Understanding Educational Impact and Specially Designed Instruction

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Regulatory Review

Educational Identification

- Is significantly different from clinical identification
- Must be determined by a team
- Must address all requirements in federal and state regulations and any local policies
- Requires data and documentation to support eligibility determinations
- Over and mis-identification and student civil rights must be carefully considered

📖 Ireland, M. & Conrad, B. J. (2016). Evaluation and Eligibility for Speech-Language Services in Schools.

Eligibility for Special Education

Federal Definition of Eligibility for Special Education:

1. The student has an impairment
2. There is an adverse educational impact
3. There is a need for specially designed instruction

Suspicion of a Disability

- There must be a suspicion of a disability
- All requirements and regulations apply for SLI only referrals
- This is NOT diet special education

Federal Regulations 34 CFR §300.304

- "Not use any single measure or assessment is used as the sole criterion for determining whether a child is a child with a disability"
- "Use technically sound instruments…"
- "Assessment and other evaluation tools…are selected and administered as not to be discriminatory on a racial or cultural basis"

SPP/APR Indicator Data	Why Is This Important?
• State Performance Plan (SPP) • Annual Performance Report (APR) • Reporting LEA and State data • CCEIS 15% set aside for LEAs (Districts)	Federal Data collection for **Disproportionate Representation** that is a result of inappropriate identification. 1. Autism 2. Emotional Disabilities 3. Learning Disabilities 4. Other Health Impairment 5. **Speech Language Impairment**

Civil Rights and Discrimination:

Identification as a child with a disability who does not meet IDEA and state criteria is a violation of their civil rights.

Research on Tests

Issues with Standardized Test Data

- Teams cannot address difference vs. disorder
- There is a high chance of over/under identification

- Documentation of educational impact and need for specialized instruction is missing
- Eligibility decisions are not in compliance and less defensible

📖 Spaulding, T., Plante, E., Farinella, K. (2006) ***Eligibility Criteria for Language Impairment -Is the Low End of Normal Always Appropriate?***

- *"The practice of applying an arbitrary low cut-off score for diagnosing language impairments is frequently unsupported by the evidence that is available …in test manuals."*
- "Perhaps the most discouraging finding of this study was the lack of correlation between frequency of test use and test accuracy…assuming the ideal goal for diagnosis is 100% correct classification of children, accuracy levels should correlate with frequency of test use."

Expectations in the Literature
Sensitivity ≥ 80% Correct identification as impaired
Specificity ≥80% Correct identification as typical

📖 Betz, Eickhoff, & Sullivan (2013) Factors Influencing the Selection of Standardized Tests for the Diagnosis of Specific Language Impairment

- *"The disproportionate use of vocabulary measures compared to morphosyntactic measures suggests that the content of the most frequently used standardized tests is not necessarily supported by the existing research literature."*
- *"research to date does not show vocabulary to be more impaired than other language domains."*

What About Newer Tests

- Some publishers do not provide sensitivity and specificity data – keep asking for it!
- Examine administration manual and ask critical questions about what is in included

What Score Should Raise Concern ?

- Adopt evidence-based cutoff scores derived for each particular test
- At least 1.5 *SD* below the mean*
- Consider all factors
  - Culture and language
  - Testing Conditions / Context
  - Scoring parameters
- Test form graphics can be misleading

Confidence Intervals	Sample Language
▪ Most confidence intervals are set at 95%, meaning that a student's true score is likely to fall between the upper and lower limits of the confidence interval 95 out of 100 times (or 95% of the time). ▪ "Reporting confidence intervals around a student's score is particularly important in cases where the score may be used to make classification or placement decisions" (CELF-5 manual p. 147)	There is a 95% chance that the student's true performance on the [test name] falls somewhere between [#] and [#].

Test Protocols - Guidance

- Each test has arbitrary categories
- Some cutoffs are at -1 SD
- Calculate Standard Scores (the most robust)
- ✗ Don't report age equivalents.
- ✗ Don't allow test to make determinations

Bias in Assessment - Culture Poverty Dialect and Dimensions of Culture (30)

Registers	Non Standard English Systems
▪ Martin Joos (1972) documented the 5 registers of language across the world ▪ Montana-Harmon (1991) found generations of poverty linked to less formal registers	▪ Viewed as English speakers ▪ Share many common rules with Standard American English (SAE) ▪ Differences in subsystems of the language ○ Phonology – inventory of sounds may differ ○ Semantics – meanings of words and vocabulary may differ ○ Syntax – rules may differ (negation, pronoun use, etc.) ○ Pragmatics – rules may differ (turn taking, eye contact, etc.) ○ Morphology – rules may differ (plurals, tense markers, etc.)

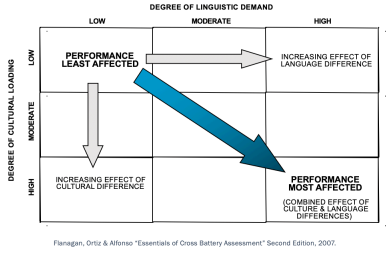
A Language Test that Stigmatizes Black Children

- A New York Times article by John McWhorter https://archive.ph/nd8nQ
- 20 of 30 items on a CELF-5 subtest are different in AAE.
- What about items affected by Southern English?
- Video Message from Cate Crowley

Types of Poverty

Generational	Situational
▪ 2 generations or longer ▪ Usually involves welfare ▪ Belief on stuck ▪ Short term & survival not planning for future	▪ Common for immigrants ▪ Shorter time ▪ Result of circumstances ▪ Pride and belief of overcoming ▪ May refuse "charity"
Early Language Experiences Quantitative Differences	Cultural and Linguistic Classification of Tests

	Words heard per hour	Words heard in a 100-hour week	Words heard in a 5,200-hour year	Words heard in 4 years
Professional Family Child	2,153	215,000	11 million	45 million
Working Class Family Child	1,251	125,000	6 million	26 million
Welfare Family Child	616	62,000	3 million	13 million



Research Shows . . .Culture and Language can impact a score by up to 35 SS pts
Rhodes, R., Ochoa, S., and Ortiz.S., (2005) Assessing Culturally and Linguistically Diverse Students: A Practical Guide, Guliford Press

Culture and Language Load

- Will you get a true measure of ability and achievement?
- Consider and address in reports as appropriate the impact of:
    - Prior knowledge
    - Temporal concepts
    - Common customs
    - Pragmatic norms
    - Language Load
    - Unfamiliar vocabulary
    - Register differences
    - Passive or complex construction

Research Updates and Links for Review

Articulation and Speech Sound Disorders

That one time a journal article on speech sounds broke the SLP internet (2018) Informed SLP blog post about the McLeod and Crowe article

- *Highlighted the difficulties SLPs have understanding the difference between research and decision making under IDEA in U.S. schools.*
- *Resulted in additional research and collaboration to address needs of U.S. school based SLPs*

Children's English consonant acquisition in the United States: A review (Crowe and McLeod, 2020)

- *Re-analysis of studies of consonant acquisition using 15 with a combined total of 18,907 children*
- *Does not separate norms for boys and girls*
- *Most sounds acquired by age 6*

Evaluating Children in U.S. Public Schools With Speech Sound Disorders: Considering Federal and State Laws, Guidance, and Research (Ireland, McLeod, Farquharson, & Crowe, 2020)

Language

- Sampling Utterances and Grammatical Analysis Revised (SUGAR): Quantitative Values for Language Sample Analysis Measures in 7- to 11-Year-Old Children (Owens & Pavelko, 2020)
- Forum: Serving African American English Speakers in Schools Through Interprofessional Education & Practice (Mills, 2021)
- Narrative Writing in Children and Adolescents: Examining the Literate Lexicon (Sun & Nippold, 2012)

Resources

- VDOE SLP page
- VDOE SLP PD page
- Leadersproject
- Kimochis

Deoni, S. C., Beauchemin, J., Volpe, A., D'Sa, V., & Consortium, t. R. (2021). **Impact of the COVID-19 Pandemic on Early Child Cognitive Development: Initial Findings in a Longitudinal Observational Study of Child Health**. . https://doi.org/10.1101/2021.08.10.21261846

- "Leveraging a large on-going longitudinal study of child neurodevelopment, we examined general childhood cognitive scores in 2020 and 2021 vs. the preceding decade, 2011-2019. We

find that children born during the pandemic have significantly reduced verbal, motor, and overall cognitive performance compared to children born pre-pandemic."
- Males and children in lower socioeconomic families have been most affected.
- Results highlight that the environmental changes associated COVID-19 pandemic is significantly and negatively affecting infant and child development.

Hustad, K.C., Mahr, T.J., Natzke, P., & Rathouz, P.J. (2021). Speech development between 30 and 119 months in typical children I: Intelligibility growth curves for single-word and multiword productions. *Journal of Speech, Language, and Hearing Research*.

- Over 500 typically developing children who spoke American English
- A standardized sample of single words and sentences orthographically transcribe recordings of these samples and used mathematical modeling to calculate rates.
- Children should be:
  - *50% intelligible by 4 years*
  - *75% intelligible by 5 years*
  - *90% intelligible a little past 7 years*

Predicting who will normalize without intervention for speech sound disorders (To, McLeod, Law, & Sam, 2022)

- Children who were more likely to normalize or normalized in a shorter time were stimulable to all errors and more intelligible as rated by caregivers using the Intelligibility in Context Scale.
- Stimulability and intelligibility were more useful prognostic factors of speech normalization when compared to (a)typicality of error patterns and expressive language ability.

Comprehensive Assessment

Academic Activities:	***Speech-Language Probes:***
• Artifact analysis • Curriculum-based assessment • Observations in school (natural) settings • Educational records	• Case history • Interviews • Language/Narrative samples • Stimulability • Dynamic assessment • Play-based assessment
Contextualized Tests:	***Decontextualized Tests:***
• Norm-referenced measures of academic achievement • Curriculum benchmarks	• Norm-referenced speech-language tests (parsed skills: articulation, semantics, syntax, morphology, fluency, etc.)

Academic Activities

- Options for examining this area include:
  - Observations in school settings
  - Artifact Analysis

- Opportunity to gain information about:
    - Knowledge and skills (strengths and weakness)
    - Teacher expectations and behaviors
    - Learning environment
    - Strategies attempted and results
    - Use and Impact of dialect

Critical Questions for Teachers

- You should be able to ask teachers
    - Why does _(name)_ need/receive services?
    - What impacts _(name)_ in the classroom?
- If teachers can't provide answers and data, there is little evidence of educational impact or need for specially designed instruction

Observation	Academic Activities / Observations
▪ Obtain parental consent (as required) ▪ Should be summarized in an evaluation report ▪ Areas to consider: ○ Setting ○ Physical Environment ○ Auditory Environment / Sensory environment ○ Social context ○ Language demands of activity* ○ Motor skills and response demands of activity* ○ Provision of and Response to Instructional Strategies*	▪ Homework, journals, work samples, classroom tests, etc. ▪ Artic errors reflected in spelling? Poor intelligibility? ▪ Language impacting performance? ▪ Data from strategies used by teacher? (MTSS, RtI and IDEA pre-referral intervention) ▪ Are strategies being implemented? Is the student responsive? ▪ Is there respect for language differences and teaching using explicit instruction

Intelligibility in Context (ICS)

- 7-item questionnaire using a 5 pt scale
- Rates the degree to which children's speech is understood by different communication partners
- https://www.csu.edu.au/research/multilingual-speech/ics

SLP Probes

- Case history and Interviews
    - Student (VDOE Appendix F)
    - Staff (VDOE Appendix F)
- Parent
    - Leadersproject Critical Questions
    - Parent Interview forms (VDOE Appendix F)
- Language/Narrative samples
- Stimulability
- Dynamic assessment
- Play-based assessmen

Tier 2 Vocabulary • Are used during classroom discussions • Are critical to understanding academic texts • Require deliberate effort to learn when not present in home language environment • Likely to appear in written texts than in speech • Are rarely scaffolded by authors or teachers (contrast to tier 3 words)	Artifact Analysis • Reviewing student work as part of an evaluation • May be done by others or by the SLP • May be part of an existing process (Student Assistance, RtI, etc.) • Should examine areas of concern, patterns, and needed actions • Should be documented as part of the evaluation.

Using a 4 Step Process

- Describe
- Evaluate
- Interpret
- Identify actions for improvement

Describe, Evaluate, Interpret and Identify (3rd Grade)

> By where me and Danielle live, they had a drug bust. Drug Busts are when police come and search drug dealer houses. It was closer to Danielle's house. It was kinda close to David house two. It was really close to Kasey and Katie because they live less than ten yards away. It was boring because you has to stay inside.

Adverse Educational Impact
• Impact is on student – not family or teacher
• Academic
  • Grades
  • Difficulty with school work
• Functional/ Social/ Emotional/ Behavioral
  • Ability to interact in school setting is impacted
  • Emotional state impacts ability to participate
  • Behaviors impact ability to participate
	Assessing for Educational Impact
	• Use data from multiple sources
	• Select tools carefully and consider:
	  • Bias due to language variation, culture, and the impact of poverty
	  • Diagnostic accuracy of tools
	• "…likely to yield accurate information on what the child knows and can do academically, developmentally, and functionally…(34 CFR 300.304 and 34 CFR 300.310)

Specially Designed Instruction	Assessing Need for Specially Designed Instruction
Instruction that is distinctly different from general education in: ▪ Content ▪ Methodology ○ Delivery ○ Intensity ▪ Setting Not just "accommodations" Not just extra practice	• Use data from multiple sources • Select tools carefully and consider: • Bias due to language variation, culture, and the impact of poverty • Diagnostic accuracy of tools • "…likely to yield accurate information on what the child knows and can do academically, developmentally, and functionally…(34 CFR 300.304 and 34 CFR 300.310)

RIOT and ICEL

The RIOT/ICEL Matrix

- A framework that increases schools' confidence both in the quality of the data that they collect and the findings that emerge from the data (Hosp, 2006, May).
- Schools should attempt to collect information from a range of sources to control for potential bias from any one source.
- RIOT/ICEL Matrix provides examples of data that may be considered (Wright, 2010).
- RIOT/ICEL Matrix Worksheet also documents strategies attempted and results (LAUSD, ND)

Potential Sources of Information

Review of historical records and products

Interview of key stakeholders

Observe performance in real time functional settings

Test through careful use of appropriately matched tools and strategies

- Educators may draw from too few sources when pulling together information about the presenting problem(s)—e.g., relying primarily on interviews with one classroom teacher -- which can bias the findings.
- Educators may not consider the full range of possible explanations for the student's academic or behavioral problems—such as instructional factors or skill-deficits—and thus fail to collect information that would confirm or rule out those competing hypotheses.

Key Domains of Learning

Instruction How the curriculum is taught including level of instruction, rate or instruction and presentation

Curriculum What is taught including scope, sequencing, pacing, materials, rigor, format and relevance

Environment Where instruction takes place including classroom expectations, attitudes, peers, school culture, facilities, class size, attendance, classroom management

- A common mistake that schools often make is to assume that student learning problems exist primarily in the learner and to underestimate the degree to which teacher instructional strategies, curriculum demands, and environmental influences impact the learner's academic performance.
- The ICEL elements ensure that a full range of relevant explanations for student problems are examined.

Learner Who is being taught including motivation, pre-requisite skills, organization and study habits, ability, impairment, educational history

RIOT ICEL MATRIX

	Review	Interview	Observe	Test
Instruction	What factors contribute to how the student has performed in school, home and community?	When is the student able to work independently and successfully?	What strategies are used to support success in participation?	What would the student do to demonstrate his/her knowledge or skills?
Curriculum	What expectations are there of the students in the class?	Where does the student do well academically?	What accommodations and modifications are used to support participation?	What hypotheses have emerged from the data that explains the student's challenges?
Environment	What supports and barriers (physical, sensory, instructional, social) exist?	What obstacles has the student overcome and what remains challenging?	What resources best support the student's engagement and achievement?	What kinds of things help to improve the student's access and participation?
Learner	In what activities, roles, routines does the student engage?	What is your favorite part of the school day? What do you enjoy doing at school/home?	What environments does the student function at his/her best?	What helps you be the best that you can be? What do you need to be able to be your best?

Report Writing: Documenting Educational Impact and Need for Specially Designed Instruction

Documenting Educational Impact and Need for Specially Designed Instruction

- Data from staff, student, family
- Educationally relevant data
- Observation Data and Rating Scales

Observe and Assess Skills Including

- Plan and how to start a task
- Organize an approach
- Develop a goal
- Establish a schedule
- Choose a strategy (what's next)
- Monitor and problem solve interruptions/issues
- Sustained effort on task

Need for Specially Designed Instruction

- Instruction that is distinctly different from general education in:
  - *Content*
  - *Methodology*
  - *Delivery*
    - Intensity
    - Setting
- Not just "accommodations"
- Not just extra practice

Evaluate outcomes

- Stimulability
  Responsiveness
  Modifiability

Dynamic Assessment Data

- What strategies were effective?
- Can these be implemented by others?
- What recommendations may be made?

Federal Regulations 34 CFR §300.304

- "Not use any single measure or assessment is used as the sole criterion for determining whether a child is a child with a disability"
- "Use technically sound instruments…"
- "Assessment and other evaluation tools…are selected and administered as not to be discriminatory on a racial or cultural basis"

Report Sections

1. Assessment Data
   1. Standardized/norm referenced
   2. LSA
   3. Dynamic Assessment
2. Analysis/Interpretations
3. Recommendations

Cross Validating Information

- Compare tests and other measurements/observations
- Are there any outliers?
- If yes, are there any factors that might explain this?
- Compare teacher, parent, and SLP data:
  - Do multiple data sources suggest the same thing?
  - Do the results lead to additional questions?
  - Do they suggest that additional data may need to be collected?
- Do the results make sense?
- Is my evaluation compliant with regulation?
- Did I use a variety of methods (informants, modes, contexts) to collect data?
- Did my evaluation process and assessment selections reduce bias and false positives/negatives?
- Did I use diagnostically accurate tools and techniques?
- Do multiple data sources (interviews, observations, decontextualized and contextualized tests and measures) suggest the same thing?
- Do the results lead to additional questions and/or suggest that additional data may need to be collected?
- Did my data support team decision making?
- Does my data link specifically to IEP development? Educational relevance?

Additional Considerations

- Are the results significant from a clinical or statistical standpoint?
  - Normative weakness (≥-1.5 sd)
  - Relative weakness (English vs Math)
- Are they meaningful in a practical way?

Develop Conclusions

- Step back to consider what the results mean and to assess their implications.
- Make Recommendations
- Instructional strategies & techniques
- Prompts and supports

Quote the Manual "*Following guidance in the test manual, Tom's scores were not calculated for 3 reasons:* 1) *subjects with mental disabilities were excluded from the norming sample,* 2) *Tom is 16 years old and the test is normed for students ages 5-12,* 3) *the administration was non-standard and used additional prompts "*	Report Writing ■ Report confidence intervals ■ Mention diagnostic accuracy ■ Describe growth and performance – *Dynamic Assessment* – *Stimulability* ■ Describe strategies and techniques that improve performance ■ Compare performance across quadrants

Eligibility

Decision Making

- How does the LEA address culture, language and the impact of poverty during evaluation and eligibility?
- How is the requirement for observation met?
- What conversations are needed to increase understanding for:
  - Staff
  - Parents
  - Others (e.g., MDs, Private SLPs, Early Intervention)

Does Your Data

- Tell you about the student?
- Inform decisions and intervention?
  - What academic language skill difficulties are impacting access to curriculum?
  - What are your instructional recommendations?
  - Will the interventions selected increase the student's educational outcomes?

Data Sources

- Which data sources does the team consider?
  - General education data before and during the evaluation
  - Standardized tools
  - Probes and dynamic assessment data
- How do others contribute data for eligibility?
- How does the team document:
  - Impairment
  - Educational impact
  - Need for specially designed instruction

Eligibility for Special Education Requires that

1. The student has an impairment
2. There is an adverse educational impact
3. There is a need for specially designed instruction

Case Study

1st grade student with scores >-2 s.d. below the mean on the CELF 5 (SS 68) an omnibus language measure and on the EOWPVT vocabulary assessment (SS 65). Difficulties were noted with following directions and receptive and expressive vocabulary.

After testing, student was able to correctly follow directions 9 out of 10 times (90%) after a short practice session focusing on listening to the whole direction before starting and visualizing the steps. He was able to learn new words and use them correctly after a single presentation. These results reveal a significant improvement and demonstrate Roland's responsiveness to instruction.

He enjoys shared reading but has had limited experience with books outside of school. Classroom observation revealed teacher is on medical leave and substitute teachers do not provide expansions or teach unfamiliar vocabulary.

1. *Is there an impairment?*
2. *Is there an adverse educational impact?*
3. *Is there a need for specially designed instruction?*