



Continuous Progress Monitoring Measures for Intervention Research and Accountability in Early Childhood

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University of Kansas



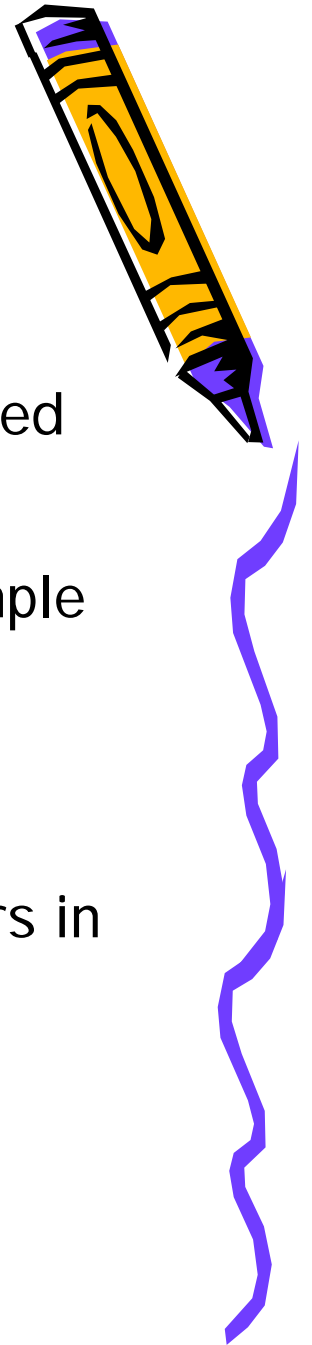
The Problem and Need

- Too many children are not ready for kindergarten
- Many students are not responsive to the general curriculum
- Many students are identified too late to benefit from early intervention
- Many measures are not sensitive indicators of progress in the general curriculum

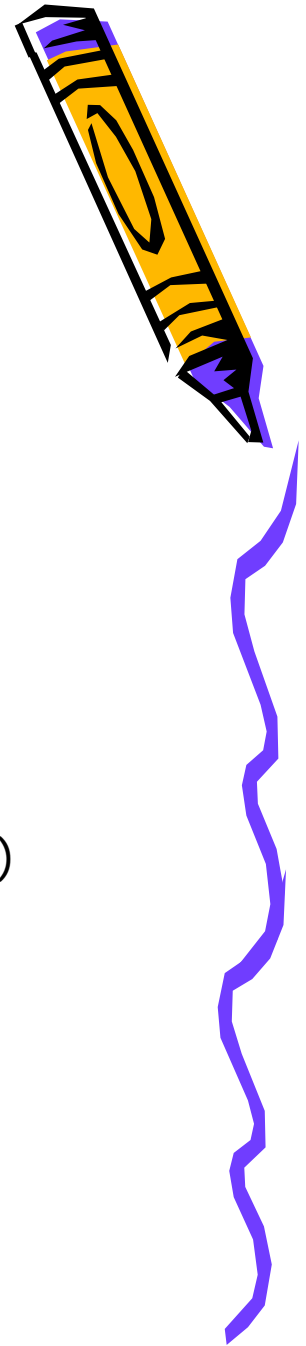


The Solution

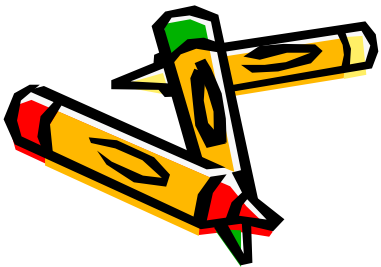
- Continuous progress monitoring is an evidence-based practice in K-12 special education (<http://www.studentprogress.org/>)
- CBM – Curriculum-based measurement is one example
- These measures are specifically intended to
 - Identify children not responsive to instruction
 - Inform the decision making of teachers and practitioners managing intervention
- Similar measures for children younger than 5 years in preschool and childcare are just emerging



Measures for Very Young Children: *Individual Growth and Development Indicators (IGDIs)*

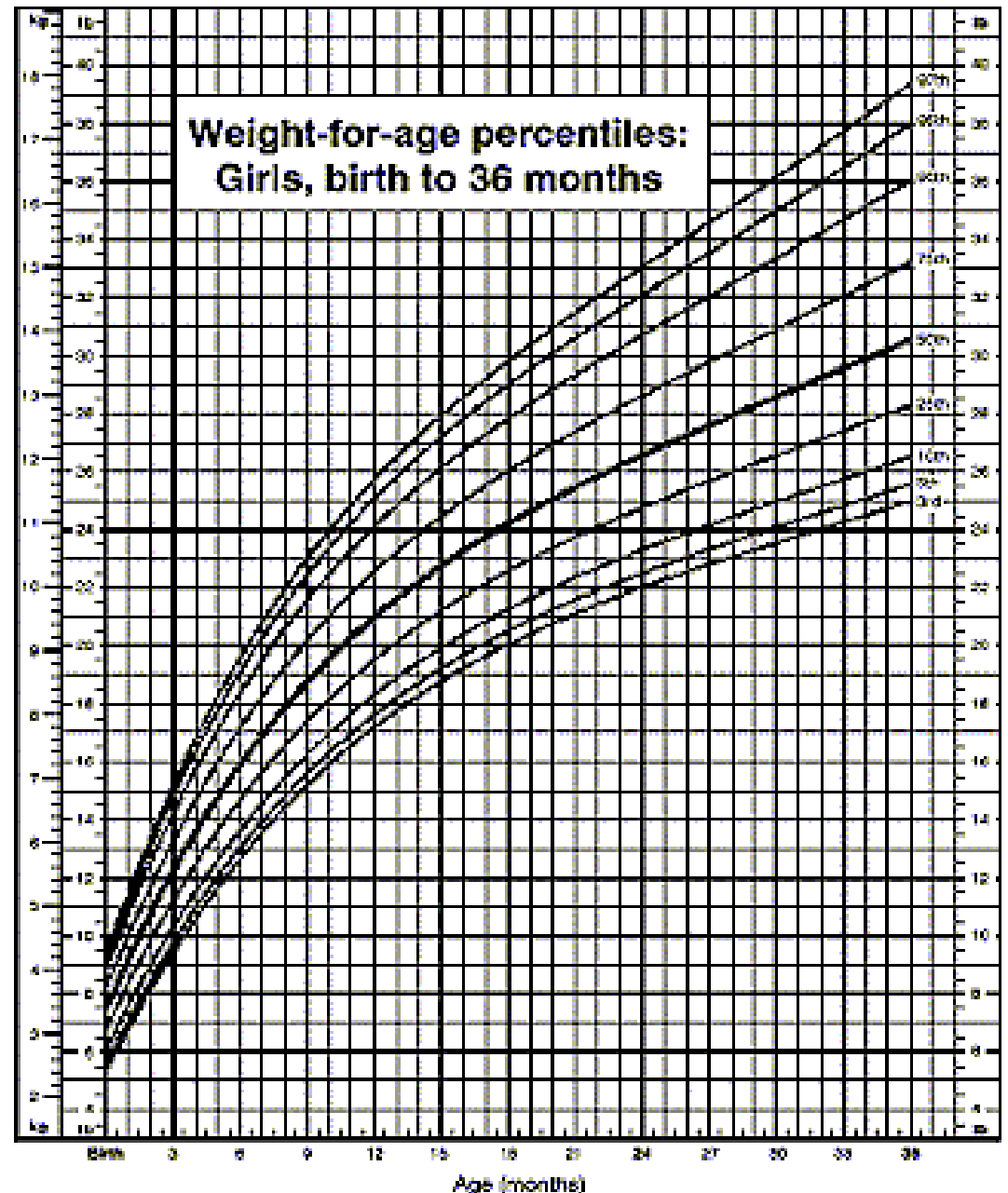
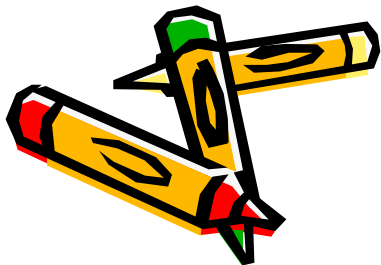


- For Infants and Toddlers (<http://www.igdi.ku.edu>)
 - Early Communication (Language)
 - Early Problem Solving (Cognition)
 - Early Movement (Motor)
 - Early Social (Social/Emotional)
- For Preschoolers (Early Literacy) (<http://ggg.umn.edu/>)
 - Picture naming (Spoken Vocabulary)
 - Alliteration
 - Rhyming



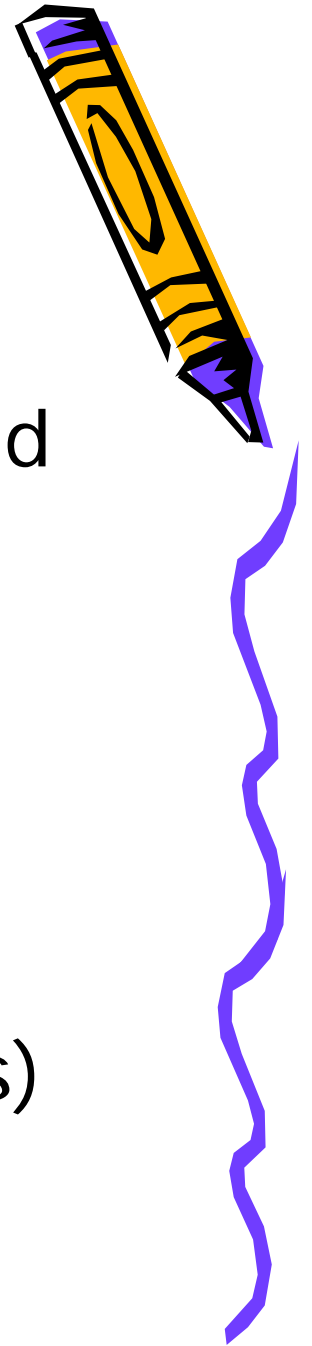
The most well known I GDI s are Pediatric Growth Charts

Widely used by pediatricians and parents



Features of Progress Monitoring Measures

- Reflect progress toward a socially valid general outcome
- Strategic (a leading indicator) not comprehensive measurement
- Chart an individual's progress
- Brief and quick to administer
- Repeatable (rate of growth, slope)
- Alternate forms (controls testing bias)
- Reliability



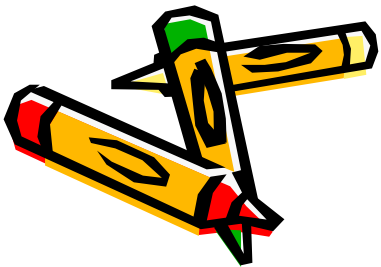
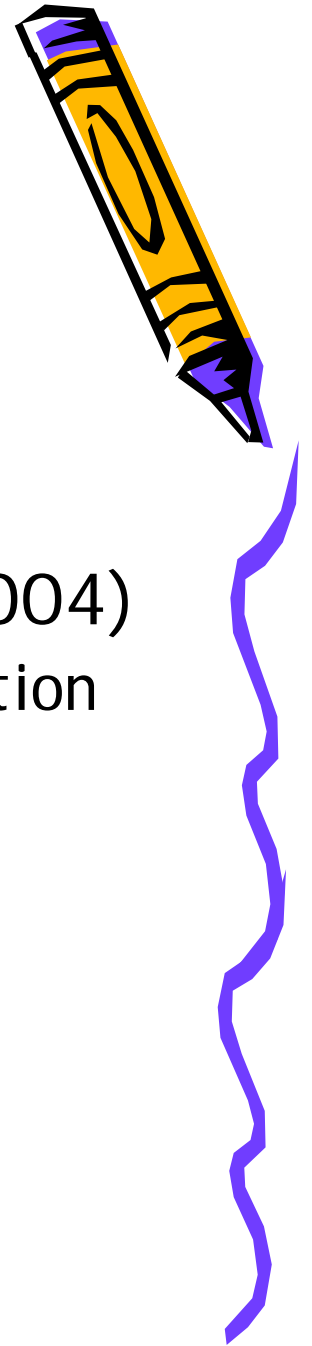
More Features (Continued)

- Construct validity – Sensitive to growth over time
- Criterion validity – Measures what is intended
- Predictive validity – Early measures predict future status
- Benchmarks – Used to determine responsiveness to intervention
- Used by practitioners who instruct/serve children
- Program results compound up from individual

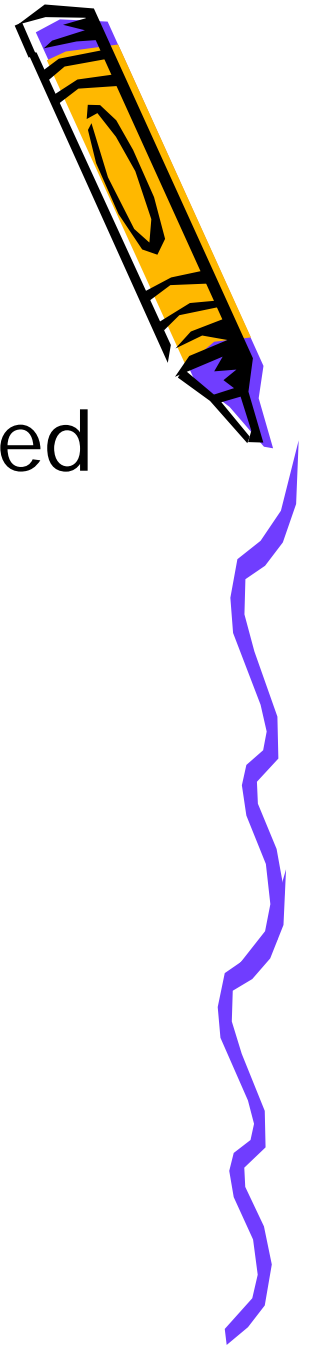


Supporting Conceptual and Policy Frameworks

- President's 2002 Commission report on SPED
- Response to Intervention (RtI) (IDEA 2004)
 - Universal screening and problem identification
 - Problem solving and decision making
 - Monitoring of individual progress
- Risk and Early Intervention
- Tiered Prevention/Intervention

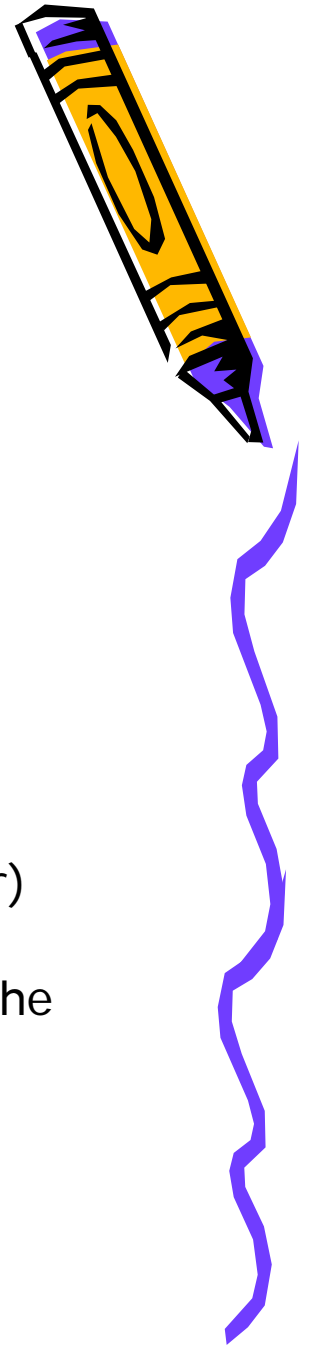
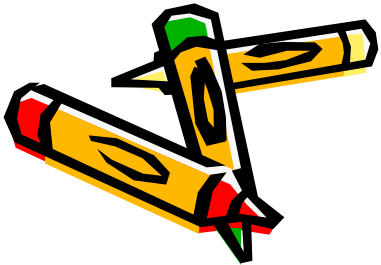


- IGDIs, like CBM are measures based on the General Outcome Measurement (GOM) approach
 - Fuchs & Deno, 1991
 - Deno, 2002



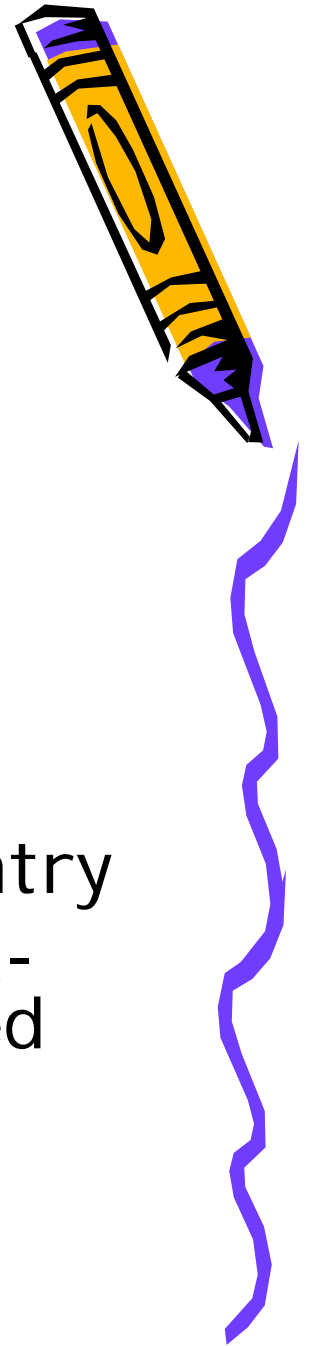
Conceptual Approaches to Progress Monitoring

- General Outcome Measurement
 - Specific, not comprehensive
 - Brief probes (several minutes)
 - Repeatability enables estimates of rate of growth
 - Provides timely data teachers can act on now
 - Improvement indicates continue current intervention
- Mastery Monitoring
 - Comprehensive
 - Takes significant amounts of time to administer (e.g., 1 hr)
 - Not readily repeatable
 - Results available at standard time intervals, usable with the next cohort of students
 - Mastery indicates a change in instruction is needed

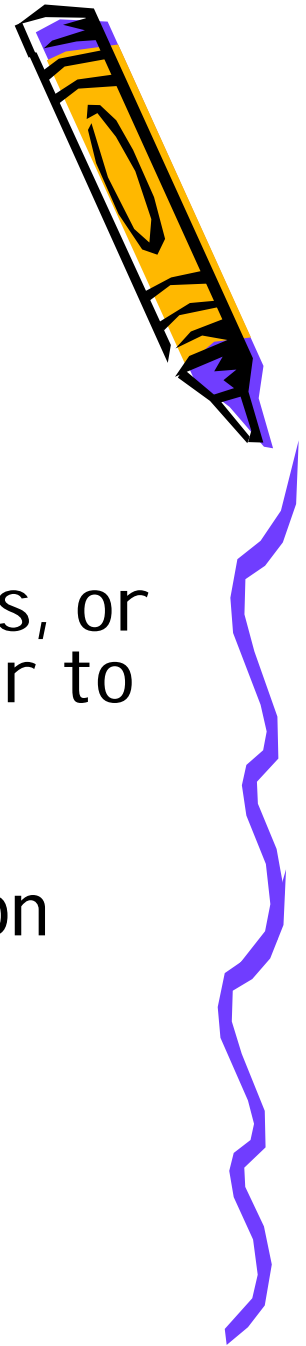


Unique Early Childhood Challenges

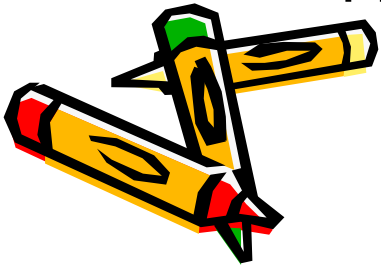
- Outcomes and key skills are often developmental or functional, rather than curriculum-based
- EC practitioners, compared to classroom teachers, are often less trained
- The EC system and its alignment with schools is highly variable across the country
- Practitioners lack a history of using data-based decision making and evidence-based practice



Early Communication Indicator (ECI) for Infants and Toddlers



- The General Outcome
 - "The child uses gestures, sounds, words, or sentences to convey wants and needs or to express meaning to others."
 - In a national survey of parents and practitioners, expressive communication was a highly rated outcome of early childhood
 - Priest et al., 2001



ECI Constructs and Key Skills



Early Communication Indicator

General Outcome: "The child uses gestures, sounds, words, or sentences to convey wants and needs or to express meaning to others"

Constructs:



Key Skills: Gesture Vocalization Single Words Multiple Words



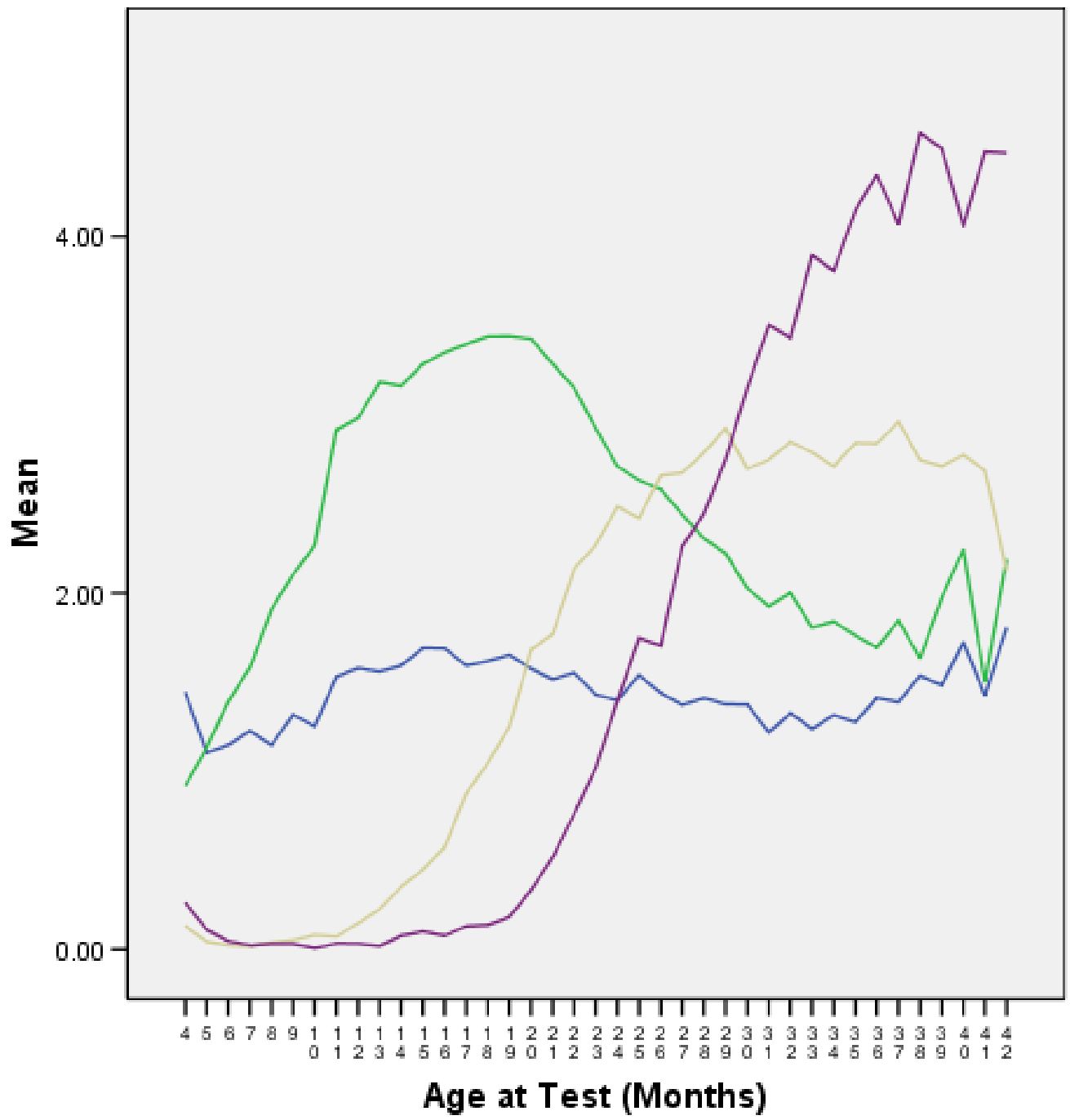
Range in Young Children's Expressive Communication Skills



Infants:
Gestures

Toddlers:
Single and Multi-Word Utterances





Administration

- Administration Procedures
 - Toy-play setting with familiar adult as play partner
 - 6-minute testing sessions
 - Play partner's role is to facilitate play and follow child's lead
 - Set-up/clean-up/put away
- Alternate Toy Forms
- Observational Recording Procedures



Toy Form A: House

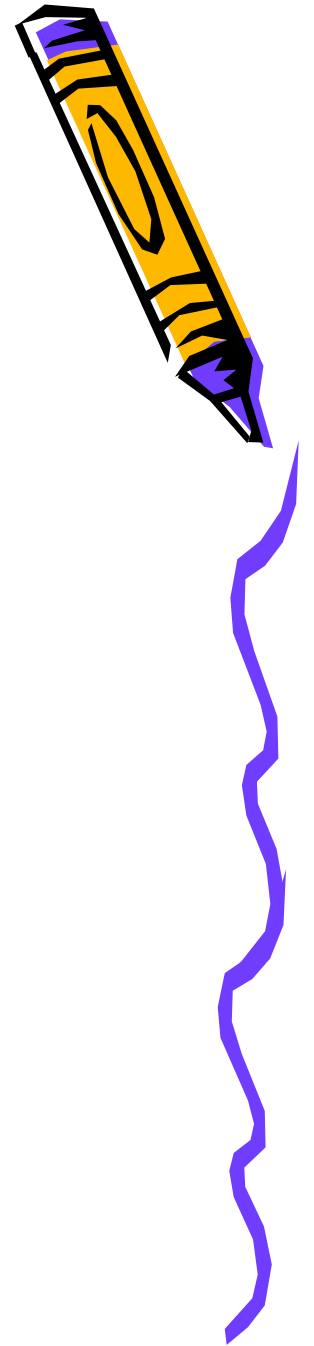


Toy Form B: Barn



Scaling-up

- Websites and online informational and technical support



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Welcome to IGDI's for Infants and Toddlers

This web site is dedicated to assessing the results of early intervention and early childhood special education services provided young children birth through age 3. **Indicators of Individual Growth and Development for Infants and Toddlers (IGDI's)** are a set of measures designed and validated for use by early childhood practitioners and interventionists for the purpose of monitoring children's growth and progress. Unlike standardized tests that are administered infrequently, IGDI's are designed to be used repeatedly by practitioners in order to estimate each child's "rate of growth" over time. The distinctive benefit of this approach is that the information can be used to directly inform intervention design, implementation, and modification at reasonable levels of training, time, and cost.



Picture of mother in

News & Information

We are looking for Kansas language and early literacy assessors

- If you live in Kansas and have experience delivering any of the following language assessments with children between the ages of 1 and 4 years old, please contact Drs. Dale Walker (walkerd@ku.edu) or Barbara Terry (terryb@ku.edu):
 - PLS-4, PALS Letter Naming, TOPEL, PPVT or TVIP, and Get it, Got it, Go
- See our [Job Description](#) for more details

Information for the Barn (toy set used for the ECI)



Individual Growth and Development Indicators for Infants and Toddlers

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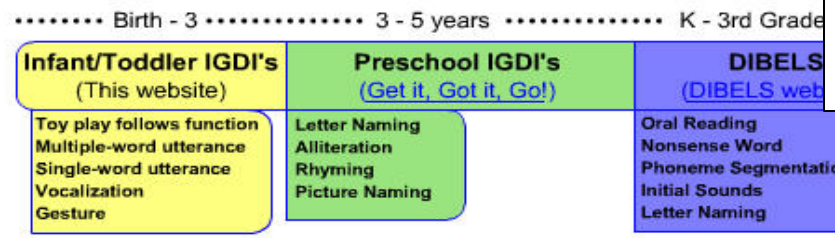
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IGDI's for Older Kids

This website focuses on IGDI measures of infant/toddler development (birth to 36 months). For information and tools to measure later development, visit one of the websites below. The graphic below illustrates how our infant/toddler measures link with the literacy measures available through the [Get it Got it Go!](#) and [DIBELS](#) websites.

IGDI Measures and Tools from Birth to 3rd Grade

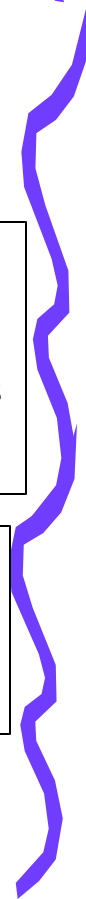
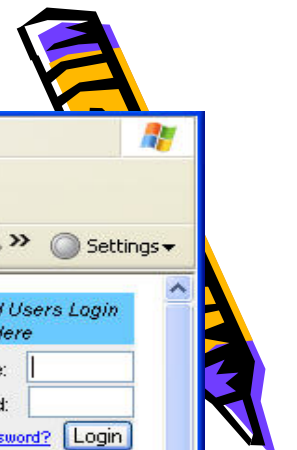


Continuum of early communication and literacy skills by measure

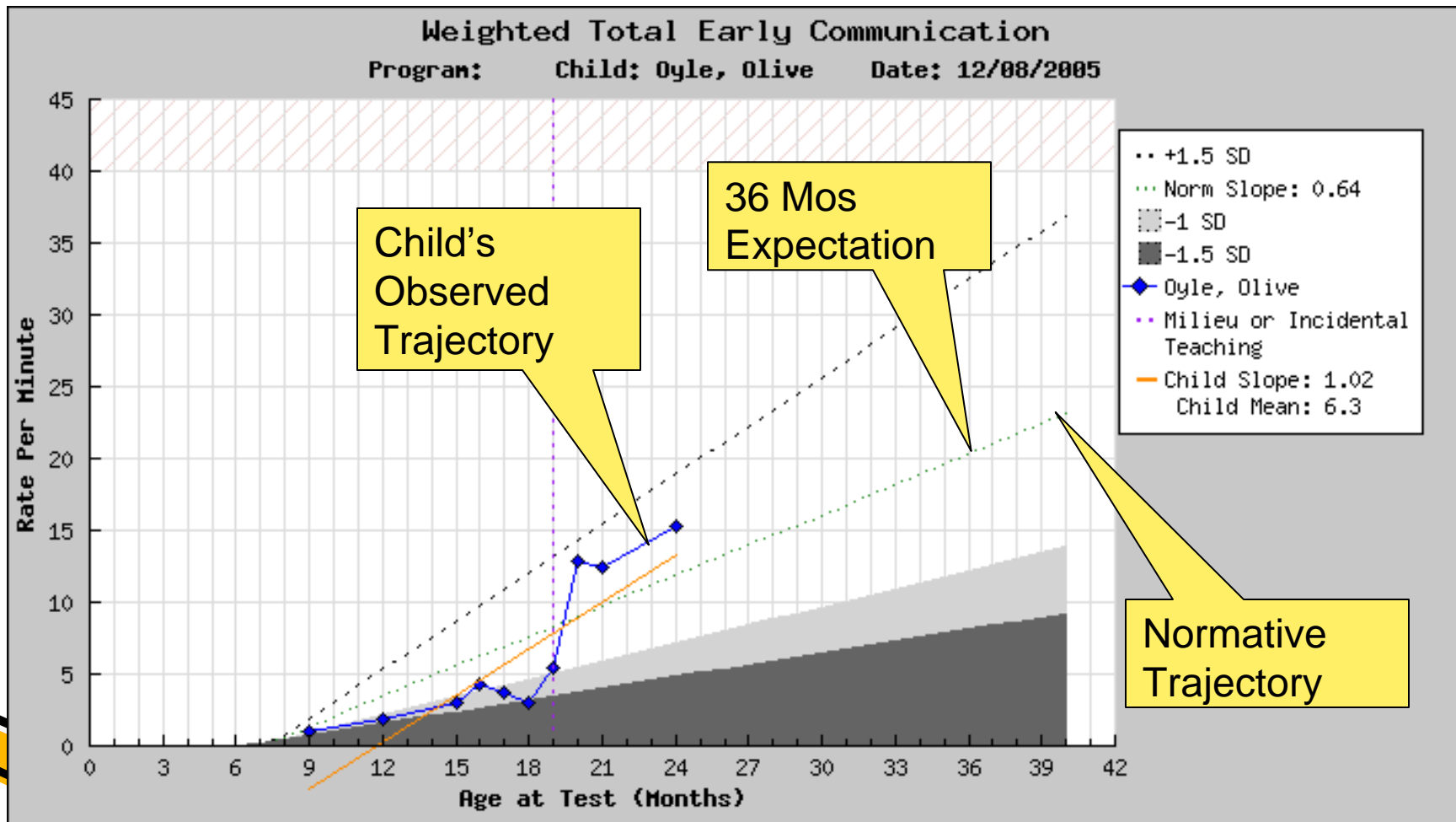
The IGDI Websites are linked to each other

[Get it Got it Go!: Tools for Improving Children's Developmental Outcomes](#) (Preschool)

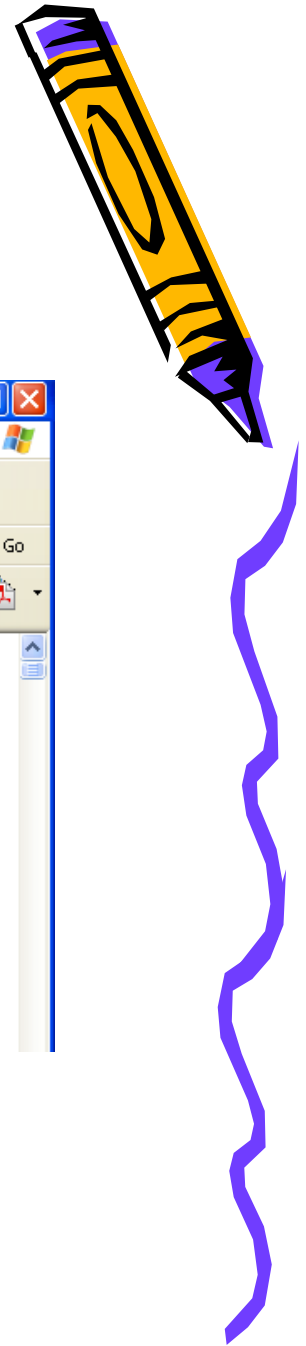
[Dynamic Indicators of Basic Literacy Skills \(DIBELS\)](#), University of Oregon (K-3rd Grade)



Individual Level Results: *Total Communication Growth Chart*



Program-level Results



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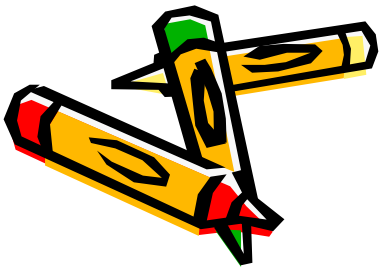
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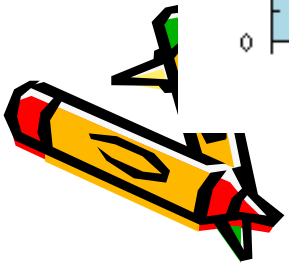
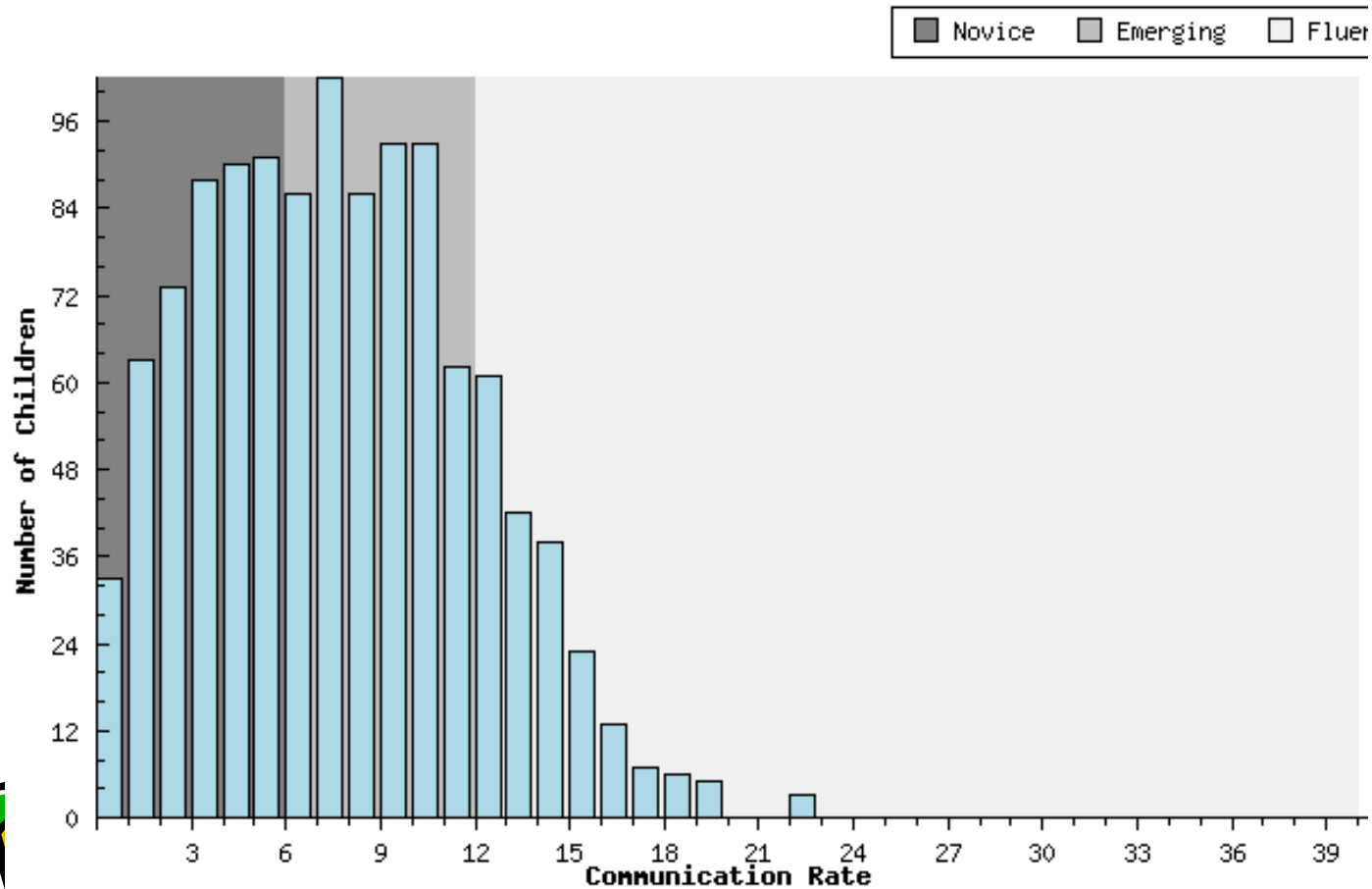
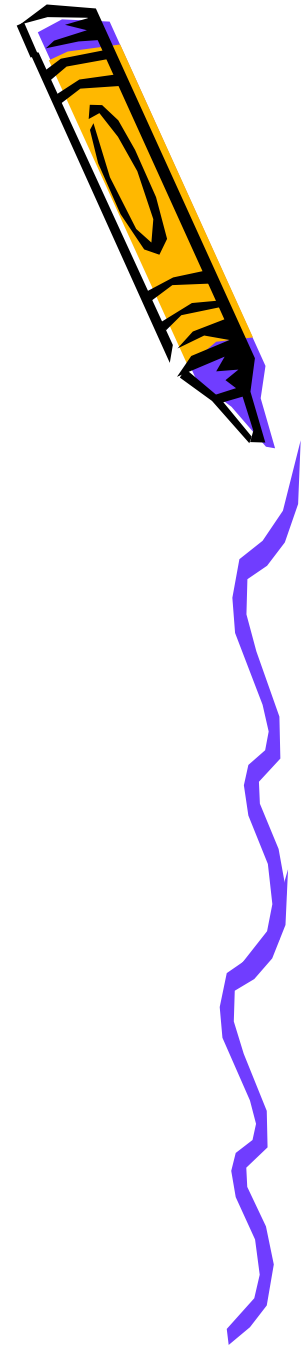
Early Communication Indicator (ECI)
Kansas Early Head Start -- Full Report
May 19, 2008

This report is separated into the following three sections:

- [Assessor Information](#) – tables that describe the status, quantity, and other relevant information about the project assessors
- [Child Information](#) – tables that describe the number, IFSP status, source of funding, and relevant demographics of the children in your project
- [Child Progress](#) – graphs and tables that summarize the progress of children's communication proficiency

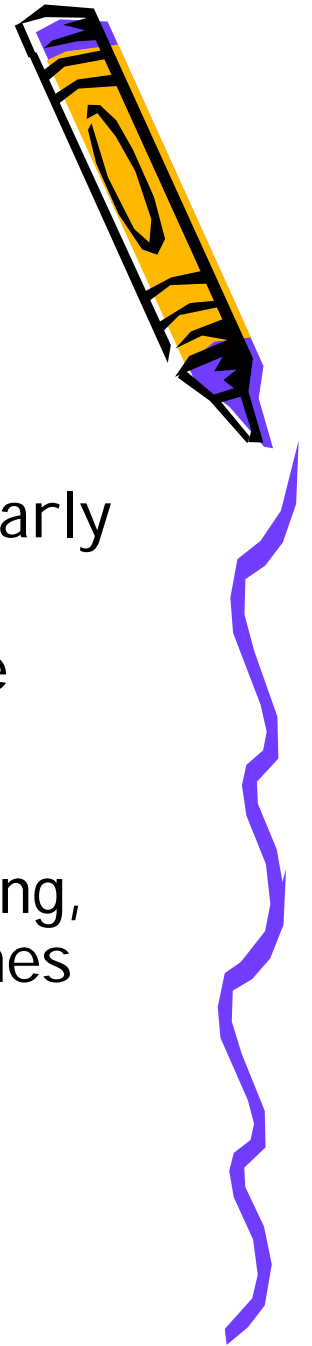


Learners' Proficiency Distribution

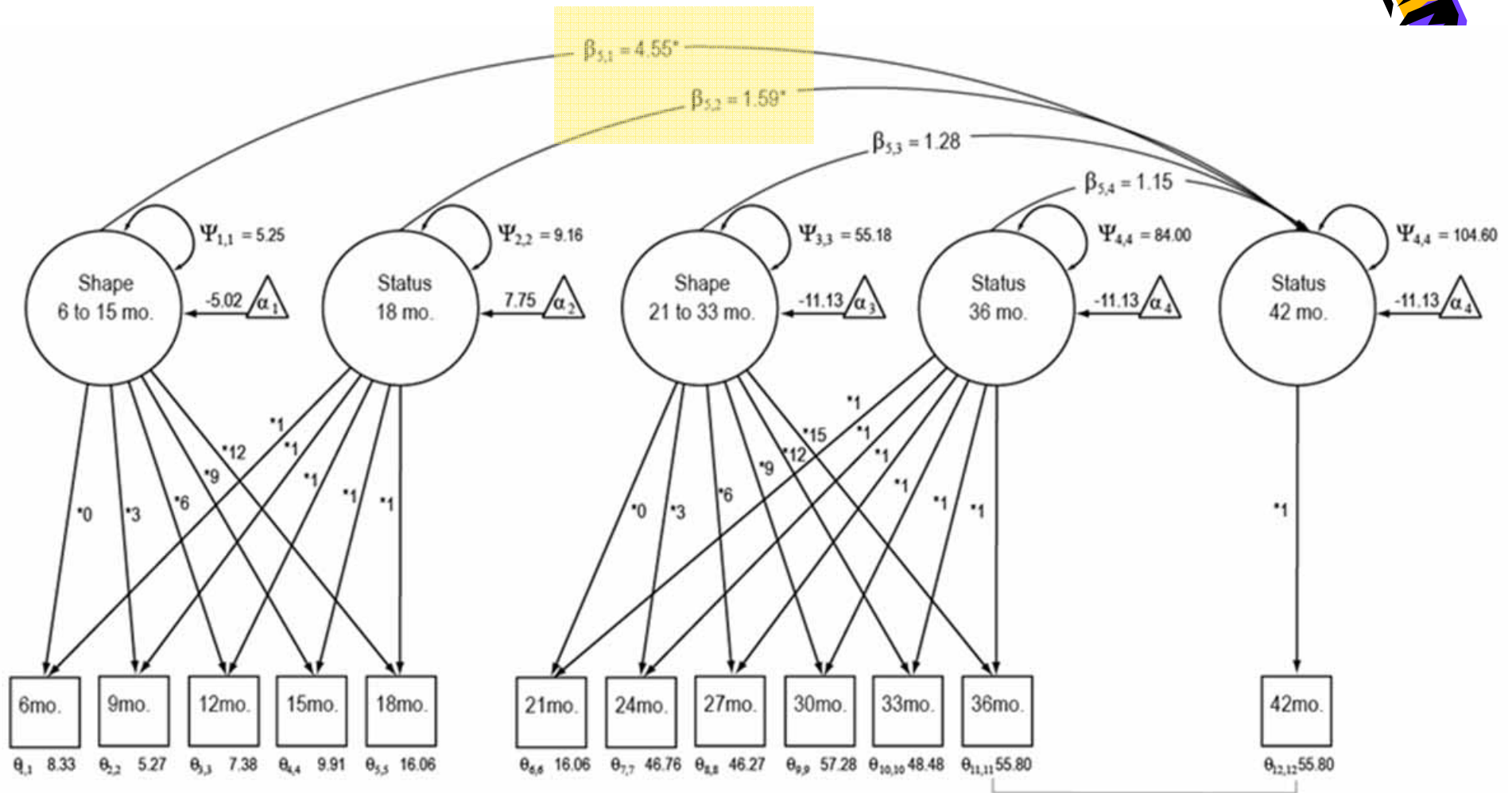
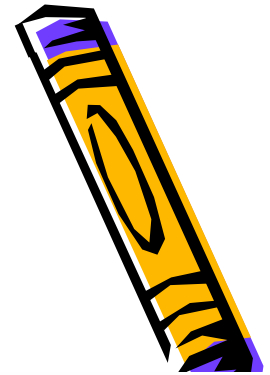


Current and Future Research

- Current work is focused in several areas:
 - Predictive validity of the ECI in terms of early language and early literacy in preschool
 - Developing benchmarks based on predictive validity findings
 - Experimental demonstrations that children whose Home Visitors use progress monitoring, vs. those that do not, obtain better outcomes
 - RTI approaches using IGDIs in preschool



Predictive Validity within Total Communication



*Significant Beta estimate

Implications/Conclusion

- IGDI s and progress monitoring are
 - Evidence-based approaches to early intervening
 - Potential for reducing early risk for delay/disability
- IGDI s for young children are past proof of concept
- IGDI s have rigorous technical features
- Work remains
 - Improving existing measures
 - Developing new measures
 - Linking measures to interventions
 - Scaling up use



References

- Carta, J. J., Greenwood, C. R., Walker, D., Kaminski, R., Good, R., McConnell, S. R., & McEvoy, M. (2005). Individual growth and development indicators (IGDI's): Assessment that guides intervention for young children. *Young Exceptional Children, 4*, 15-27.
- Greenwood, C. R., Carta, J. J., & Walker, D. (2004). Individual growth and development indicators (IGDI's): Tools for assessing intervention results for infants and toddlers. In B. Heward et al., (Eds.), *Focus on Behavior Analysis in Education: Achievements, Challenges, and Opportunities* (Chapter 6, pp. 103-124). Pearson/Prentice-Hall: Columbus, OH.
- Greenwood, C. R., Carta, J. J., Walker, D., Carta, J. J., & Hughes, K. (2006). Preliminary investigators of the application of the Early Communication Indicator (ECI) for infants and toddlers. *Journal of Early Intervention, 28*(3), 178-196.
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