

**EFFECTIVE INSTRUCTION: IT
DEPENDS ON CHILDREN'S
LANGUAGE AND LITERACY SKILLS
INDIVIDUALIZING INSTRUCTION FROM
KINDERGARTEN THROUGH THIRD GRADE**

Head Start Conference

Washington DC 2010

THANKS AND ACKNOWLEDGMENTS

- Frederick J. Morrison, University of Michigan
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- ISI Team
 - Elizabeth Crowe
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 - Stephanie Glasney
 - And everybody
- US Department of Education IES
- National Institute of Child Health and Human Development



CHILD X INSTRUCTION INTERACTIONS

- The effect of a particular reading instruction strategy may depend on the language and literacy skills children bring to the classroom
 - Correlational evidence from kindergarten through third grade
- Examining whether CXI are implicated in students' response to instruction.



APTITUDE X TREATMENT INTERACTIONS

- ...well-substantiated findings regarding ATI are scarce. Few investigations have been replicated. Many reports (of both positive and negative results) must be discounted because of poor procedure (p. 6).
 - Cronbach & Snow, 1977
- We are finding them now because...
 - Better understanding of reading
 - Better statistics
 - Multidimensional Conceptualization of Reading rather than more global curricular conceptualizations



OVERVIEW

- Why do students experience difficulty making gains in early reading?
- Multiple Dimensions of Instruction
- Providing instruction to all students
 - By considering Child X Instruction interactions
- Implementing individualized or differentiated instruction in the classroom
 - Implications for preschool
- What is the research evidence?



WHY DO READERS EXPERIENCE DIFFICULTY?

- Knowledge & Skill in
 - Decoding
 - Comprehending
 - Semantic and academic knowledge
 - Studying
- Lack of Experience
 - with books
 - with concepts
 - with tasks & formats
 - with the community and other places in the world
- Interest & Motivation
- Texts & Tasks
 - Thin instruction
 - Inconsiderate text
 - mismatch



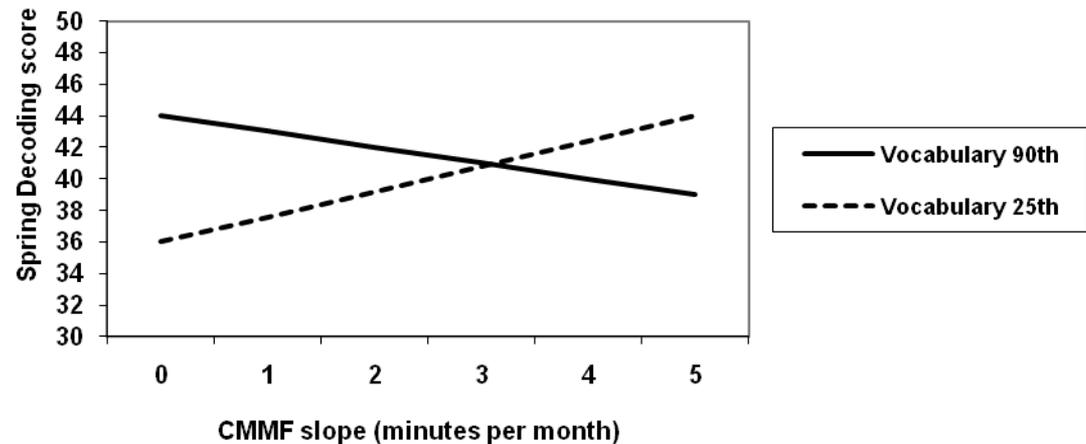
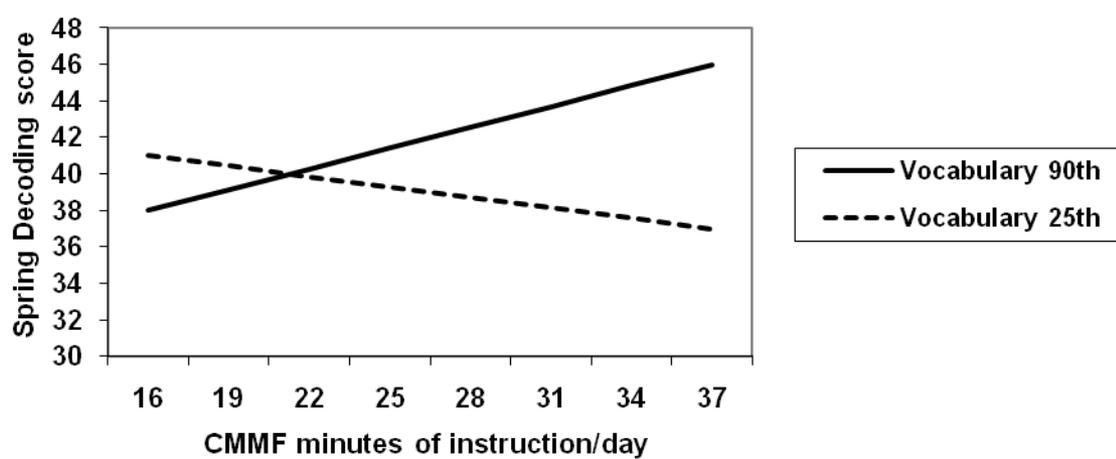
PROVIDE INSTRUCTION TO ALL CHILDREN

- Set high expectations for all students
- Monitor literacy growth for all children
 - Including able children

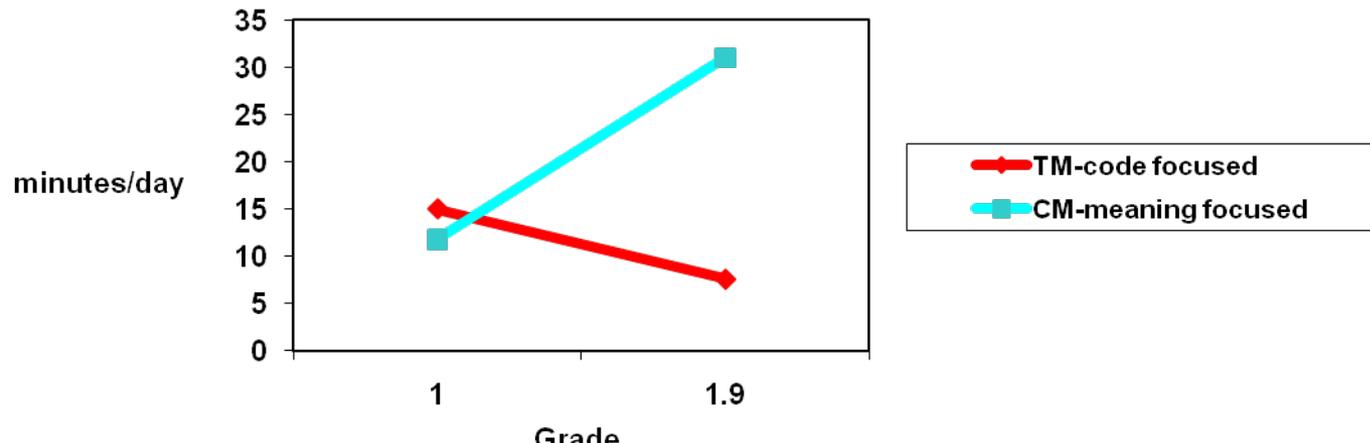
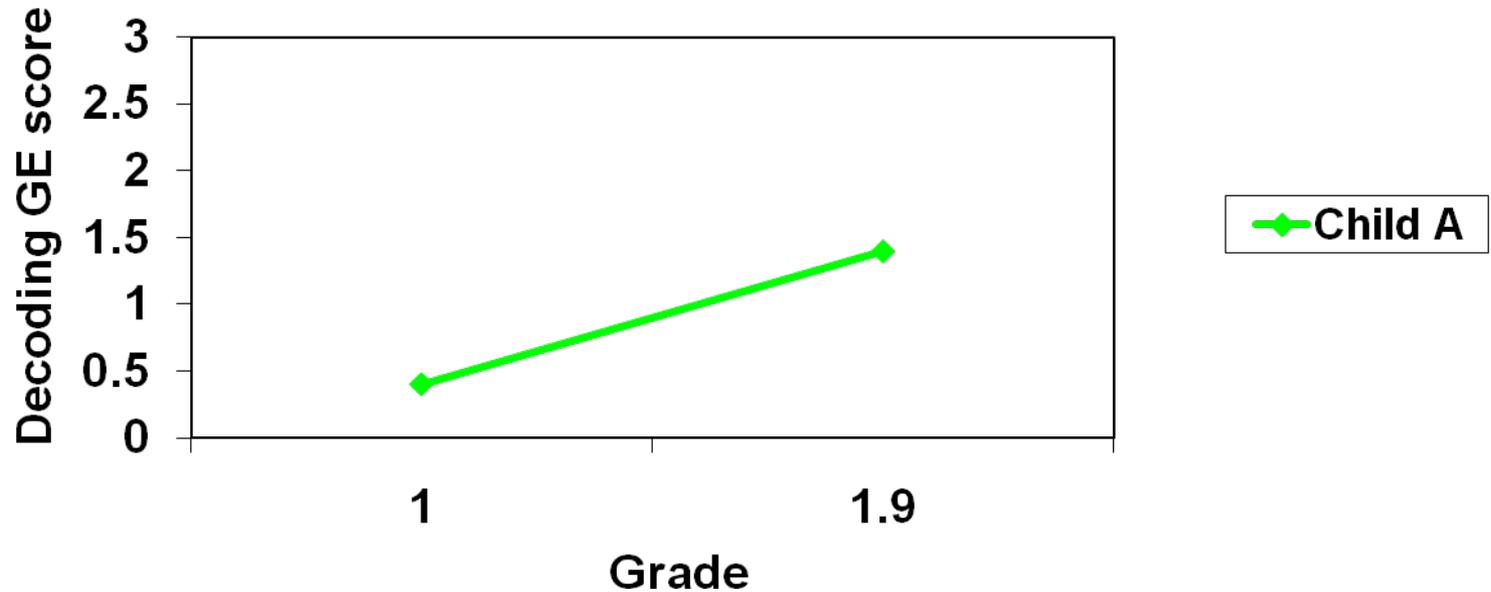


Dimensions	Teacher/Child Managed	Child Managed
Code Focused	Third Grade: The teacher is working with a small group of students on an activity designed to help decode and spell multisyllabic words by using similar root words with different prefixes and suffixes.	Third Grade Students are working in small, peer groups to practice spelling and decoding multisyllabic words.
Meaning Focused	The first grade teacher , working with a small group of students, asks them to make inferences between two or more stories read in class, in order to make connections and build background knowledge.	Second Grade Students are working on a multiple-meaning vocabulary worksheet with the following words: bark, story, and track. Other students are engaged in writing a summary of a story they've recently read.

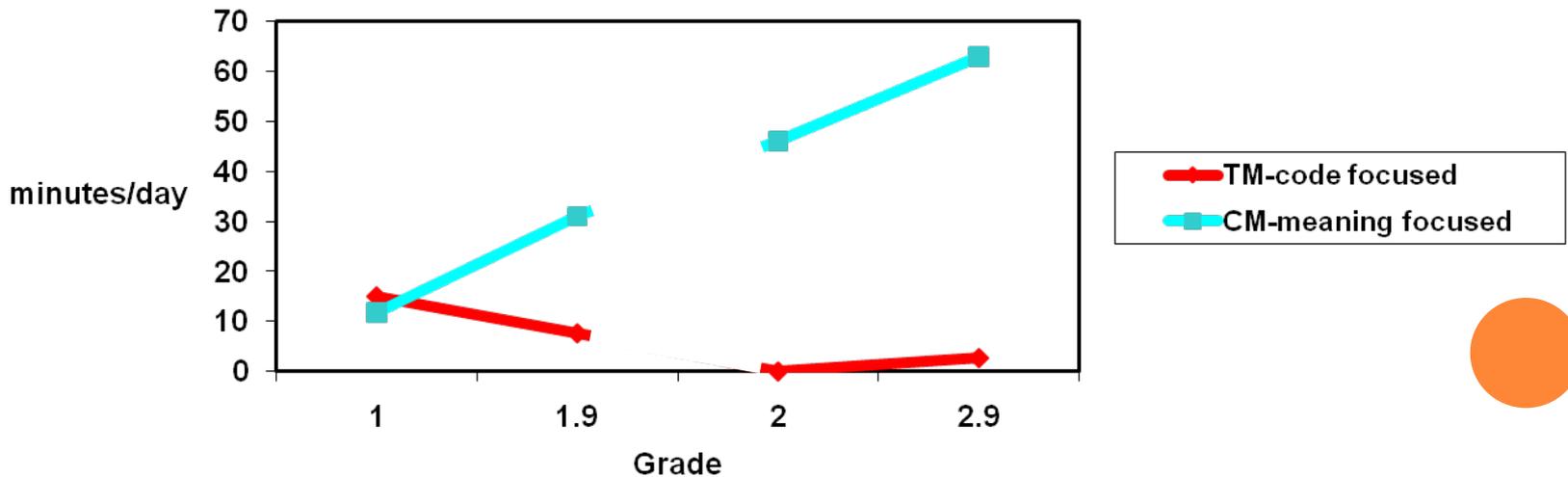
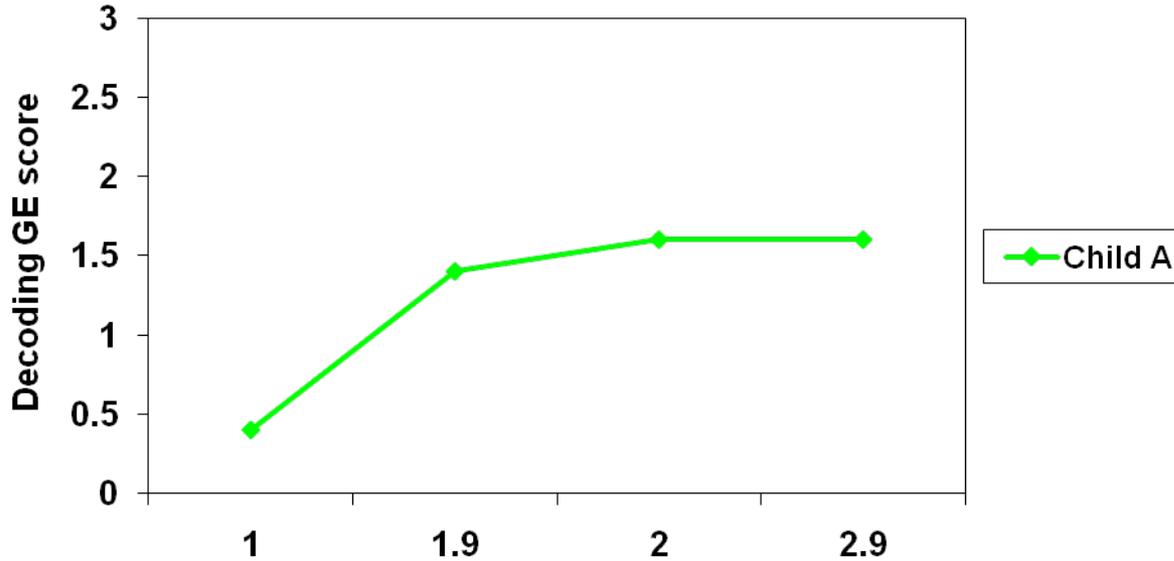
CHILD-INSTRUCTION INTERACTIONS – FALL VOCABULARY BY CHILD-MANAGED MEANING FOCUSED (CMMF) AMOUNT AND SLOPE



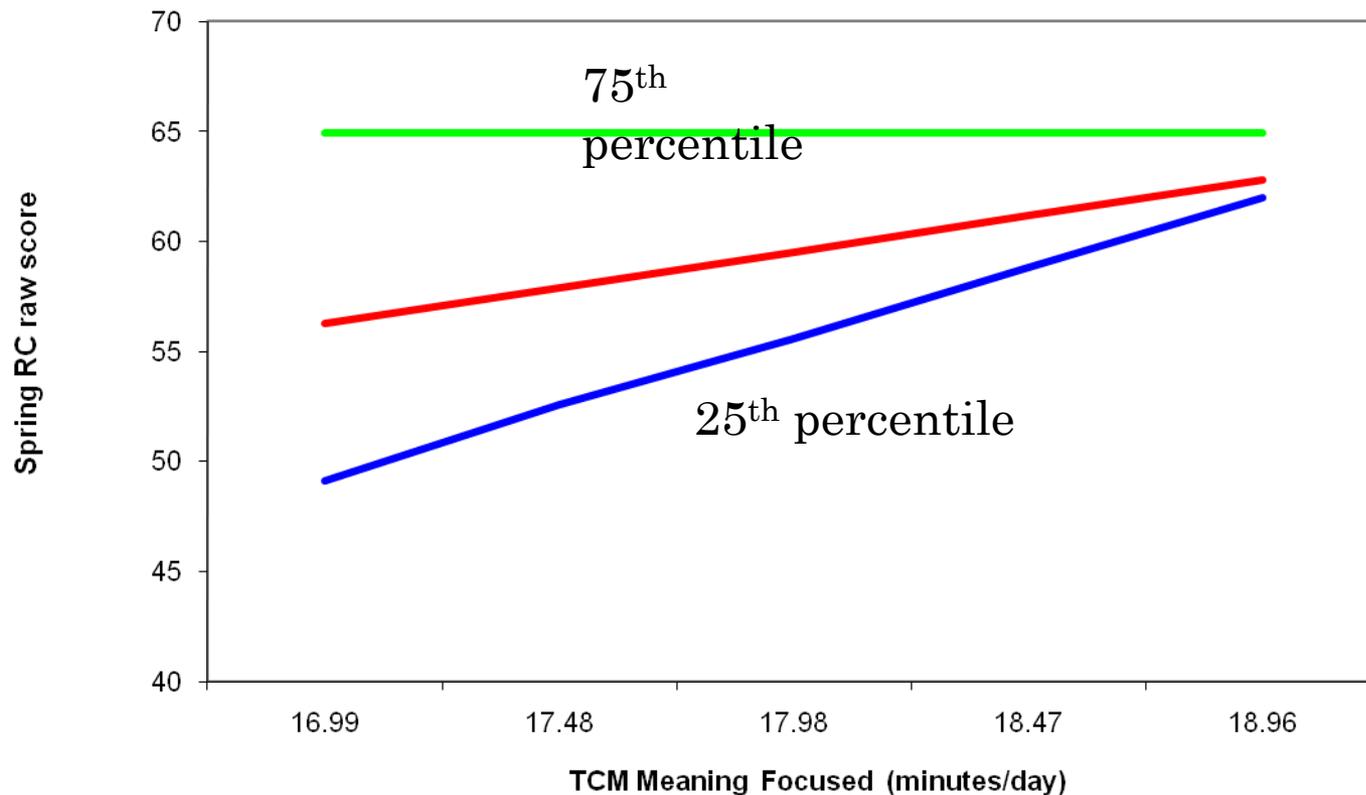
CASE STUDY 1ST GRADER WITH LOWER FALL VOCABULARY AND DECODING SKILLS



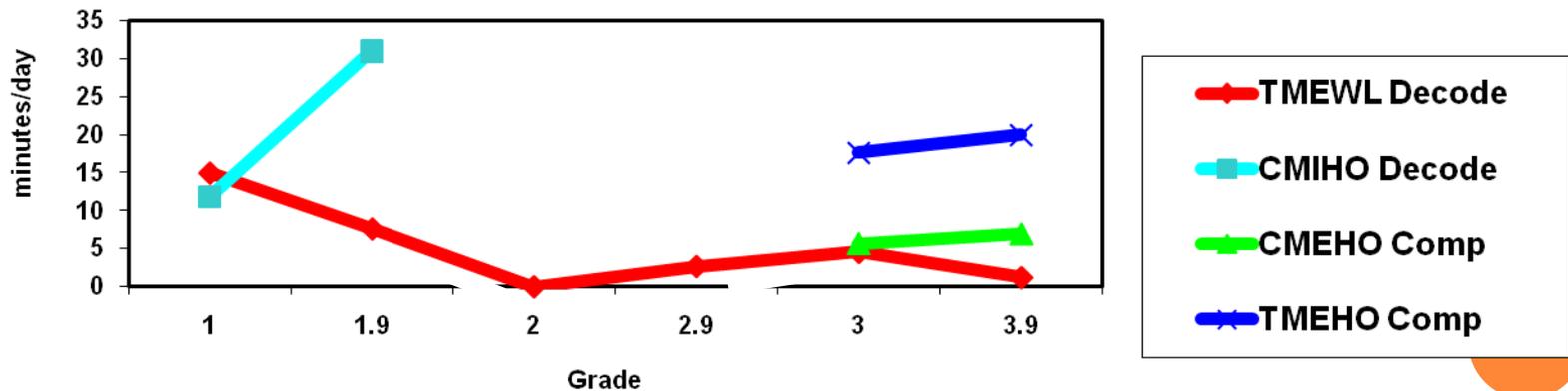
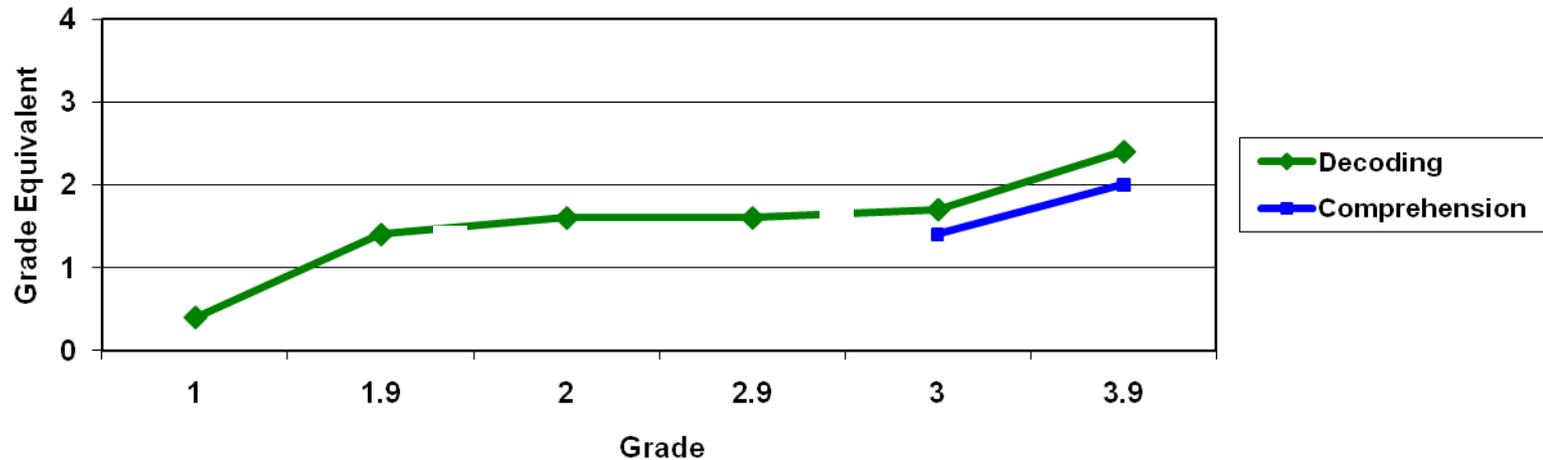
CASE STUDY FROM 1ST THROUGH 2ND GRADE

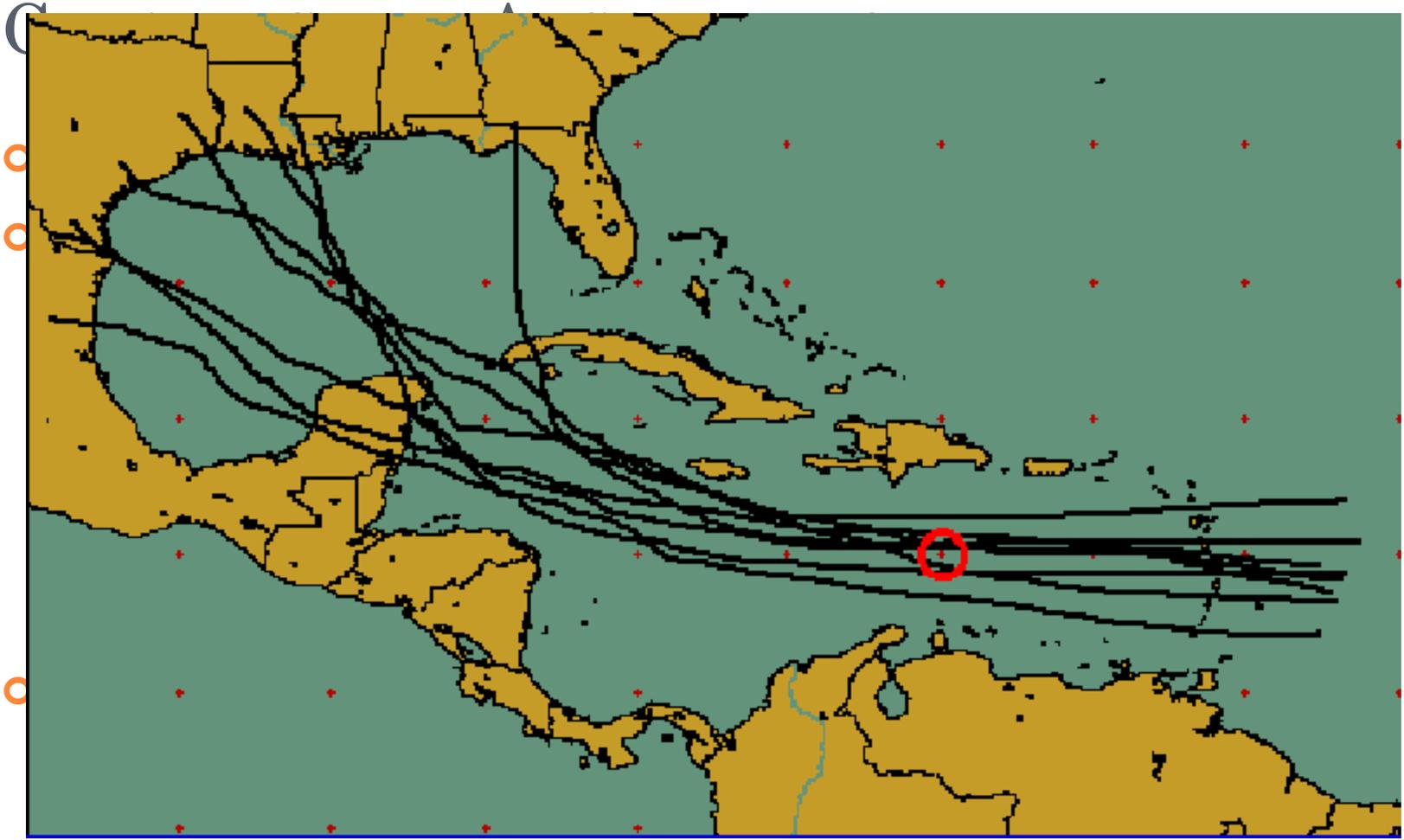


3RD GRADE FALL RC BY TEACHER/CHILD-MANAGED READING COMPREHENSION (TCM-RC) INTERACTION



FOLLOWING CHILD A THROUGH 3RD GRADE





RESEARCH QUESTIONS

- Can teachers implement ISI?
- Is ISI more effective than an alternative treatment in grades kindergarten through third?
- Does the precision with which students receive the recommended amounts predict student outcomes?
- Does the effect of ISI from 1st through 3rd grade accumulate?



THE INTERVENTION

- Teacher Professional Development
 - Coaching model with classroom-based support
 - 2 half-day workshops
 - Monthly meetings
- Assessment
 - Word-level reading
 - Passage-level reading
 - Vocabulary/Semantic Knowledge
- Assessment-to-instruction (A2i) software



LOG IN: A2IDEMO

PASSWORD: ISI06!

ISI Home
Welcome Page
Video Library
Word Match Game
Articles
Resources
Resources Home
Dimensions of Instruction
Using Assessment to Guide Instruction
The Individualized Classroom
The First Six Weeks
What A2I Teachers Are Asking
isi FAQ
A2I Technical Assistance
A2I Resources
Using Research in Your Classroom
Discussion Board Favorites

Carol Connor, Welcome to the Individualizing Student Instruction Web Site!



Find What You Need

Welcome to Individualizing Student Instruction online - your portal to planning for effective instruction and professional development resources.

Visit the [Discussion Board](#) to see the latest A2I updates and new resources.

Announcements

Date	Text
6/12/2009	*** Site Availability Notice - June 26 - 29, 2009 *** A2I will be unavailable from Friday June, 26, 2009 through Monday, June 29, 2009 while the servers are moved to a new location. We apologize for the inconvenience while we move to a new facility.
1/14/2009	Bay County Participants: Please join us on Tuesday, January 20th @ 2:45 for our January Community of Practice meeting. We will be meeting in room 416 at the Nelson Building and light refreshments will be provided immediately before the meeting begins. We look forward to seeing you! Happy New Year!
1/06/2009	Tallahassee Participants: We look forward to seeing everyone Tuesday, January 13th @ 4:15 for our January Community of Practice meeting. We will be meeting in the same room and light refreshments will be provided. Check in at the first floor desk and follow the signs to the third floor. If you have not already done so, please post to the Discussion Board and respond to someone's post. At our meeting we will be discussing effective strategies in providing small group and individual instruction in our third grade classes.

Please take the time to reflect on the recommended minutes in the Literacy Minutes Manager. You'll notice that some of your students have increased recommended amounts in the Child-Managed-Meaning Focused section.

Thanks again for all of your work and great instruction!
October Communities of Practice are coming up or underway! Please contact your research partner if you need the date and location. Also, we've made some minor changes to the first grade algorithms. You'll notice that some of your students will have different recommended amounts. These changes are based on updated research and should offer more precise recommendations. Thanks again for all of you work and great instruction!

NEW 10/20/2008

Discussions Summary

General Discussions				Administrators
[ISI Discussion Forums]				
Professional Development Forum ISI PD Team Private Forum	94	385	RE: Testing .. 10/2/2008 11:55:52 AM	ISI Administrators
Sub-forums: A2I Technical Issues for Research Partners Forum				
Individualizing Instruction Forum This is the main ISI Forum	24	128	RE: Easy Way to Locate Center .. 4/26/2009 10:14:19 PM	BAY ISI, ISI Administrators
Technical Forum This is the ISI Forum for all things Technology.	30	110	RE: Feedback/Suggestions .. 11/24/2008 2:01:08 PM	BAY ISI, ISI Administrators



Classroom View

School: Ramapo HS

Classroom: Mr. Demo's Classroom

	Teacher Managed		Child Managed		Recommended	Group Assigned
	Meaning-Focused	Code-Focused	Meaning-Focused	Code-Focused		
Group 1						
Pitt, Brad	27	25	18	30	1	1
Rushing, Maurice	26	29	20	30	1	1
Recommended Minutes	25	25	20	30		
Group 2						
Elam, Jordan	25	15	24	18	2	2
Gershwin, Geoff	25	17	24	21 +	2	2
Hostetter, Albert	26	15	24	11	3	2
Marcus, Demario	25	15	24	18	2	2
Recommended Minutes	25	15	25	15		
Group 3						
O'Connell, Dorothy	28	15	23	5	3	3
Stirner, Gary	26	15	18	5	3	3
Valdez, Adriana	25	12	23	5	3	3
Recommended Minutes	25	15	20	5		
Group 4						
Roberts, Terry	39	11	28	5	4	4
Russell, Elizabeth	34	12	25	5	4	4
Recommended Minutes	35	10	25	5		

Update

Reset to Recommended Groupings

VIDEO

- Implementation in First Grade



FORMATIVE ASSESSMENT

- Use assessment to directly inform instructional decisions and implementation
- Examples of assessments
 - Standardized Assessments
 - SAT
 - Woodcock-Johnson Tests of Achievement III
 - Curriculum-based assessments
 - DIBELS
 - AIMS WEB
 - Miscue analysis
 - Think alouds
- Frequency of assessment will depend on the test, the child and the skill assessed



FLEXIBLE LEARNING GROUPS

- Change whenever children's skills change
- May differ for different components
 - Language
 - Decoding
 - Reading Comprehension
 - Writing
- Organize so teacher table is homogeneous but peer-group activities heterogeneous
 - Word of caution – marginalization of children who struggle with reading
 - (Christian & Bloom, 2004; Palincsar, et al., 2000)



PLANNING TO DIFFERENTIATE INSTRUCTION

- Don't try to wing it
- Teachers who planned to differentiate instruction were generally more effective with all students
 - (Fuchs & Fuchs, 1994)
- Organize by students' profile
 - Different constellations of skills, dispositions, and background
 - Plan for the week
 - Plan for the day
- Don't be afraid to change the plan



CLASSROOM SET-UP

- One example but there are many ways to differentiate
- Flexible homogeneous-skill based groups based on learning needs
- Teacher table
 - Provides the opportunity to work the small groups of children
 - Focus on
 - Review
 - Preview
 - Challenge
- Centers and child-managed activities
 - Meaningful activities
 - Peer-group collaboration
 - Seatwork
 - Computers
 - Library and writing centers



CLASSROOM MANAGEMENT

- The goal is that students are engaged in meaningful instruction for most of the school day (Wharton-McDonald, et al., 1998)
 - This does not always happen (Pianta, et al., 2007)
- Planning
- Authoritative leadership
 - Not over controlling or disengaged
- Consistency
- Routines
- Clear cues for transitions
 - Switch songs



ADAPTATIONS FRAMEWORK

	Few Adaptations	More Adaptations
Content of instruction (comp, word id, fluency, vocabulary, etc.)		
Intensity and Duration (how long and how frequently)		
Instructional support (explicitness, scaffolding, etc.)		
Text(s) (difficulty, genre, familiarity, authenticity)		
Tasks (open/closed; timed/untimed; independent/cooperative, etc.)		
Practice (type, quantity, success rate, feedback, etc.)		
Amount of actual reading (independent, supported, collaborative, etc.)		

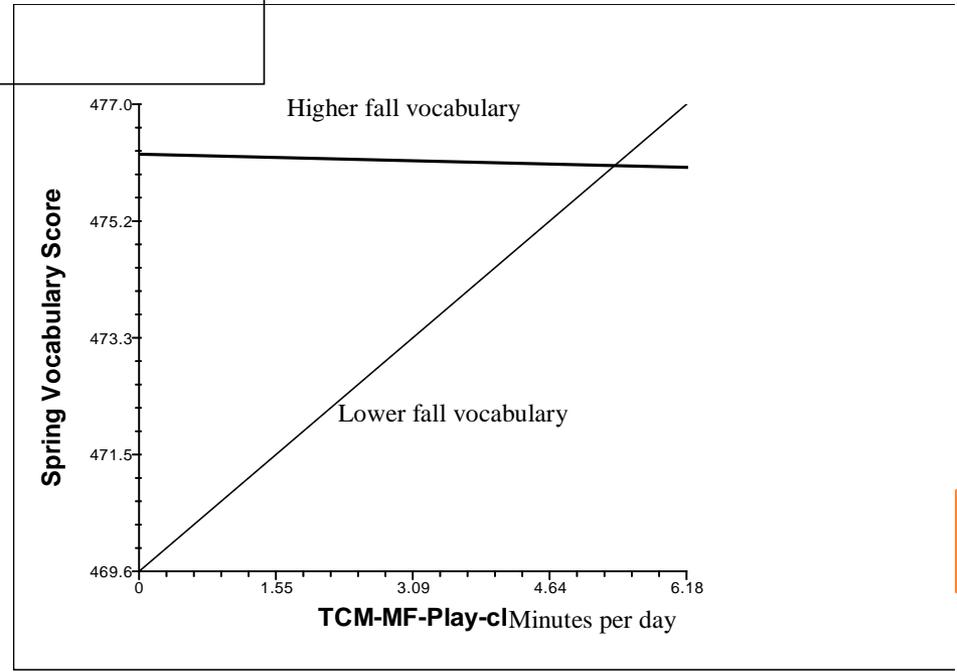
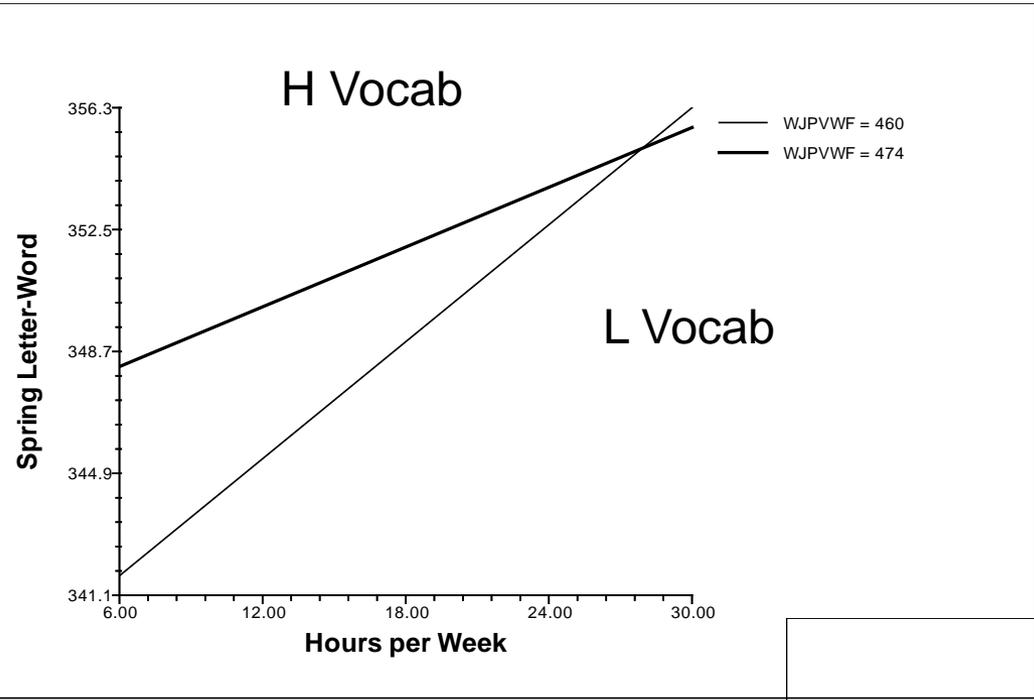


WHAT ABOUT PRESCHOOL?

- Explicit instruction versus child-centered
 - Graue et al., 2004
 - Connor et al., 2006



Outcome	Alphabet		Letter/Word Recognition		Vocabulary	
<i>Child fall score status</i>	<i>Lower fall Alphabet</i>	<i>Higher fall Alphabet</i>	<i>Lower fall LW</i>	<i>Higher fall LW</i>	<i>Lower fall Vocabulary</i>	<i>Higher fall Vocabulary</i>
Classroom Level (minutes/day)						
TCM-CF-cl	+	++	+	-	0	+
TCM-MF-cl			-	+	++	+
TM-MF-cl					.06	.06
CM-MF-cl					.16	.16
CM-MF-Play-cl					++	0
Student Level (minutes/day)						
TCM-CF-st	.28	.28	.12	.12		
TCM-MF-st						



RESEARCH IN PRESCHOOL

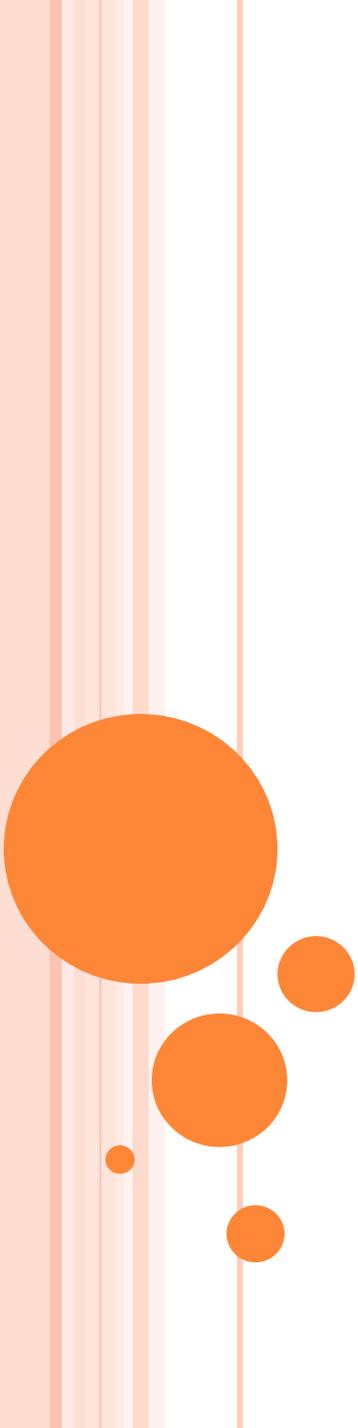
- There is correlational evidence of Child by Instruction Interactions but have not conducted an RCT (Connor et al., 2006)
 - Incoming language and emergent literacy predicted effective classroom activities and instruction
 - Generally, whole class TCM-meaning focused predicted vocabulary gains
 - Play predicted vocabulary gains but only for children with weak initial vocabulary
 - TCM-code focused activities predicted letter-word reading gains but there were CXI
 - EXCEPT when provided in smaller groups of children
 - Small group had 4 times the effect of whole class on code-related skills



PRESCHOOL AND READING

- What would individualized instruction look like in preschool?





DOES INDIVIDUALIZING INSTRUCTION WORK?

Results of Randomized Control Trials

SCHOOLS

Study 1: 22 treatment teacher and 25 control teachers, 616 children

School	Treatment School?	Reading First?	Total number first grade classrooms	Core Curriculum	% of students on FARL
A	No	Yes	3	Reading Mastery	93
B	Yes	Yes	6	Open Court	96
C	No	Yes	6	Open Court	88
D	Yes	Yes	5	Reading Mastery	82
E	No	Yes	5	Open Court	57
F	Yes	No	4	Open Court	69
G	Yes	No	5	Open Court	67
H	No	No	7	Open Court	37
I	No	No	6	Open Court	24
J	Yes	No	5	Open Court	29

KINDERGARTEN

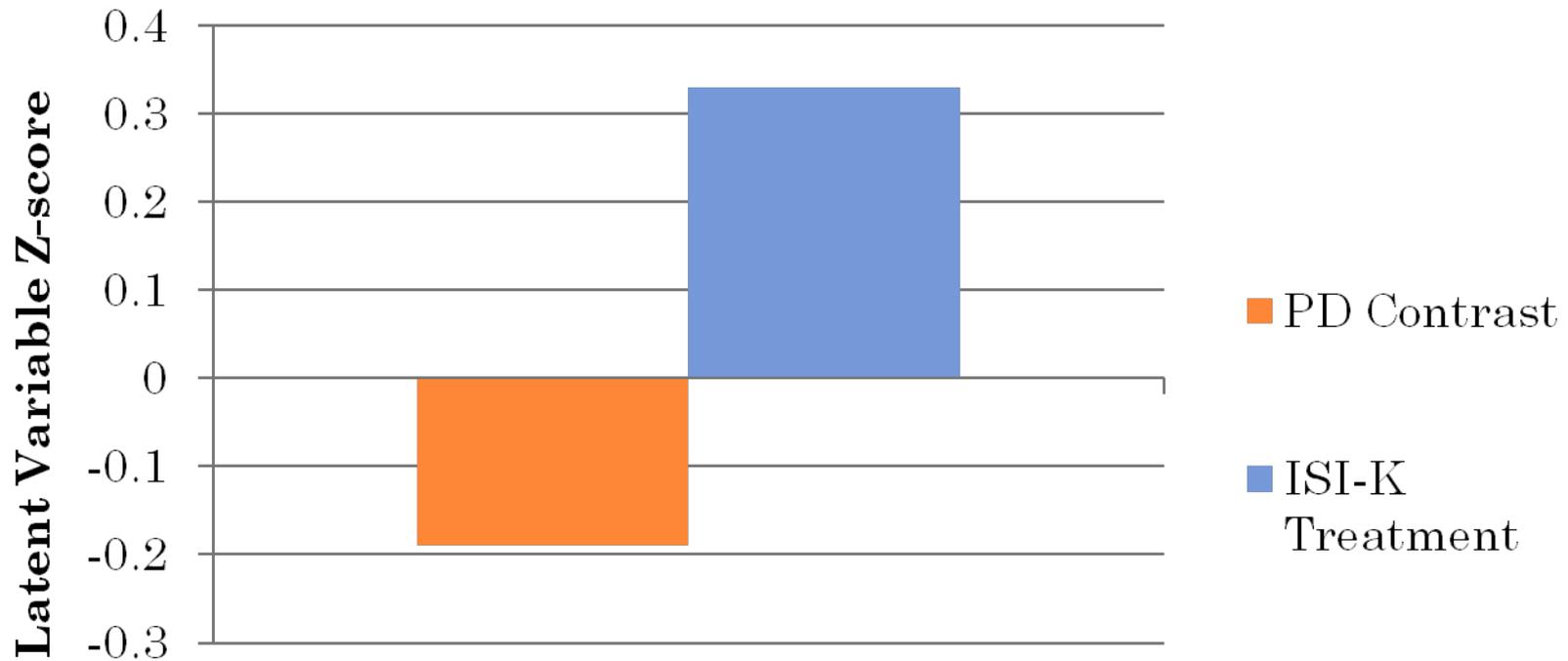
(AL OTAIBA ET AL IN PRESS)

- 12 Schools
 - Full Day Kindergarten
 - 90 Min Literacy Block
- 44 Classrooms
 - 23 ISI Intervention
 - 21 Control – Workshop PD
- 556 Children
 - 305 ISI Intervention
 - 251 Control
 - 55% qualify for free and reduced lunch (60% ISI)
 - About 15% qualified for special education



MULTIVARIATE MULTILEVEL MODELING RESULTS

Effect of ISI-K

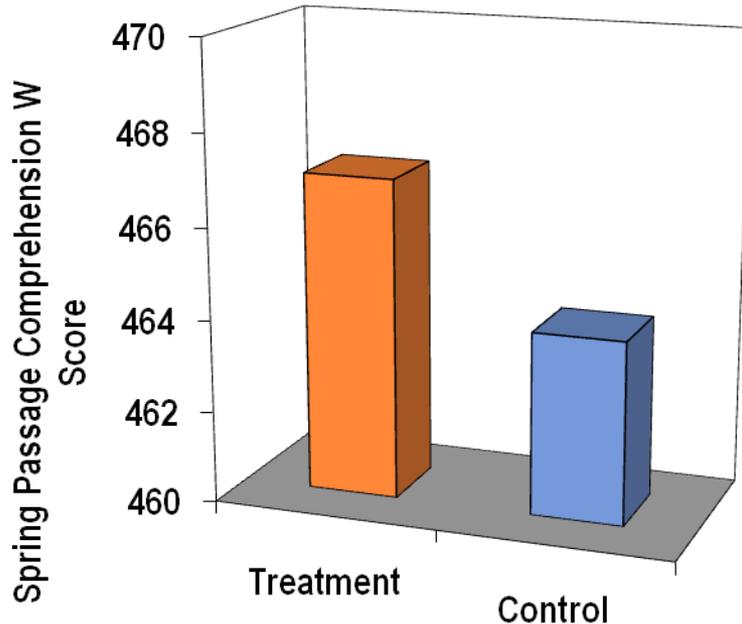


HLM: INTENT TO TREAT RESULTS

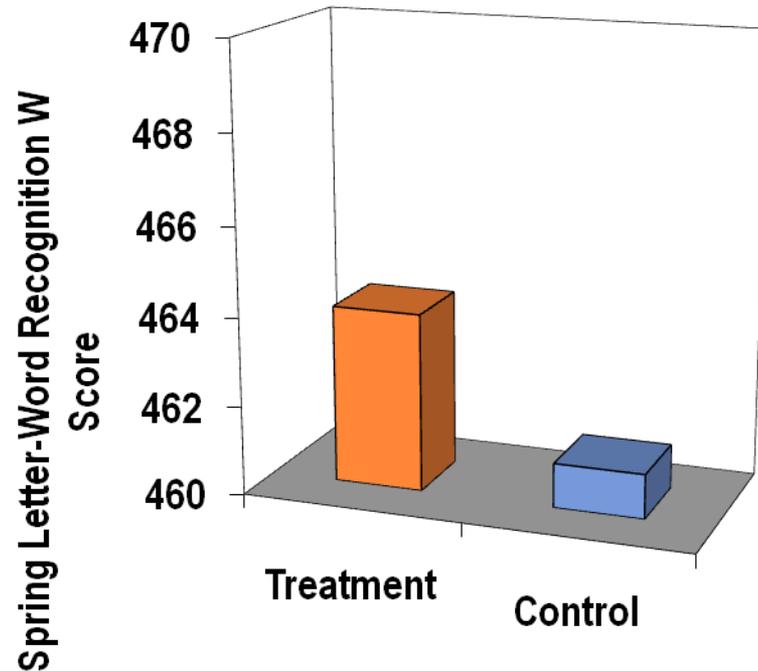
616 students; 47 classes

562 students; 26 classes

Study 1 (2005-2006)



Study 2 (2006-2007)



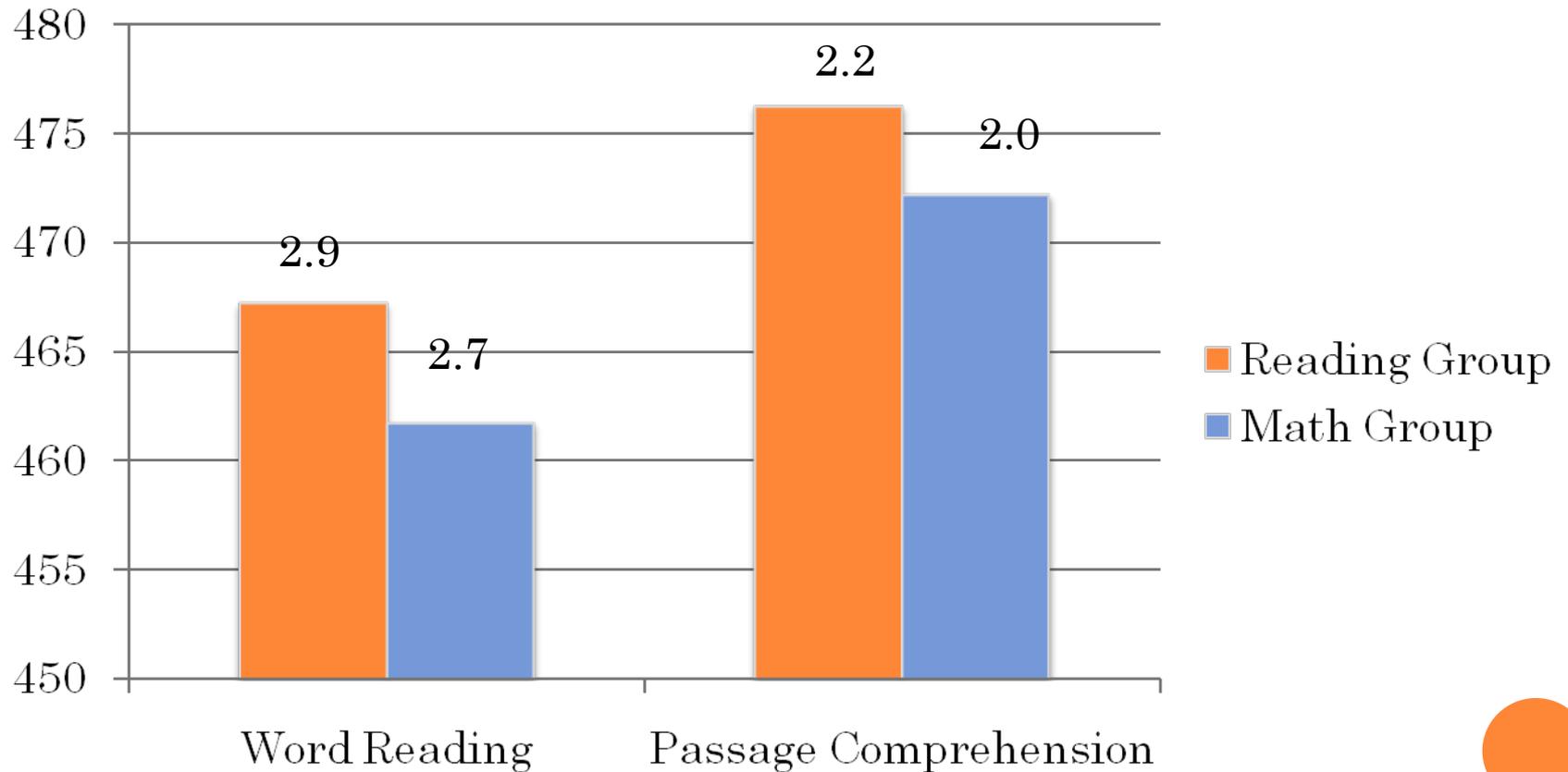
■ Treatment ■ Control

Connor et al., 2007

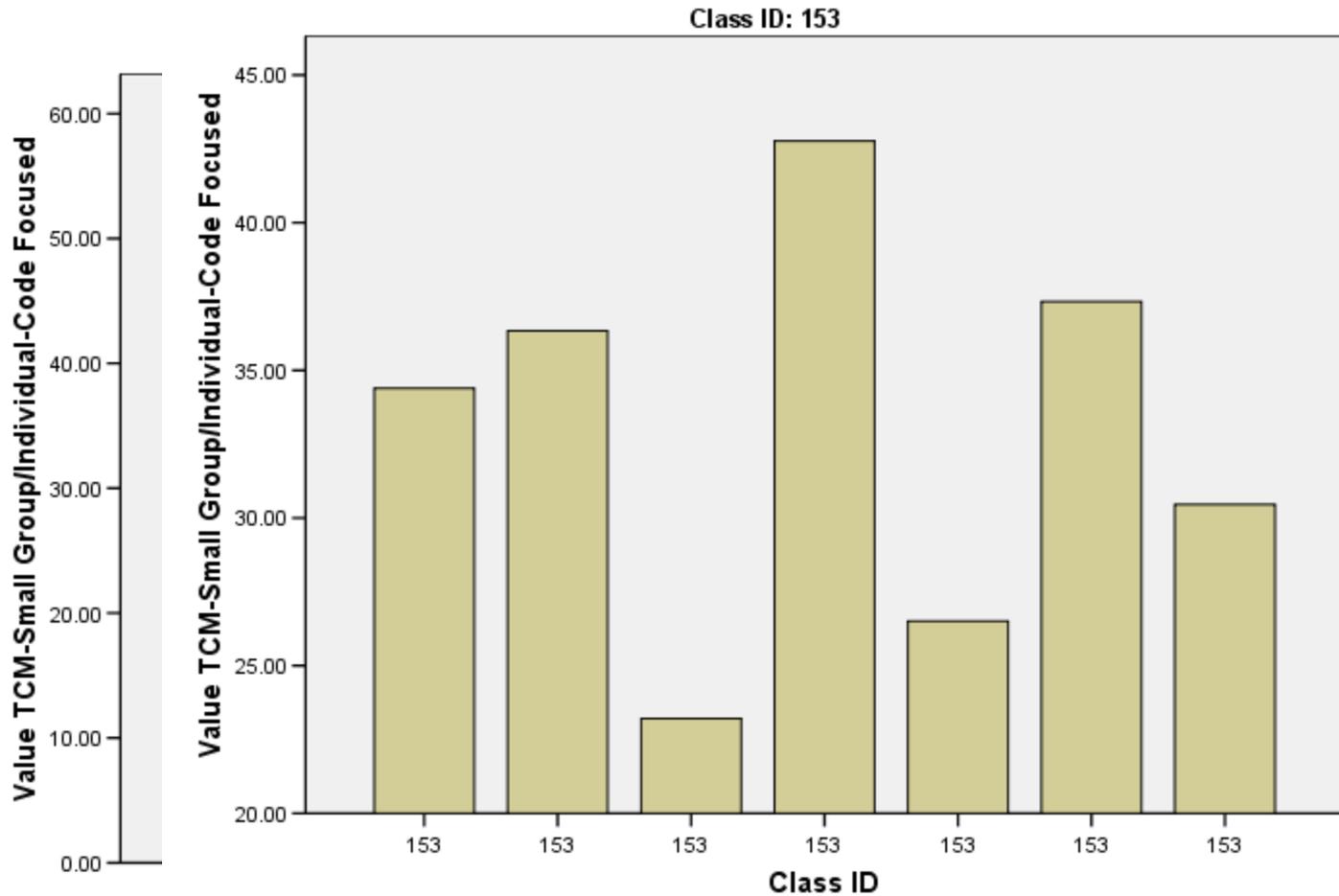
Connor et al., in review

STUDY 3 FIRST GRADE

511 students; 28 classrooms



TCM SMALL-GROUP CODE-FOCUSED

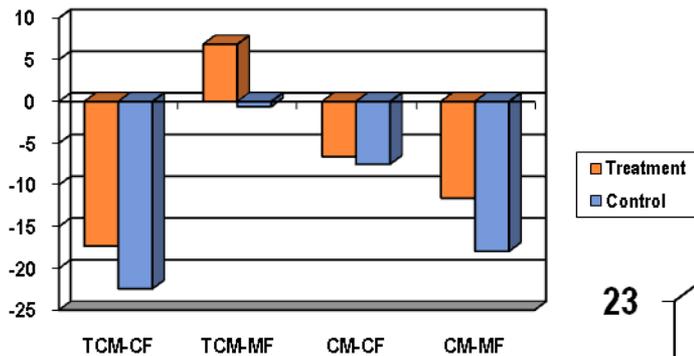


Class ID

Connor, Piasta et al., 2009

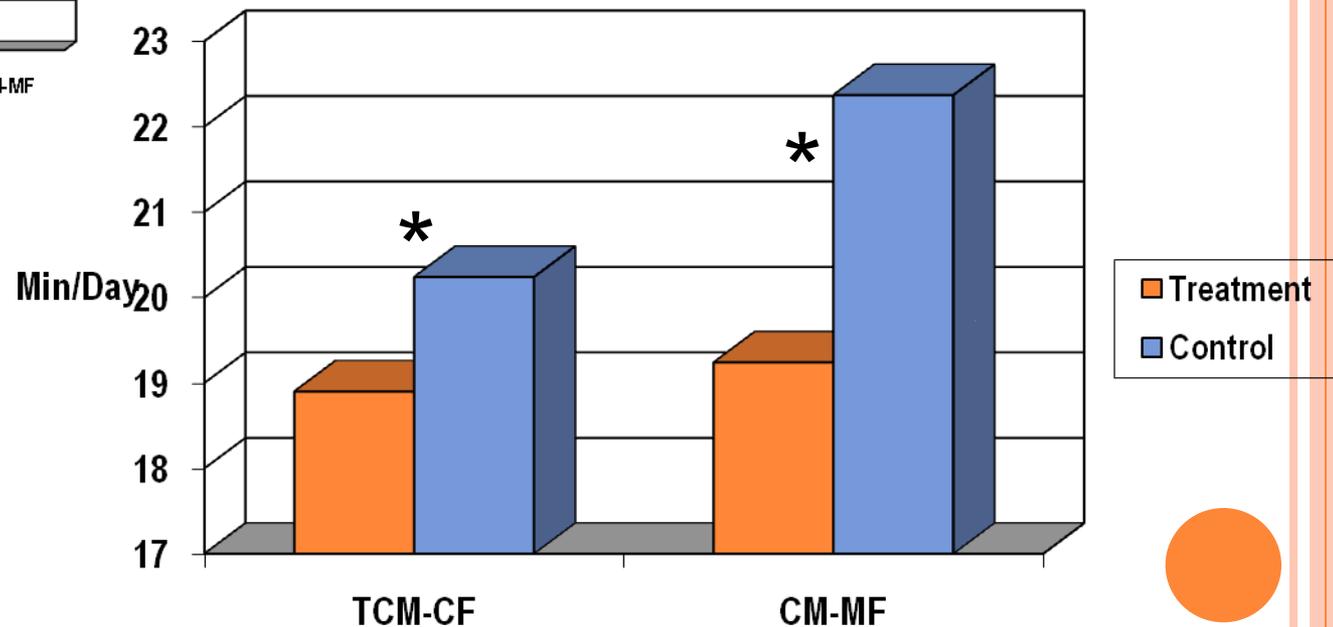
DISTANCE FROM RECOMMENDATIONS

OBSERVED – A2I RECOMMENDED AMOUNTS



Simple Differences

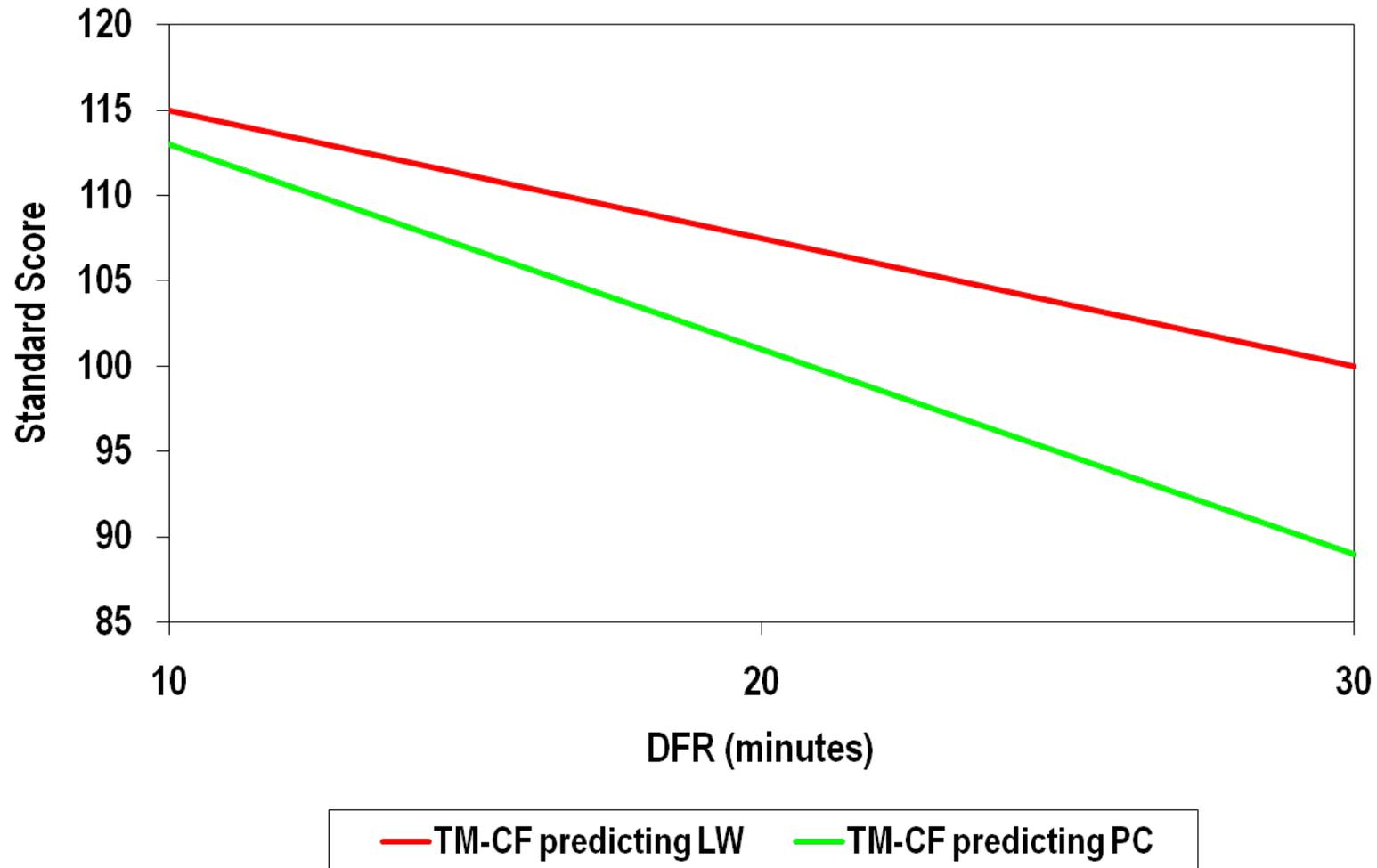
Absolute Values



ES (d) = .42 for TCM-CF and .41 for CM-MF

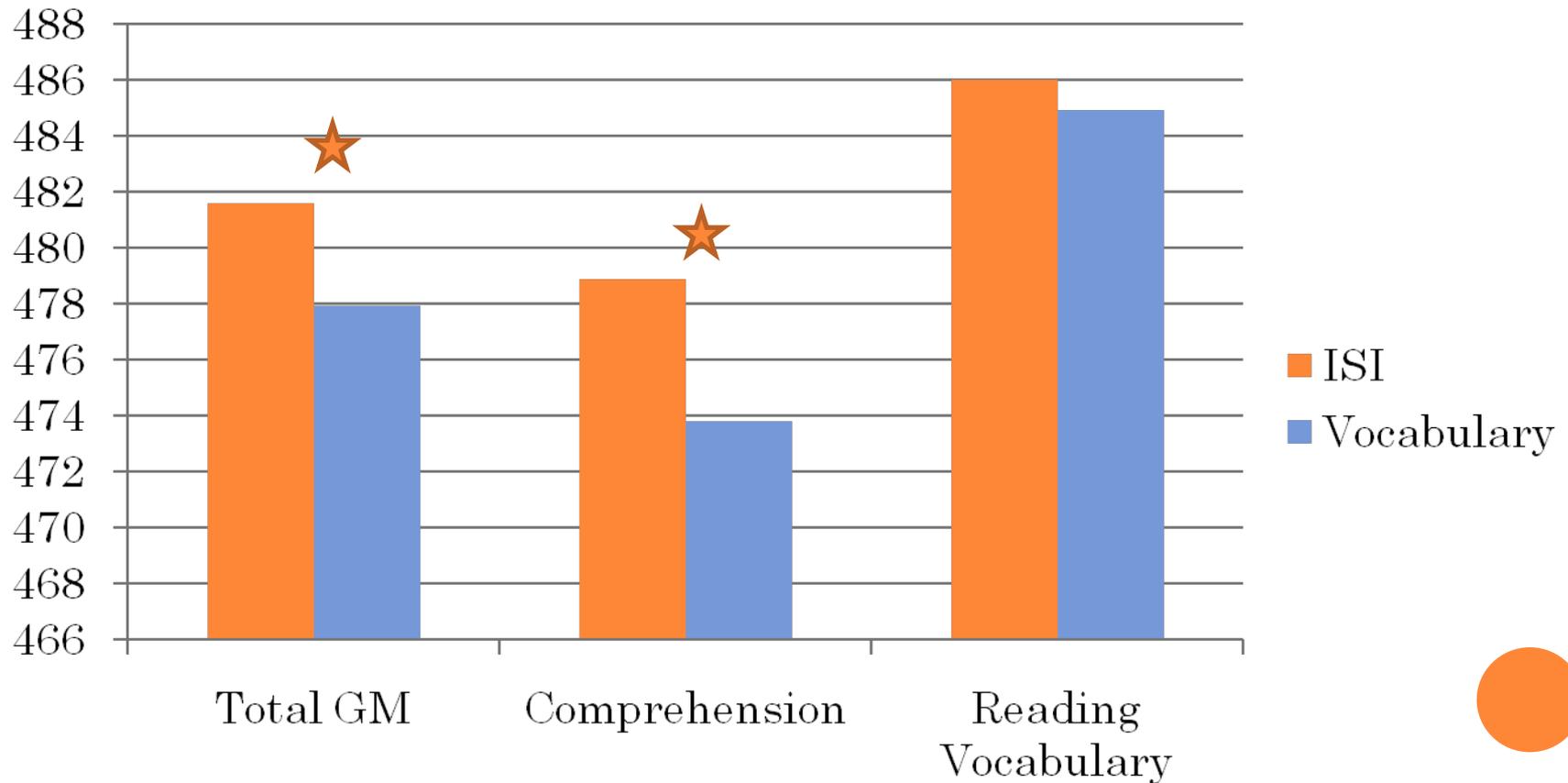


DISTANCE FROM RECOMMENDATIONS (SS) — REPLICATED IN STUDY 2



THIRD GRADE RESULTS GATES MACGINITIE ESS

488 students; 33 teachers



DO THESE EFFECTS ACCUMULATE OVER TIME?

- 100 Students with data all three years
- 73 teachers

	ISI	Control/ Vocabulary	Total
First Grade	22	2	24
Second Grade	15	11	26
Third Grade	12	11	23
TOTAL	49	24	73



STUDENT DISTRIBUTION

	Grade 3 ISI	Grade 3 Vocabulary	Total
G1-C G2-Voc	11	7	18
G1-C G2-ISI	13	4	17
G1-ISI G2-Voc	11	12	23
G1-ISI G2-ISI	24	18	42
TOTAL	59	41	100



WJ PASSAGE COMPREHENSION

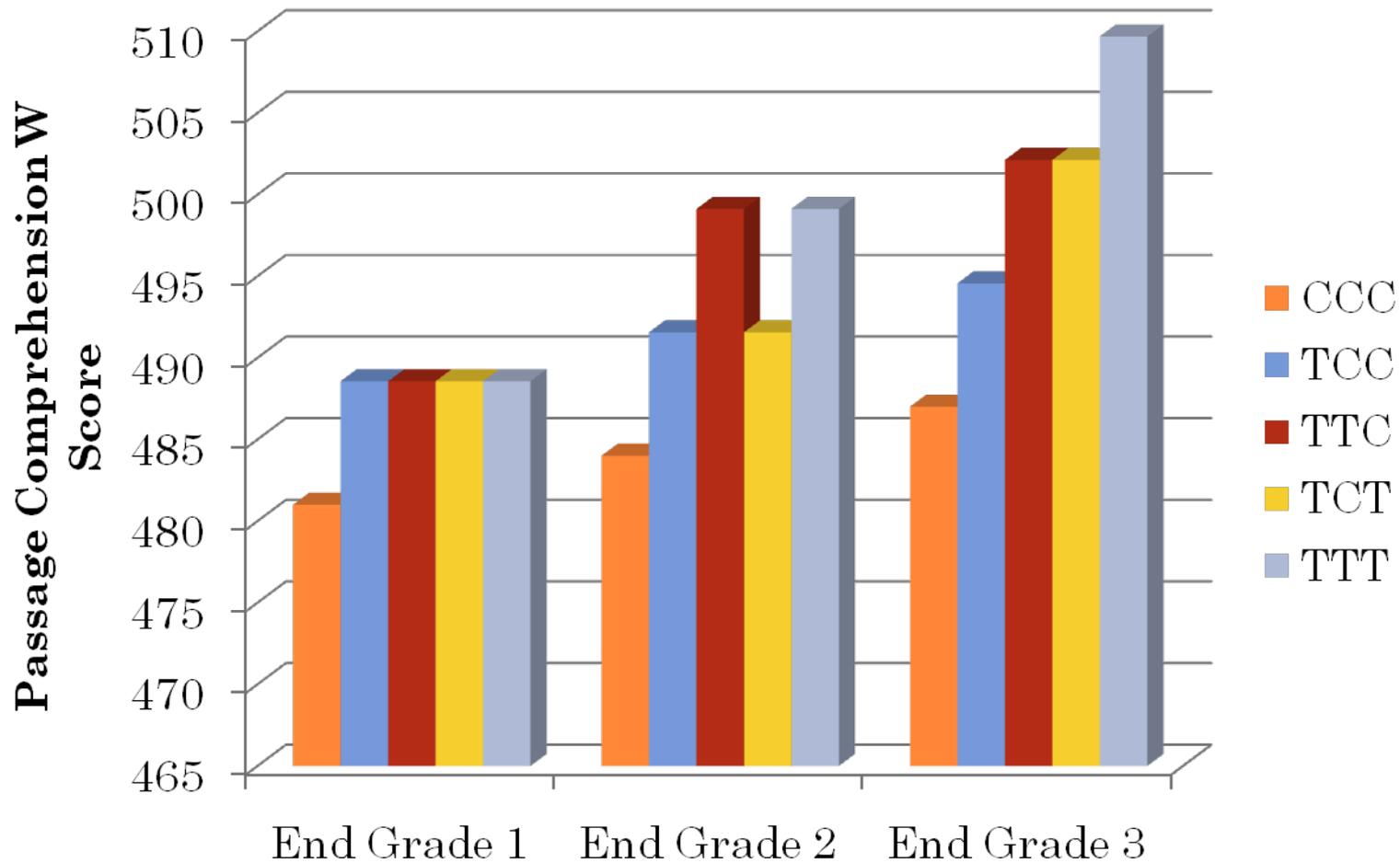
	Coefficient	Standard Error	Df	p
End of G3 Intercept	487.9	5.27	584	< .001
ISI-effect on intercept	15.9	6.37	584	.013
Slope (Wpoints/ Months)	.25	.28	584	.381
ISI-effect on slope	.84	.34	584	.015

Random Effects: Variance $b_{00}=99.7$; $b_{01}=28.3$; $b_{11}=.11$; $e=58.5$; $p < .05$

- Quadratic and Cubic trends not significant
- Similar results for Letter-Word Identification



FITTED PC RESULTS BY GRADE



W 480 = GE 2.4; W 488 = GE 2.9; W 495 = GE 3.6; W 502 = GE 4.5; W 509 = GE 6.1



IMPLICATIONS

- Child-by-instruction interactions are causally implicated in the variability observed in students' literacy outcomes
 - Letter and Word reading
 - Passage Comprehension
 - Text Comprehension
- Defining “quality” of instruction
- Assessment
- Differentiating/Individualizing Instruction
- The effect of efficacious intervention may accumulate from grade to grade
- Dynamic Forecasting Intervention Models
 - As models improve, theoretically so should student reading skill gains



THANK YOU!

- Questions
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