

Precisely Evaluating Learning Outcomes for Children with Autism: Empirically Validating Instruction with Precision

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Precision Teaching and Fluency-Based Instruction

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| <ul style="list-style-type: none"> • Emphasis on rate (responses per minute) • Data collected on Standard Celeration Chart • Child Centered Daily Goals • Norm-Referenced outcomes measures | <ul style="list-style-type: none"> • Emphasis on rate (responses per minute) • Data collected on Standard Celeration Chart • Child Centered Daily Goals • Criterion Referenced outcomes measures RESAA |
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How Do Precision Teachers Establish Frequency Aims?

- Percentage of Improvement (Lovitt & Hansen, 1976)
 - Child can progress when achievement of 25% over baseline and 90% accuracy
- Peer Comparison
 - "How fast can other three year olds go?"
- Normative Data
 - Mean comparison from group of same-age high achievers
- Teacher/Student Ratio (Mercer, Mercer & Evans, 1982)
- Competent Professional's Rate on tool skills (Johnson & Layng, 1994)
 - Engineer's rate on math facts

How Do Fluency Based Instructors establish aims?

By the **outcomes** of performance:

- **Retention** and maintenance of skills and knowledge
- **Endurance**, attention span, resistance to distraction (greater stability, less easily drawn off task)
- **Stability** - the ability to engage in the skill easily in the face of distraction
- **Application** or transfer of training in application and subsequent learning (generativity, creativity)
- **Adduction** confluence of skills to produce new patterns of responding

- Binder, 1996; Johnson & Layng, 1992;
Binder, Haughton, & Van Eyk, 1990;
Haughton, 1972,

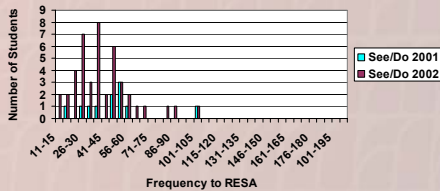
Why does Fabrizio/Moors Consulting individually validate?

- Few aims derived on persons with autism
- Regardless of diagnosis, different students may require different frequencies to attain RESAA
- Students may require different aims depending on fluency of other skills in their repertoire

- **Subjects:**
 - Over thirty children in four states
 - Five children receiving Fabrizio/Moors programming for four years
 - Age ranges between 18 months and 10 years
 - Home programs average 15 hours per week
- **Methods for data collection:**
 - All individual charts with empirical evidence of passing RESA checks were collected from student's homes and compiled

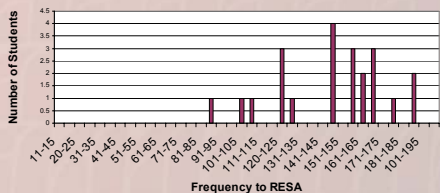
- **See/Do Example pinpoints:**
 - Gross Motor
 - Fine Motor
 - Standing Motor
 - Oral Motor
 - Actions with objects

See/Do

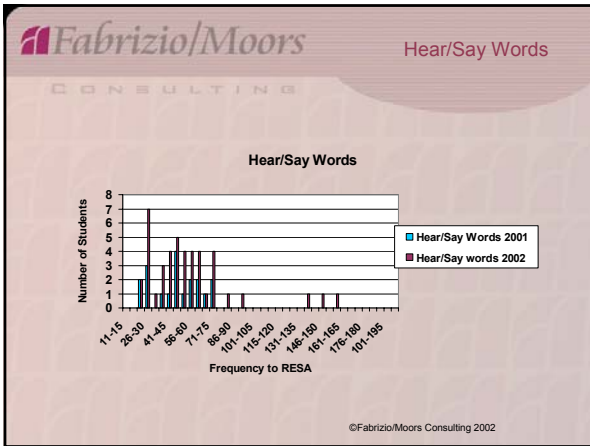


- **Free/Do Example pinpoints:**
 - Shake
 - Point
 - Reach
 - Push/Pull
 - Squeeze
 - Pinch
 - Grasp/Release

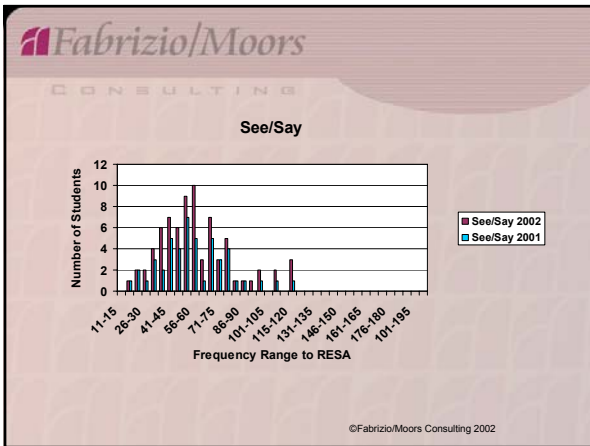
Free/Do 2002



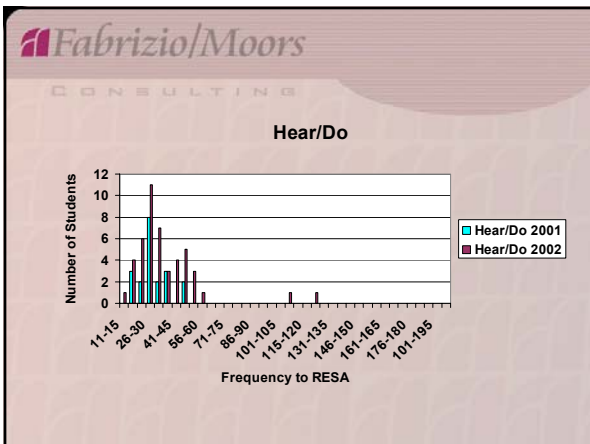
- **Hear/Say Example Pinpoints**
 - Phonemes
 - Phoneme blends
 - Words
 - Syllables
 - Sentences
 - Hear a category/say related items



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- See/Say Example pinpoints (flashcards or practice sheets) :
 - See/Say Labels
 - See/Say Phonemes
 - See/Say Words
 - See/Say Prose
 - See object/Say component parts



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- Hear/Do Example pinpoints:
 - Gross Motor Movements
 - One to three step commands



Fluency Design Matrix with Empirically Derived Aims for Children with Autism

Think (T)	150-200 per min.	55-60 per min.	30-50 per min.	130-150 per min.	50-80 per min.		100-150 per min.
See (S)	30-35 per min.	30-35 per min.	30-50 per min.	50-55 per min.	40-60 per min.		30-35 per min.
Hear (H)	30-35 per min.			30-35 per min.	40-60 per min.		
Feel (F)							
	Do	Mark	Match	Say	Write	Type	Point

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- Tracking syllables as well as words on all verbal charts (Hear/Say, See/Say, Free/Say)
- Continual data compilation of individual student's charts within Fabrizio/Moors Consulting programs and annual presentation.
- Analyzing existing data for frequency range differences in ages, level of diagnosis, number of hours of instruction, celeration, etc...
- National Database/Website? Clearinghouse available for suggested aims
 - One on One Instruction vs. Classroom applications

References

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