Critical Issues in Studying Growth on State Tests for Students with Disabilities

Gerald Tindal, Joseph Stevens, & J. F. T. Nese

University of Oregon

Ann Schulte, Stephen N. Elliott, & Alexander Kurz

Arizona State University

Jacquelyn Buckley

Institute of Education Sciences

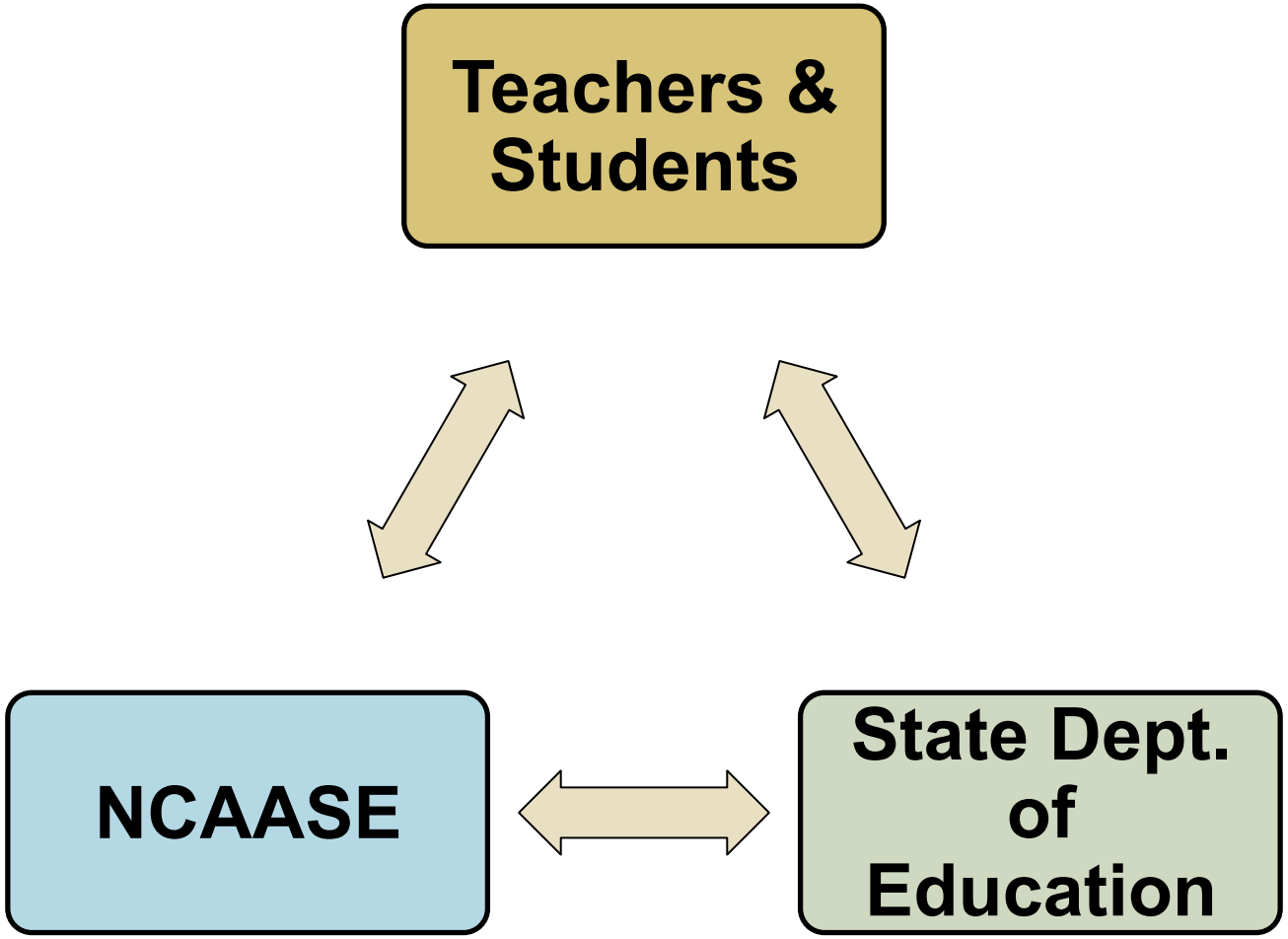
Session Outline

- National Center on Assessment and Accountability for Special Education (NCAASE)-Context and overview
- NCAASE Findings to Date-Selected highlights
  - Methodological findings related to studying growth for students with disabilities
  - Growth in students with disabilities
  - Understanding the determinants of growth-Opportunity to learn study
- Ongoing Work

NCAASE 2011-2016: Our Key Research Questions

1. What is the **natural developmental progress** in achievement for students with disabilities?
2. What models **best characterize achievement growth** for students with disabilities who are participating in general achievement tests?
3. How do various growth models represent **school effects** for students with and without disabilities, and how do results compare to those derived from the status models now in use?
4. How do results from different types of **interim assessments** of students' achievement meaningfully contribute to a model of academic growth for students with disabilities?
5. How can information about **opportunity to learn** and achievement growth be used to **enhance academic outcomes** for students with disabilities?

Research<->Practice Data Cycle



Looking Back to the Beginning of Standards-based Reform…

- 40-50% of students with disabilities (SWDs) excluded from national and state assessments

- Concern that exclusion of SWDs distorting reform and accountability efforts for all students, and leaving SWDs behind

The Issues Faced in Moving Toward Growth Models…

- We have very little information about typical achievement growth for SWDs
  - 81% of published growth studies omit special education in analysis, 94% do not distinguish exceptionality categories
- SWDs pose unique and multiple challenges, particularly for growth-based assessment
  - Diversity of disabilities
  - Wider range of cognitive and academic functioning
  - Variability in assessments and testing conditions across years

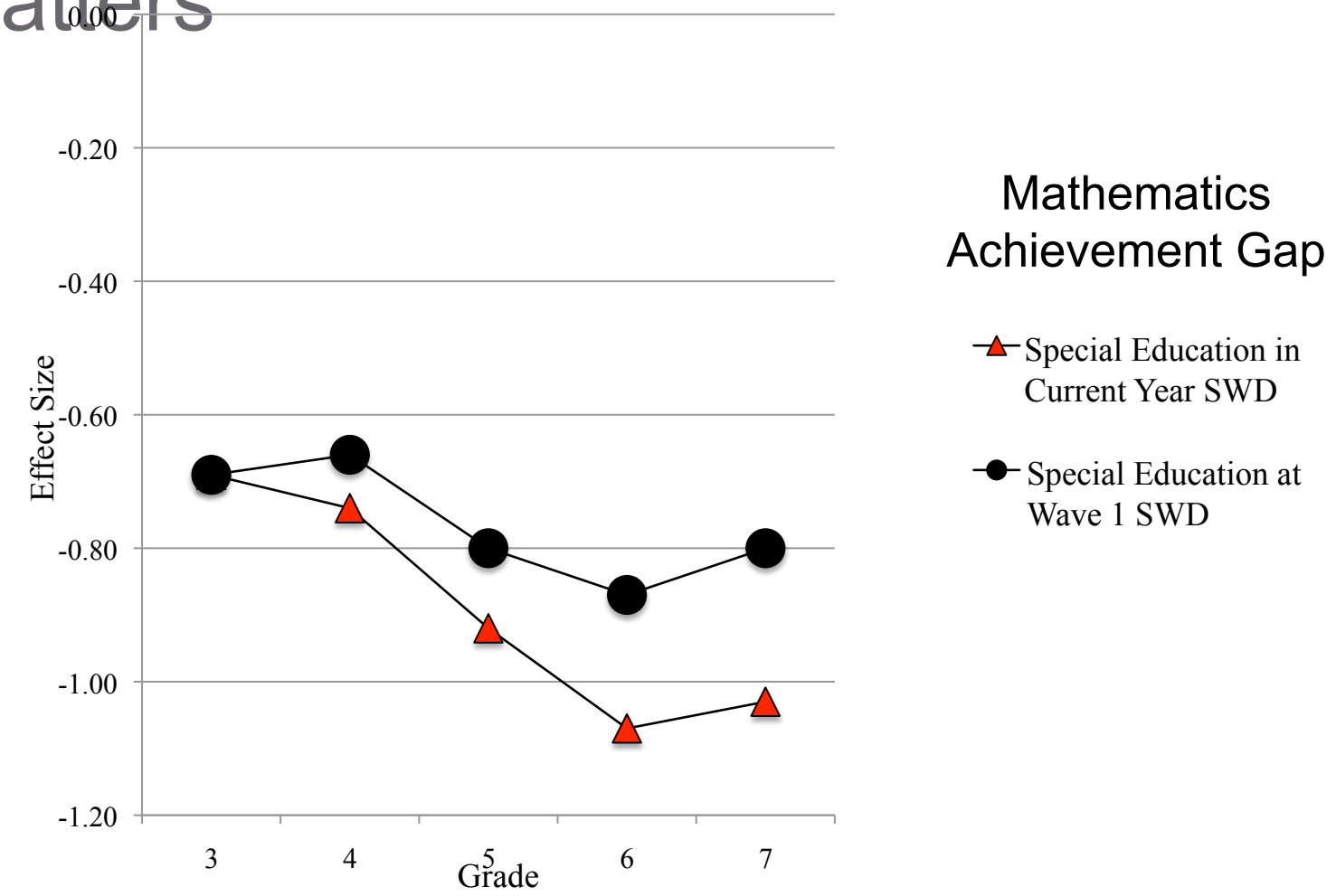
Students with Disabilities…

- Enter and exit services throughout their careers
- Change disability classifications
- May take general or alternate assessment
- May be members of other groups where achievement gaps are a concern (e.g., poverty, English language learner)
- All of these pose new challenges for [illegible] assessing growth

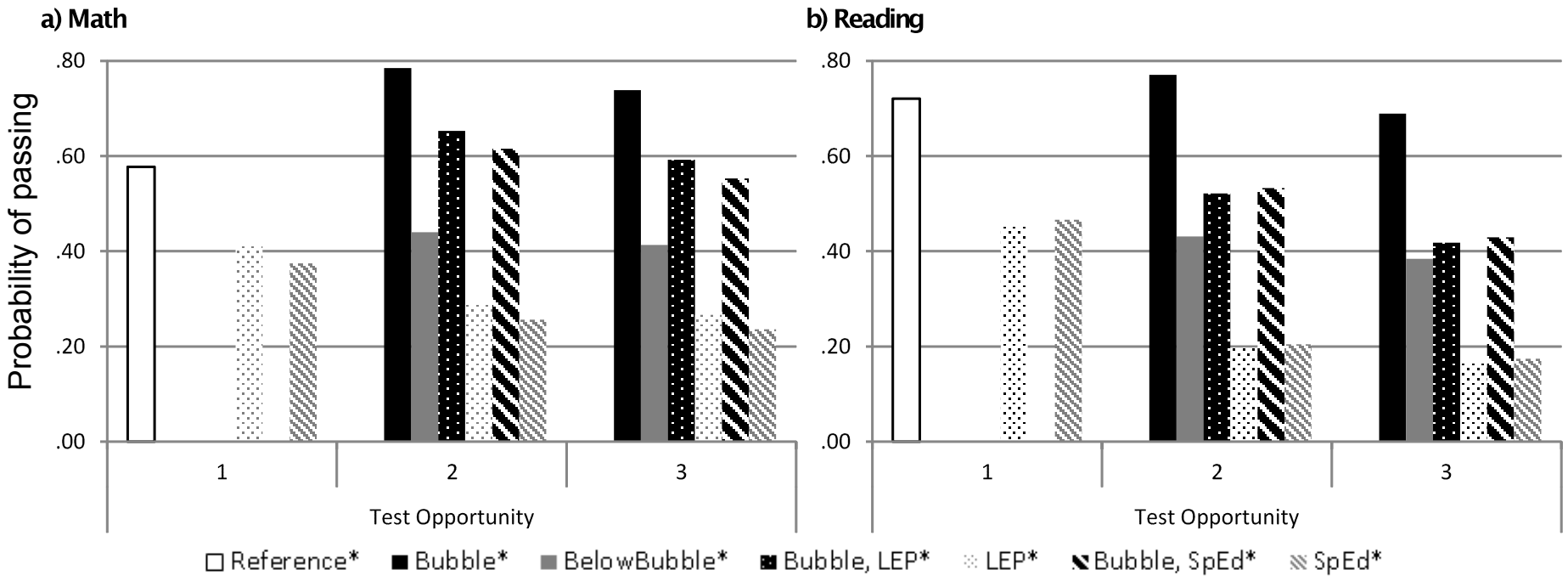
Stability Across Three Years in NC

	Spec ed 3rd gr	Gen ed 3rd gr
First time in 3rd grade in 2001 (n)	14,380	88,429
In a NC school following 2 years (n, %)	12,731 88.5	79,841 94.9
Same school (%, all subsequent figures based on n of students present all 3 years)	63.7	69.4
Retained (%)	14.0	7.4
Same sped status (Y/N) across yrs (%)	76.3	95.0
Same ec category across years (%)	64.6	---
Took general assessment all three yrs		
Reading (%)	69.7	98.3
Math (%)	76.3	98.4
Use/nonuse of accommodations consistent across years (%)	61.0	92.2

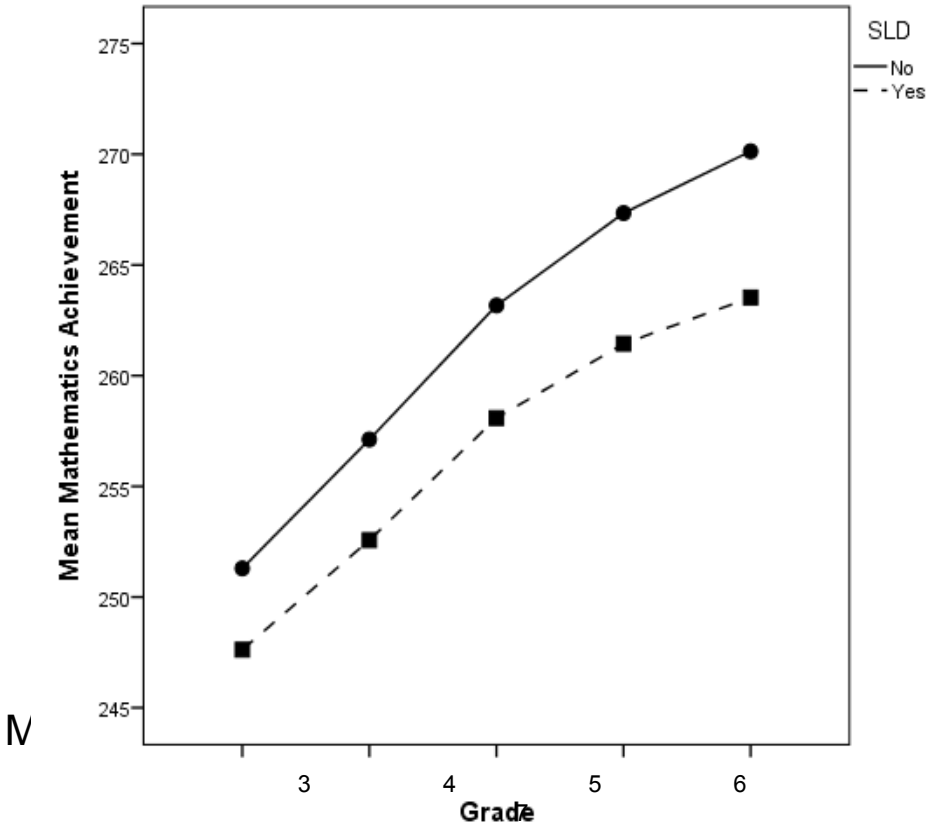
Looking at Outcomes Longitudinally Matters



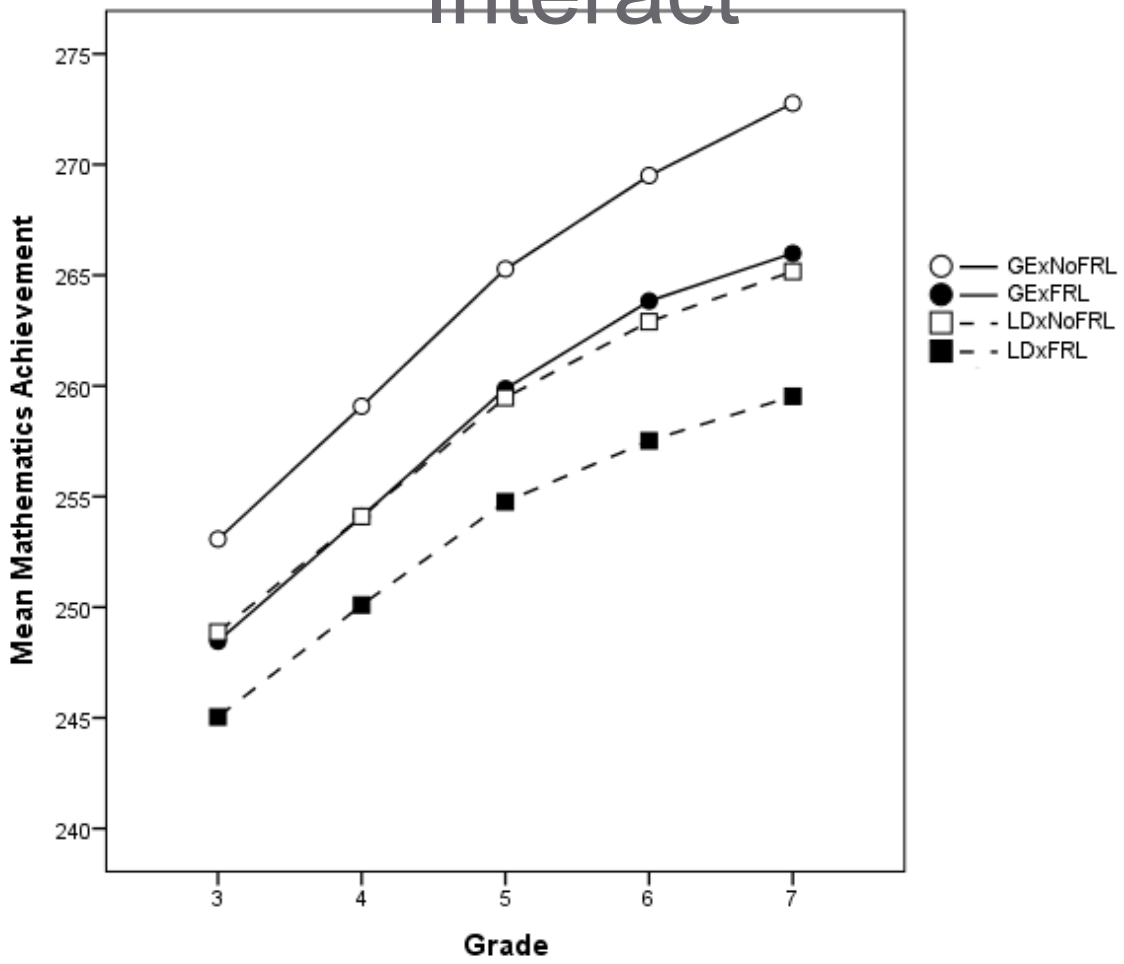
Multiple Testing Opportunities



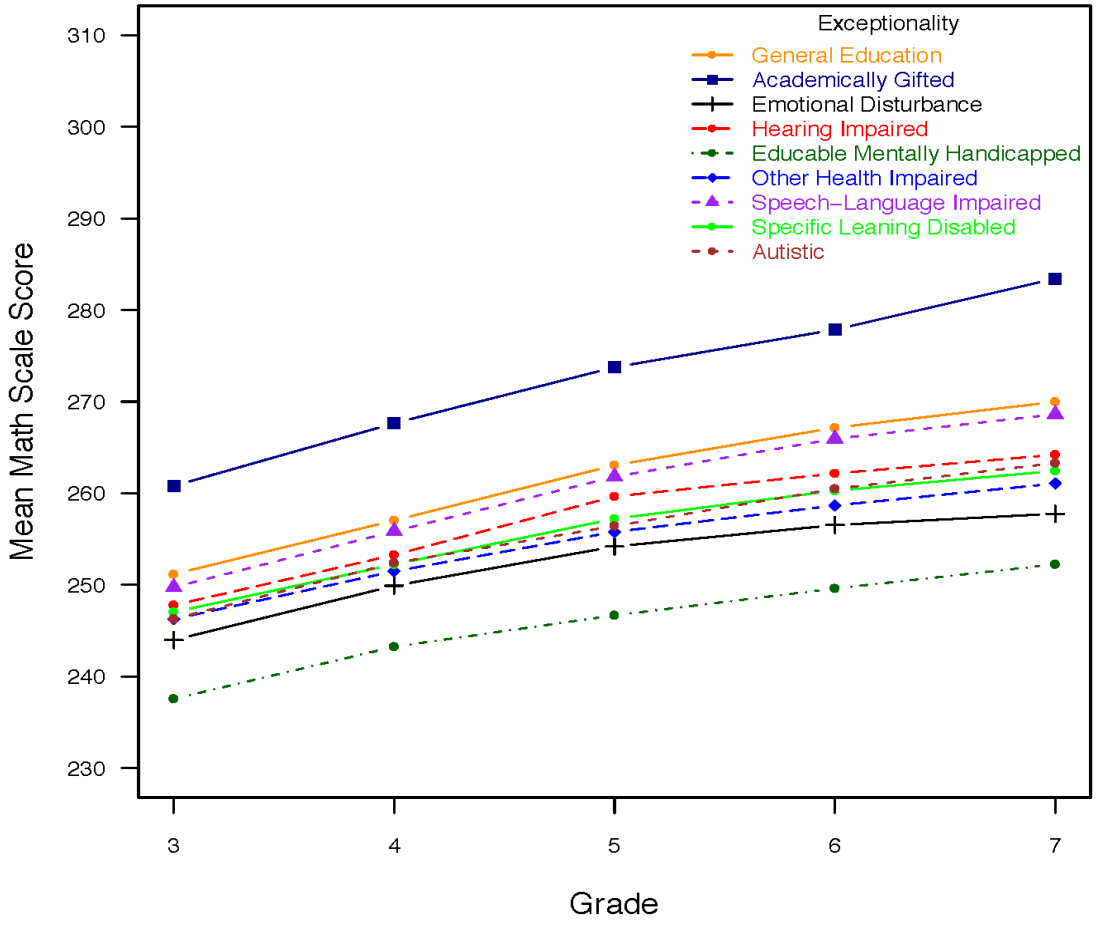
Mathematics Growth for Students with LD



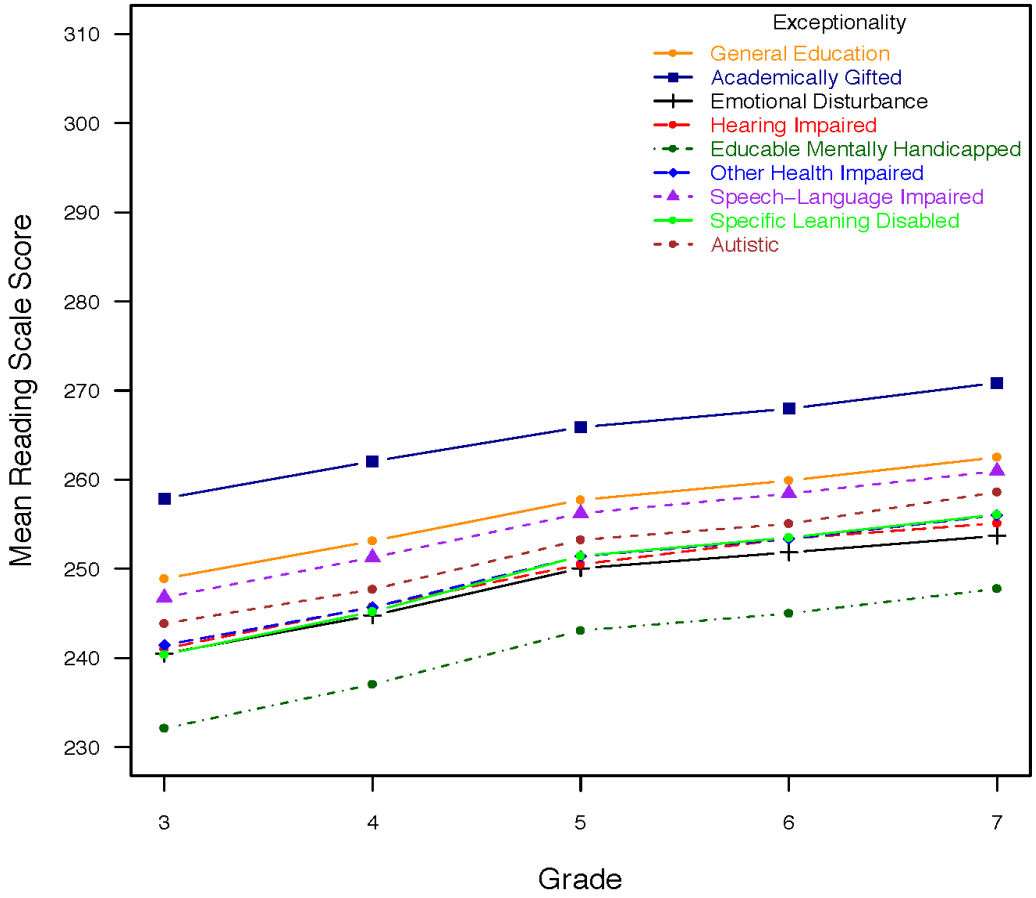
Risk Factors for Low Achievement Interact



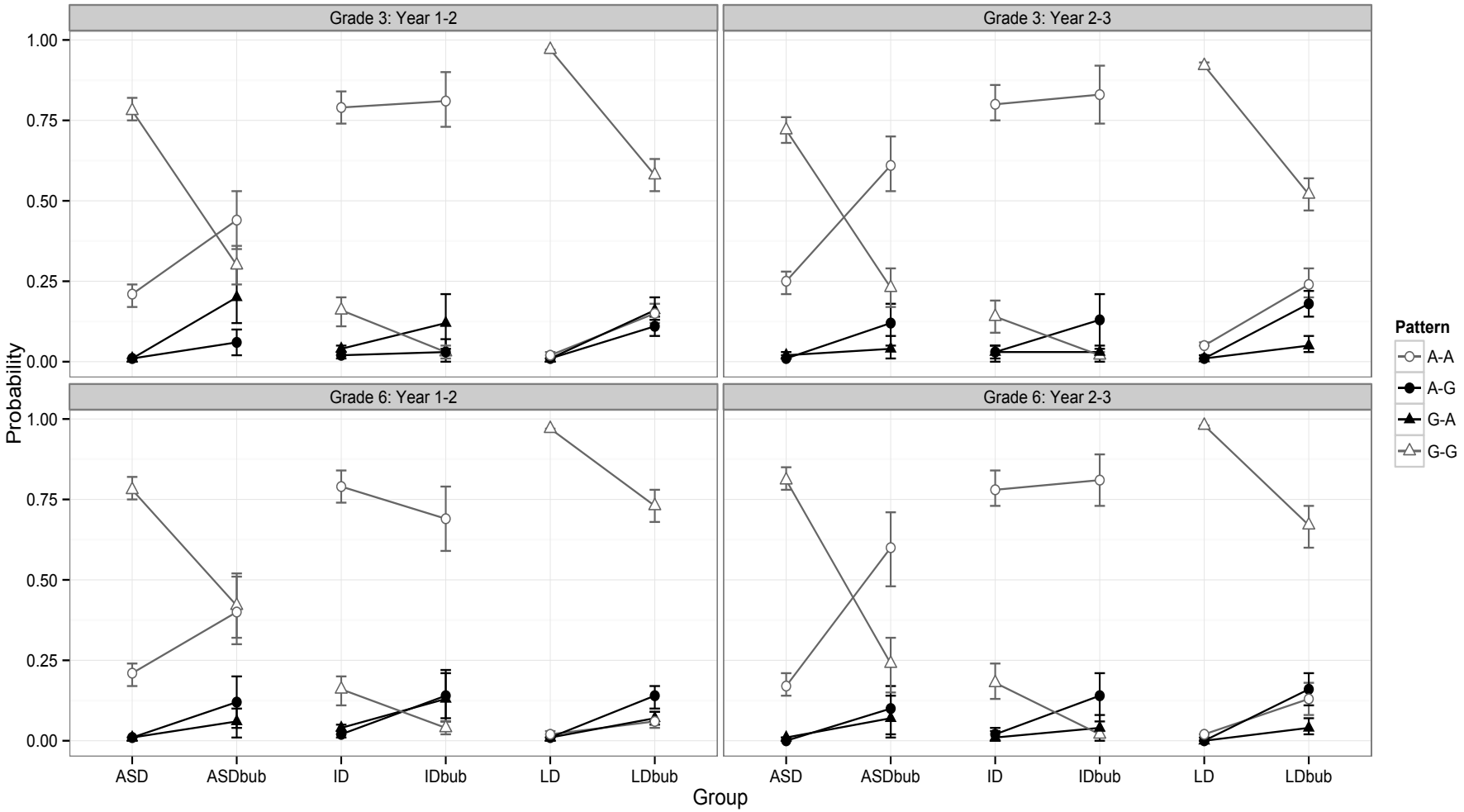
Mathematics Growth by Ex



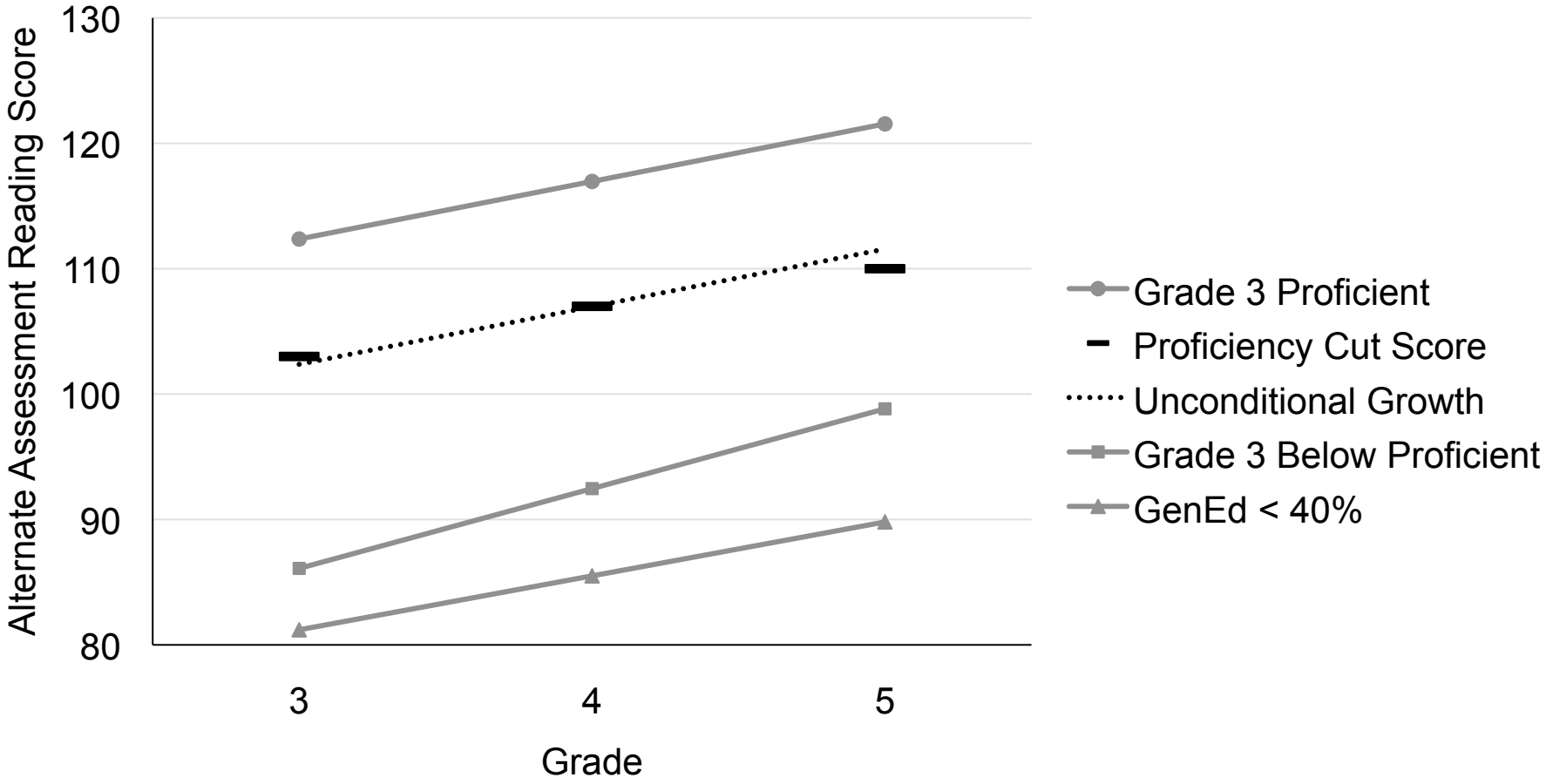
Reading Growth by Exceptionality



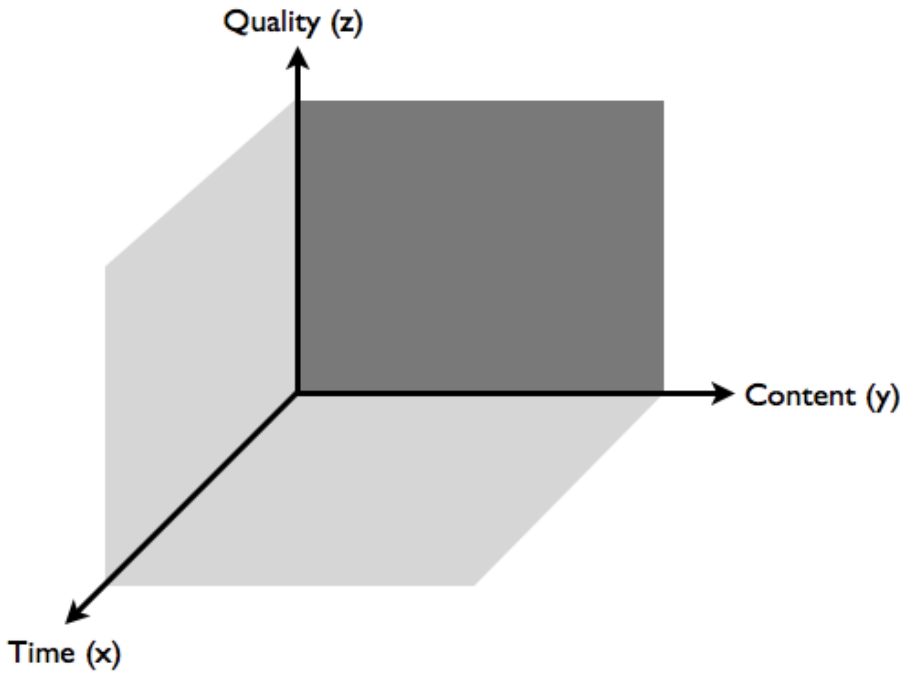
SWSCD Alternate-General Participation



Growth for SWSCD



Opportunity to Learn the Intended Curriculum



A unified conceptualization of OTL based on 50+ years of empirical research.

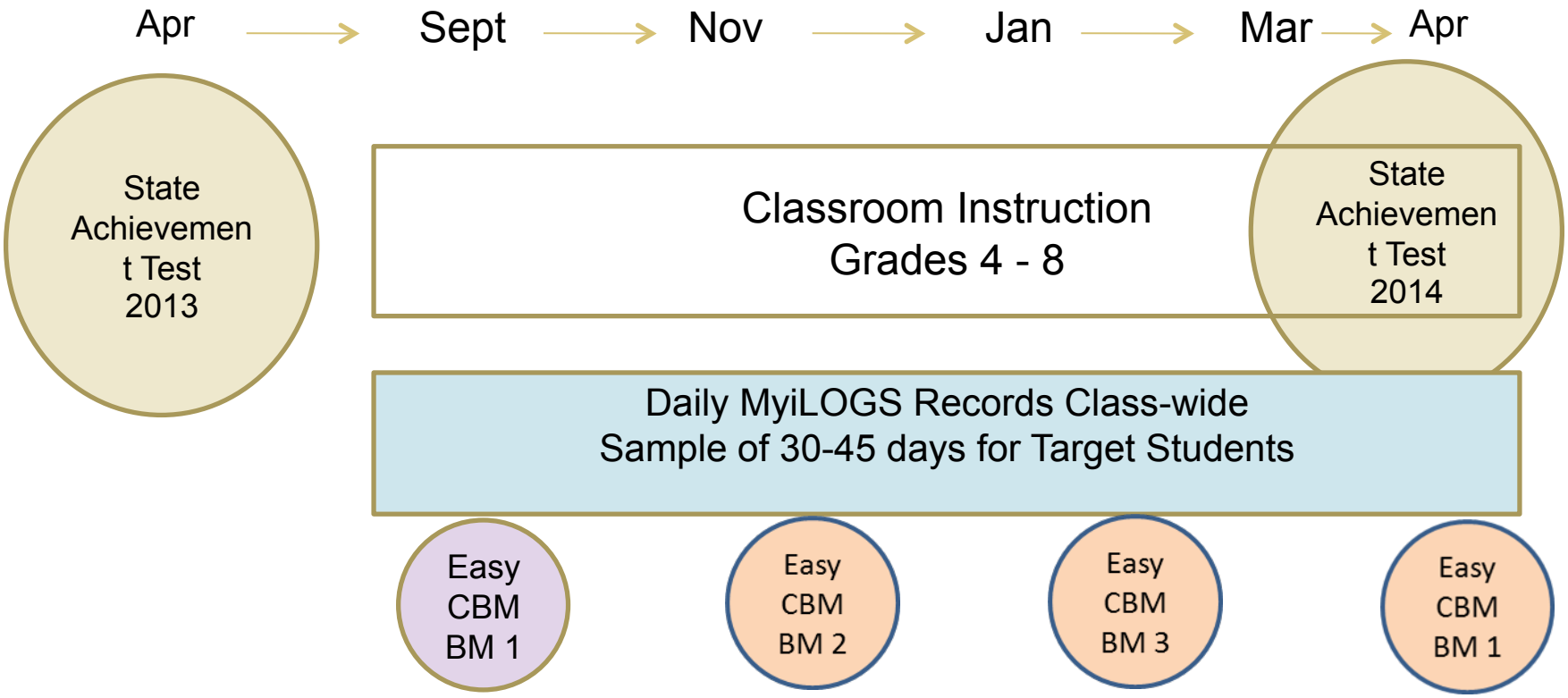
<u>Definition: Opportunity to Learn</u>

The degree to which a teacher dedicates **instructional time** and **content coverage** to the intended curriculum objectives emphasizing higher-order **cognitive processes**, evidence-based **instructional practices**, and **alternative grouping formats.**

(Kurz, 2011)

Multiple Measures Study

Four 2-year Longitudinal Cohorts: 4-5, 5-6, 6-7, & 7-8



Multiple Measures Study: Year 1 Findings

- Teachers (N = 69) and students (N = 261; 136 SWD + 125 SWoD) from AZ & OR schools grades 4^{th}-8^{th} .
- A regression analysis showed OTL, easyCBM, grade, and special education status predicted nearly 67% of the variance in students' end of year mathematics achievement as measured by the OR Assessment of Knowledge & Skills in Math. By comparison, this same set of measures accounted for 61% of the variance in students' end of year mathematics achievement on the AZ Instructional Measurement of Skills test.
- Inspection of the regression results showed
  - CBM measures are the best single predictor of end-of-year achievement (46% of the variance)
  - OTL indices of time, content, cognitive processes, and instructional practices contributed an additional 10% to the prediction of end of year achievement for students in mathematics.
- More information to come from this study as we finish Year 2; we will have achievement growth data for all these students!

Summary of Findings to Date

- Growth for students with disabilities in reading and math follows the same curvilinear pattern seen in students without disabilities.
- Overall, achievement gaps for students with disabilities remain similar; they do not close or widen markedly across grades.
- However, there are large differences in achievement outcomes and size of gaps among exceptionalities.
- Achievement risk factors interact.
- Within-student changes in status can substantially affect outcomes reported for the students with disabilities subgroup.
- Multiple testing opportunities benefit students with disabilities.
- Increasing instructional time and focusing on tested content standards is associated with overall test

Ongoing and Planned Studies

- Replication of NC growth studies with remaining states
- Examination of performance of different growth models in representing schools' impact on students with and without disabilities
- What accelerates growth for students with disabilities?

- Questions? Comments?
- What are the most salient assessment and accountability issues your states are facing with respect to SWDs?

Thank you and stay in touch:

NCAASE web site: http://www.ncaase.com/

This work is supported by the Institute of Education Sciences, U.S. Department of Education, through grant R32C110004 awarded to the University of Oregon. The opinions expressed are those of the authors and do not necessarily represent views of the Institute or the U.S. Department of Education.