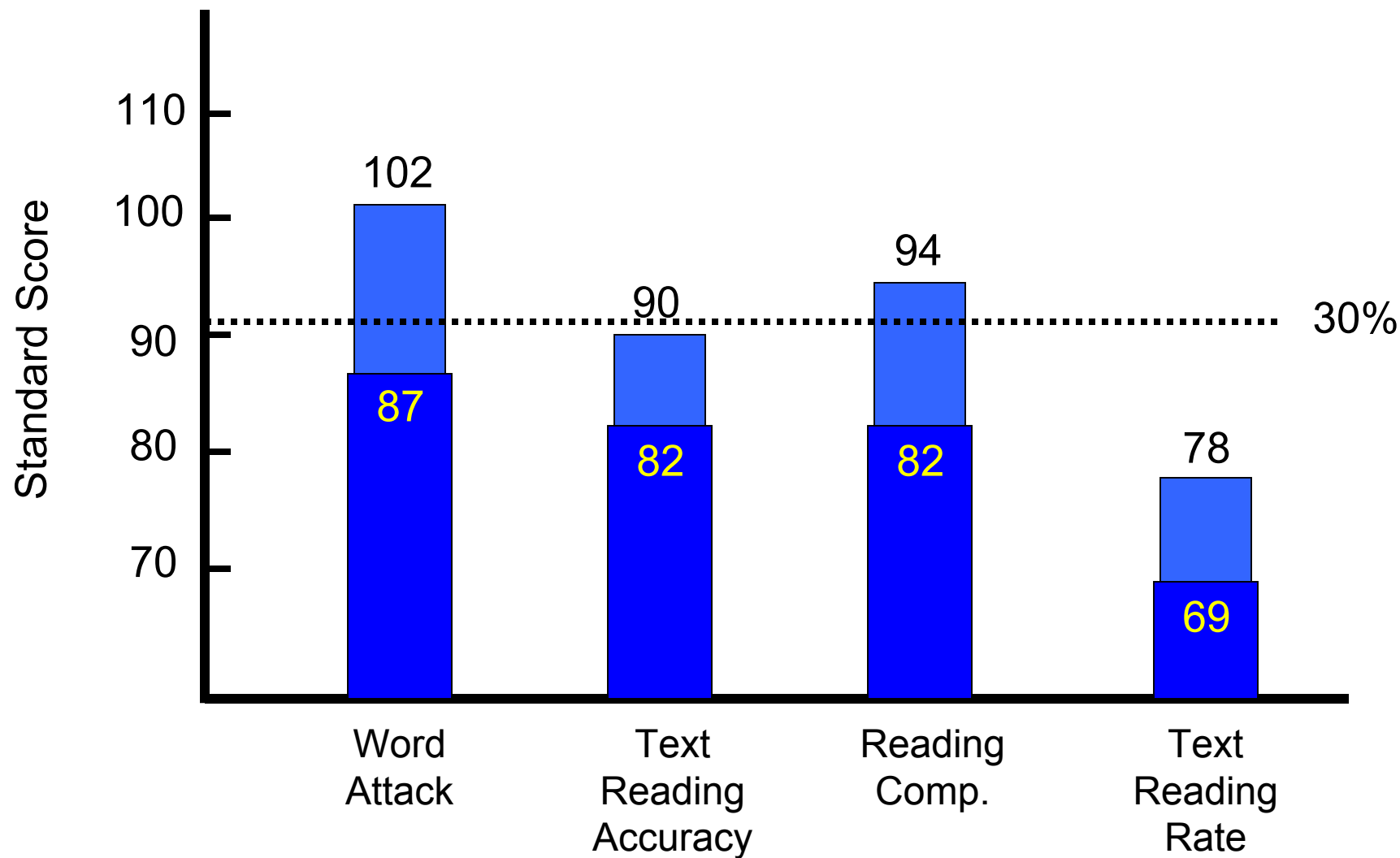
Intervention provided in groups of 2-4

Remedial Method: Spell Read P.A.T.

Mean Word Identification Score = 80

Children with word level skills around the 10 percentile

Outcomes from 50 Hours of Small Group Intervention with working class students--Spell Read



A School-based, treatment control study of 40 students

60% Free and reduced lunch

Mean Age 12 years (range 11-14)

45% White, 45% Black, 10% other

53% in special education

Received 94-108 hours (mean=100) hours of instruction

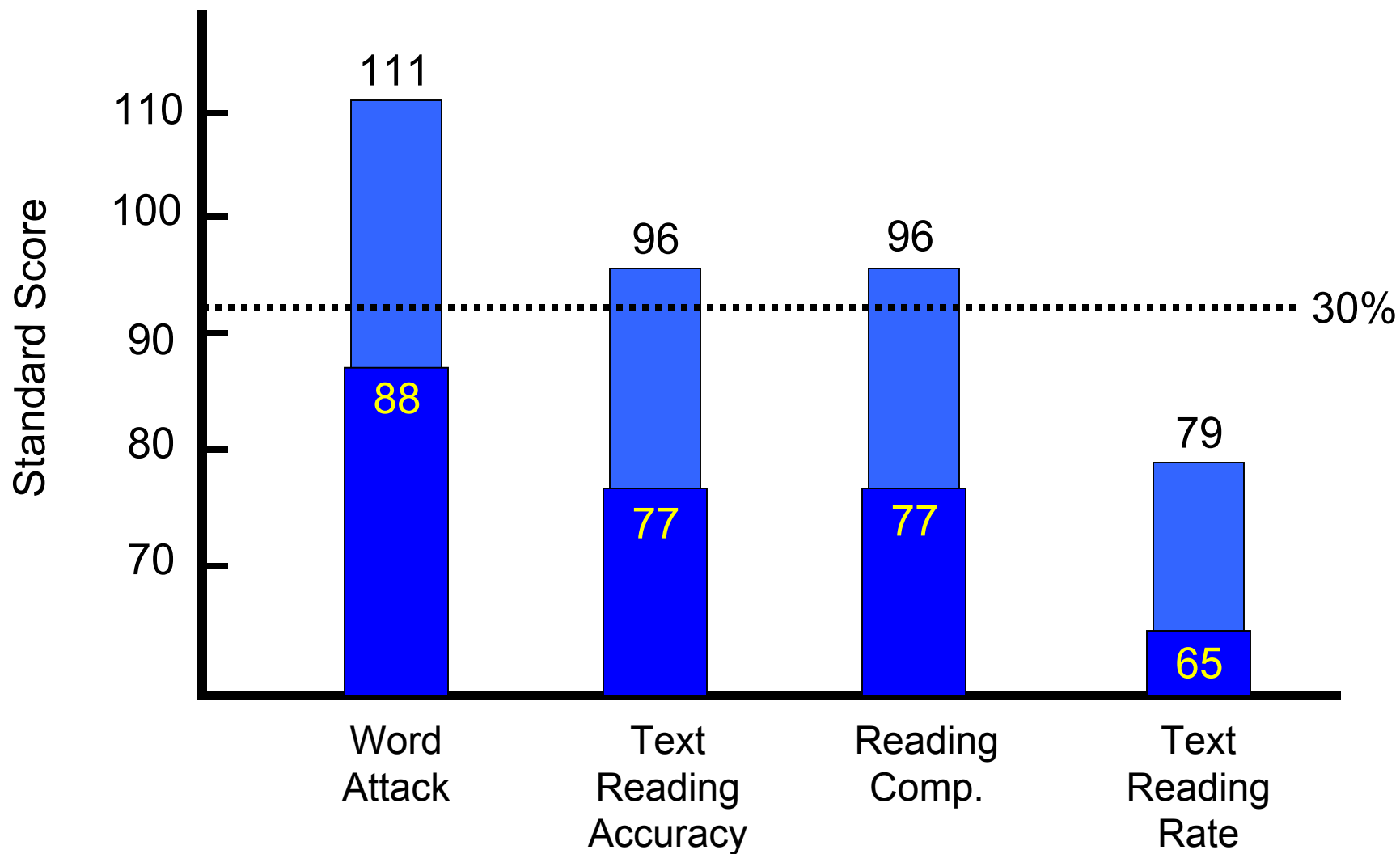
Intervention provided in groups of 4-5

Remedial Methods: Spell Read P.A.T., Soar to Success

Mean Word Identification Score = 83

Children begin with word level skills around 10th percentile

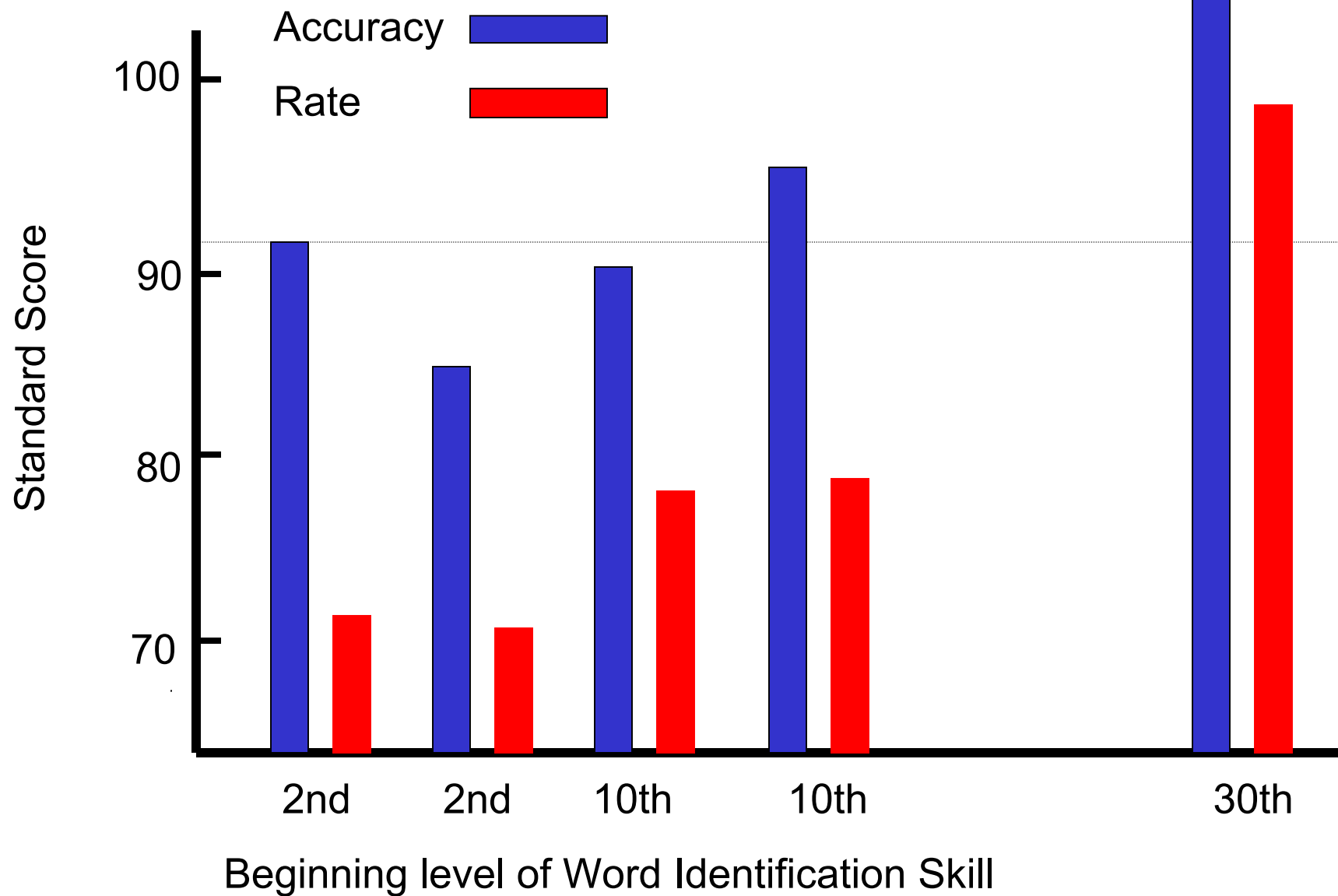
Outcomes from 100 Hours of Small Group Intervention--Spell Read



Summary and Conclusions:

1. For many older children with word level reading skills around the 30th percentile, a relatively brief (60hrs) dose of appropriate small group instruction can bring their skills in phonemic decoding, text reading accuracy and fluency, and comprehension solidly into the average range.
2. For many older children with word level reading skills around the 10th percentile, a more substantial dose (100hrs) of appropriate small group instruction can bring their skills in phonemic decoding, text reading accuracy, and reading comprehension solidly into the average range. Although the gap in reading fluency can be closed somewhat, reading fluency is likely to remain substantially impaired.
3. For older children with word level reading skills around the 2nd percentile, intensive interventions can have a strong effect on phonemic decoding, text reading accuracy, and reading comprehension, but they are likely to leave the fluency gap essentially unaffected.

Disparity in outcomes for rate vs. accuracy in four remediation studies



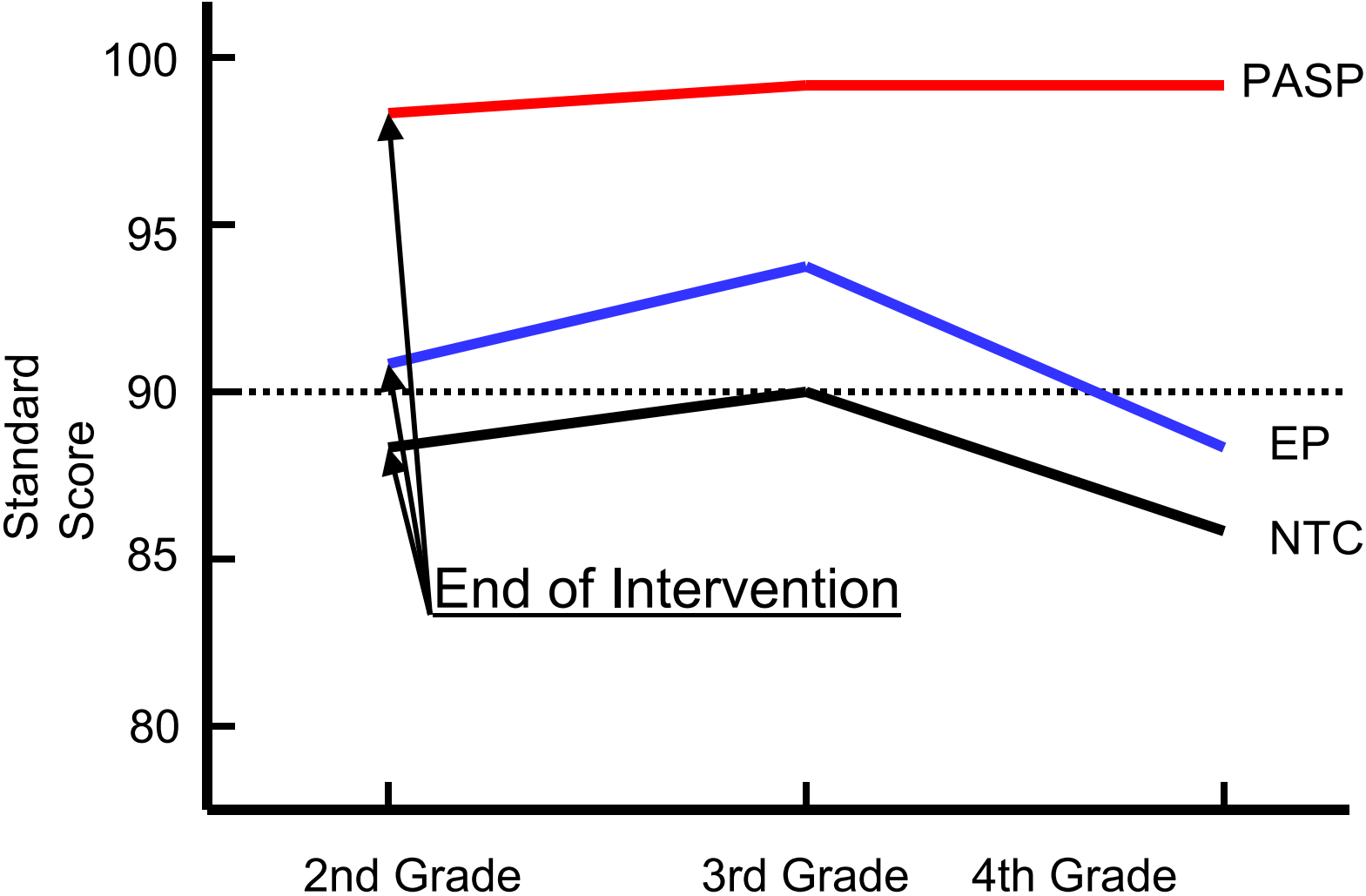
What happens to accuracy and fluency of reading scores when children receive powerful preventive instruction?

Children were identified in kindergarten and received 2 1/2 years of preventive instructional support.

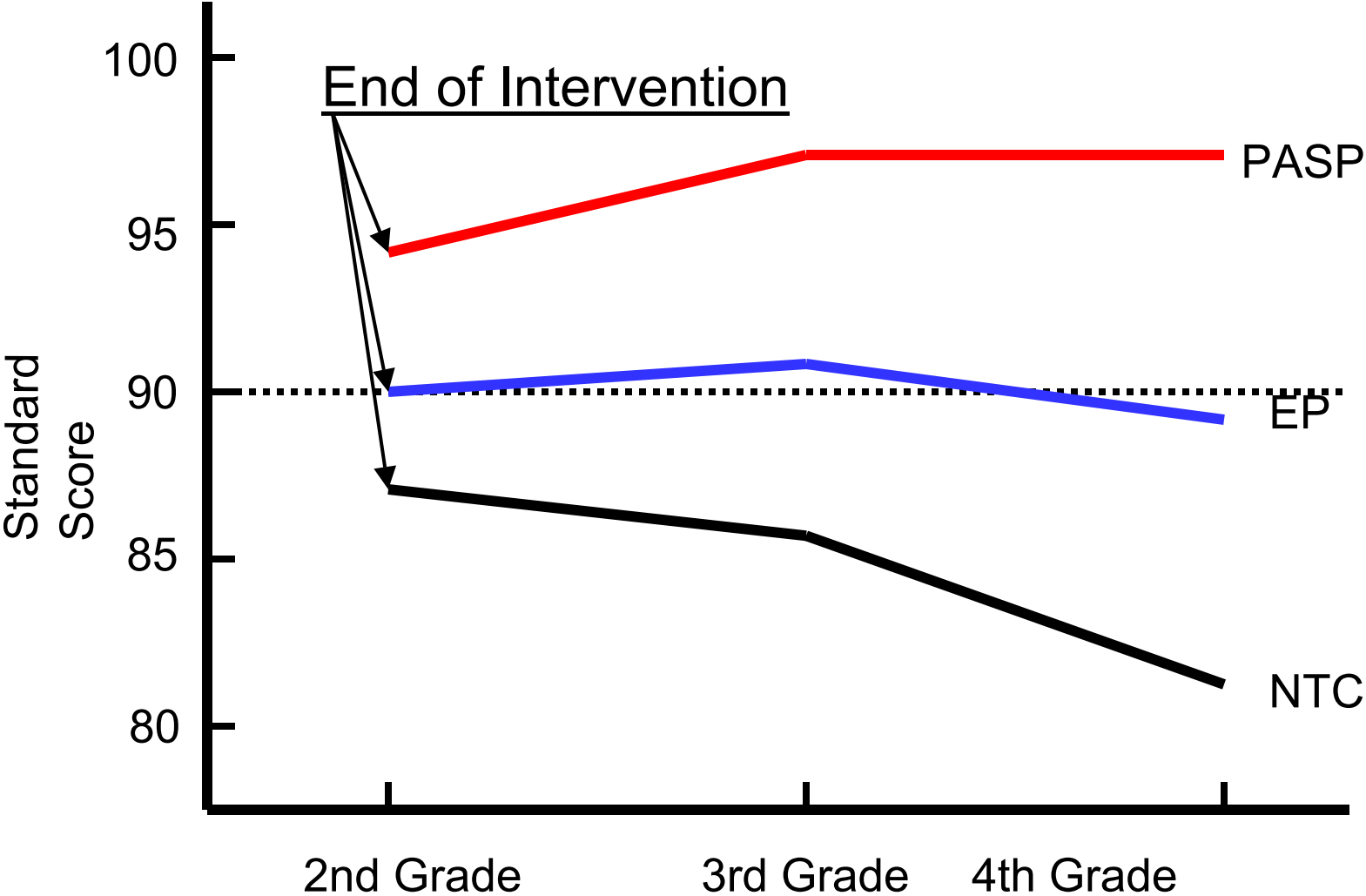
Curriculum featured multi-sensory, explicit instruction in phonemic awareness and phonics

Children were taught 1:1 in 20 minute sessions four times a week: half the sessions were taught by well trained teachers, and half were taught by aides.

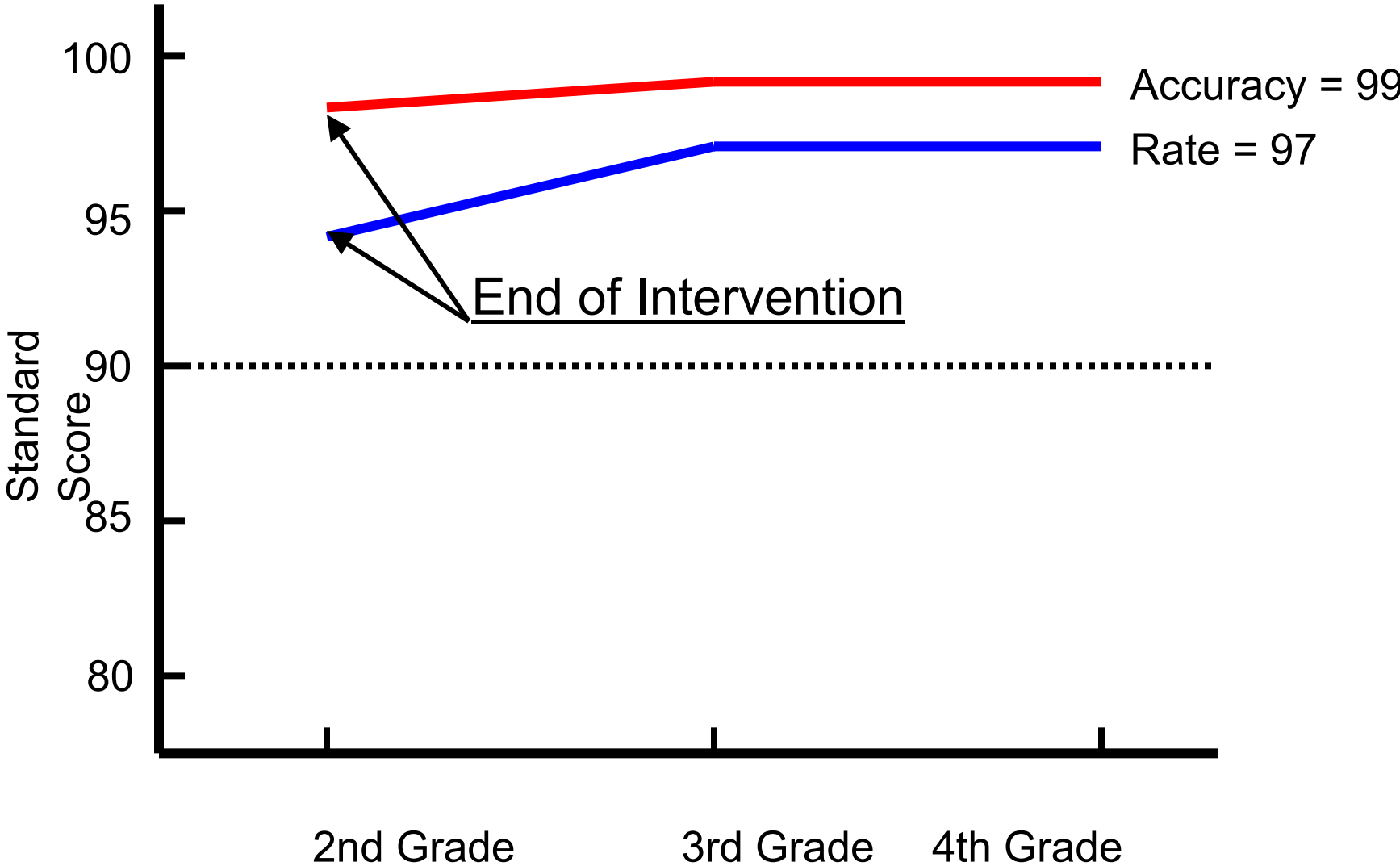
Follow-up growth in text reading accuracy



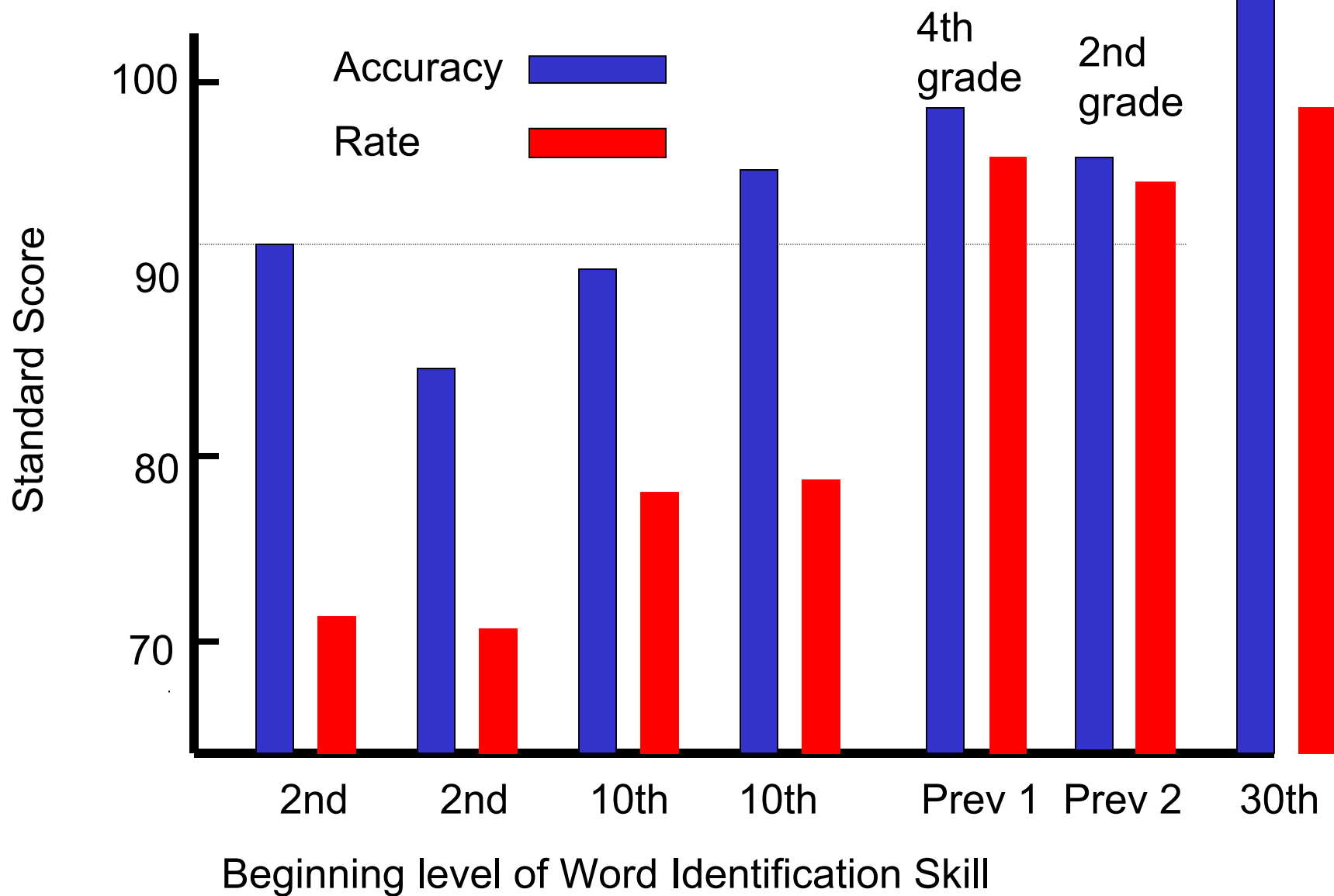
Follow-up growth in text reading fluency



Comparison of Rate vs. Fluency for strongest group (PASP)



Disparity in outcomes for rate vs. accuracy in remediation and prevention studies



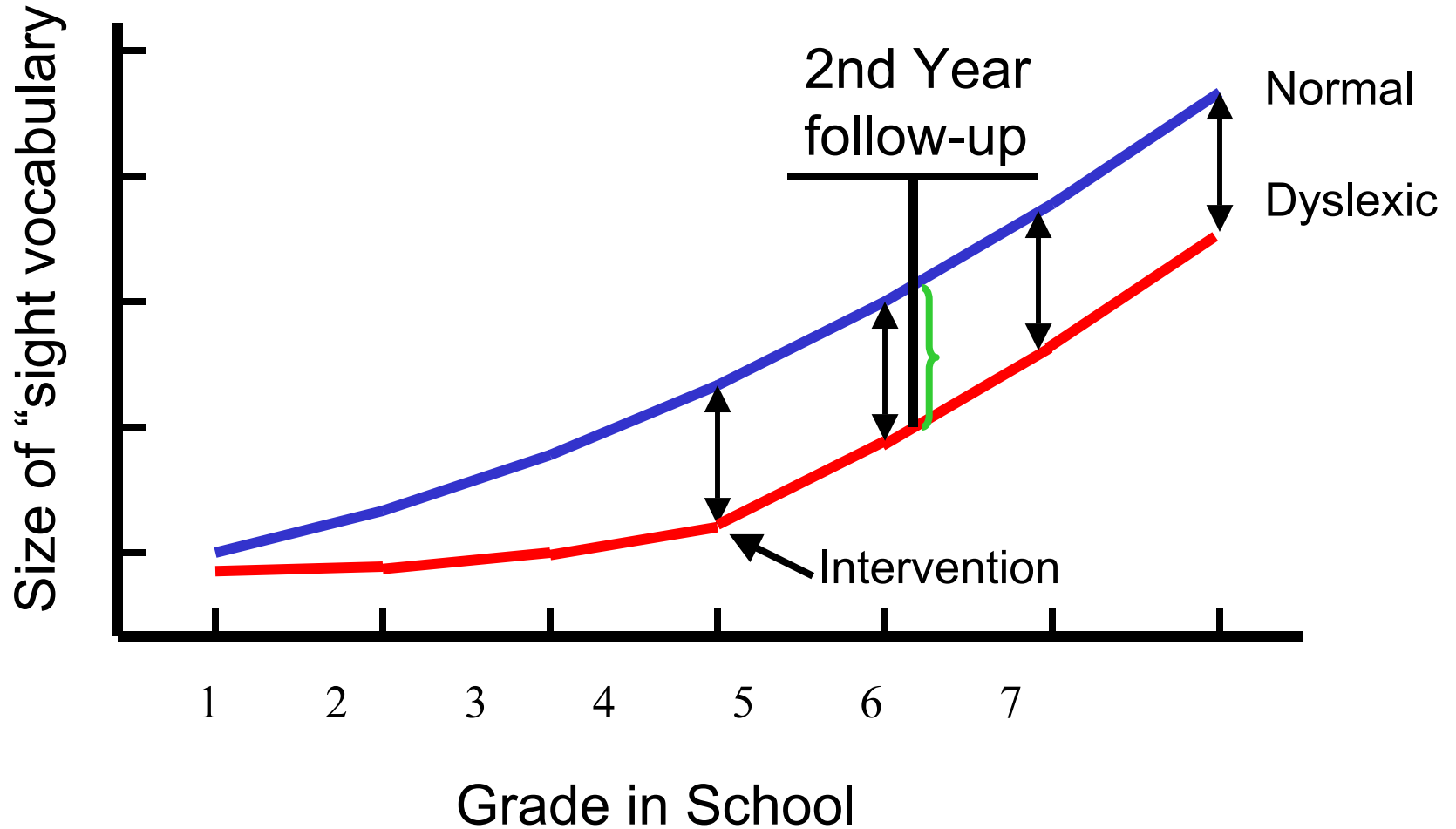
Our Current Hypothesis:

After problems with reading accuracy have been substantially remediated through intensive instruction, children remain dysfluent readers relative to age peers primarily because there are too many words in grade level passages that they still cannot recognize as sight words

If children are allowed to fall behind in the development of word reading skills in first, second, and third grade, they miss out on the many thousands of accurate word reading repetitions necessary to sustain normal growth in size of their sight word vocabulary.

Very low beginning word identification scores may signify a level of deficiency in sight word development that cannot noticeably be overcome during intensive interventions. Further, normal levels of reading practice following intervention cannot significantly “close the gap” with average children who are continuing to acquire sight words at a rapid pace in late elementary, middle, and high school.

Projected growth in “sight vocabulary” of normal readers and disabled children before and after remediation



The major factor limiting reading fluency in older children with reading disabilities is a relative deficiency in the number of words they can read “by sight”.

which suggests.....

Once children become able to read text accurately, the major challenge in working with older disabled readers is how to engineer and focus reading instruction and practice so that development of “sight word vocabulary” is accelerated at a rate sufficient to “close the gap” in reading fluency.

Some useful references:

Written reports of the intervention research:

Torgesen, et al., (2001) Intensive remedial instruction for children with severe reading disabilities...*Journal of Learning Disabilities*, 34, 33-58.

Torgesen, et al., (in press). Progress toward understanding the instructional conditions necessary for remediating reading difficulties in older children. In B. Foorman (ed.) *Interventions for children at-risk for reading difficulties or identified with reading difficulties*. York Press: Parkton MD

The best current explanation of how children learn sight words:

Ehri, L.C. (1998). Grapheme-phoneme knowledge is essential for learning to read words in English. In J. Metsala & L. Ehri (Eds.). *Word recognition in beginning reading*. (pp. 3-40). Hillsdale, NJ: Lawrence Erlbaum Assoc.

Web site for Spell-Read P.A.T.

<http://www.spellread.com/intro.cfm>