Together to Tomorrow: Collaboration to Meet Unique Learning Needs

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Purpose of Education?

- Education is the best provision for old age (Aristotle)
- Education should teach all to write with a swift and fair hand (Benjamin Franklin, 1749)
- Education should replace an empty mind with an open one (Malcom Forbes, 1980)
- Education should provide instruction and related services that are free from cost and that meet student needs while also fostering an understanding and acceptance of ethical values such as respect for others, justice, civic virtue and citizenship, and responsibility for self and others (US Department of Education)

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The Results

- Regular Education Initiative
- Co-teaching
  - Strong effects for language arts and moderate effects for math (Murawski & Swanson, 2001)
  - Enhances skills of students who are at-risk but non-disabled (Cook & Friend, 2004)

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Substantial Shift in Education

- 1983!
- Focused to comprehensive
- Basic skill to proficiency (to college and career ready)
- Process to outcomes

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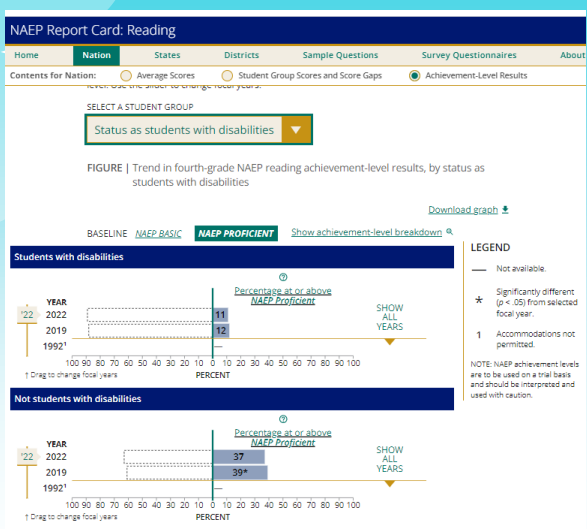
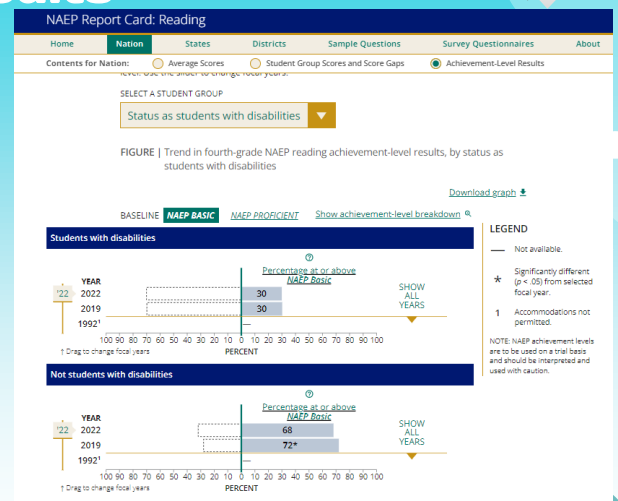
Results





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President's Commission on Excellence in Special Education

- Reduce paperwork and increase flexibility
- Identify and intervene early
  - Service first and assessment later
- "Those that get counted, count."
- Use special education staff more effectively

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Special Education

Individualized instruction, at no cost to the parents or guardians, to meet the unique needs of a child with a disability.

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Interventions for Children with LD

Reading comprehension	1.13
Direct instruction	0.84
Psycholinguistic training	0.39
Modality instruction	0.15
Diet	0.12
Perceptual training	0.08

Kavale & Forness, 2000

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SPECIAL Education	Special **EDUCATION**
• Special interventions for the right kids • Process training, diet, etc. • *d* = 0.17	• Instructional adaptations for all kids • Direct instruction, practice, error corrections • *d* = 1.04

RtI for International Schools Summit
#RISS2019

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Table *Demographic information*

Group	Sex	Pre	Post*	IQ	ADHD?	Medication
1/D	M	13	55	103	Yes	Adderal
2/D	M	02	59	95	Yes	Ritalin
3/D	M	02	38	110	No	Ritalin
4/D	F	03	55	105	Yes	Ritalin
5/D	F	02	50	110	Yes	Ritalin
6/D	M	18	60	101	No	—
7/D	M	01	38	98	Yes	Ritalin
8/D	M	01	45	102	No	—
9/NI	M	38	39	99	No	—
10/NI	F	50	48	107	No	—
11/NI	M	85	83	122	No	—
12/NI	M	82	85	101	No	—
13/NI	M	60	60	113	No	—
14/NI	M	52	50	95	No	—
15/NI	M	49	53	99	Yes	Ritalin
16/NI	M	75	74	121	No	—

Simos et al., 2001

* Follow-up testing was performed using alternate forms.

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Group Results

- Experimental group increased 44.75 points (SD = 7.22)
- Correlation between growth and IQ
- r = -.29

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390 *Scholin and Burns*

Table 2
Correlations Between Pre-Intervention Measures and Reading Fluency and Growth z Scores

Pre-Intervention Measure	*n*	Post-Intervention Fluency (95% Confidence Interval)	Fail-Safe *n*	Reading Growth (95% Confidence Interval)	Fail-Safe *n*
Baseline Reading Fluency	95	.60* (.45 to .72)	95	.09 (−.11 to .29)	NA
IQ	37	−.46[a] (−.68 to −.16)	94	−.11[a] (−.42 to −.22)	NA
Word Reading SS	39	.53[a]* (.26 to .72)	30	.12[a] (−.20 to .42)	NA
Reading Comprehension SS	27	−.24 (−.57 to .15)	NA	−.18 (−.52 to .22)	NA
Reading Fluency SS	14	.70* (.27 to .90)	19	.37 (−.20 to .75)	03
Word Attack SS	14	.54 (.01 to .83)	11	.36 (−.21 to .75)	03
% of Comprehension Questions Answered Correctly	26	.72* (.46 to .87)	36	.32 (−.08 to .63)	02
Reading Accuracy	62	.45 (.23 to .63)	31	.02 (−.23 to .27)	NA

Note. SS = standard score; NA = not applicable.
[a]Coefficient corrected for range restriction.
* $p < .003$.

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Table 2
Median Effect Sizes for Each Variable

Variable	*k*	Median *g*	95% CI	Fail-safe *N* for a small effect	Fail-safe *N* for a large effect
Use of data					
Screening	30	.41	.31–.51	32	15
Designing interventions	4	.42	−.05–.89	4	2
Tier of intervention					
Small group	15	.30	.18–.42	8	9
Individual	16	.44	.28–.60	19	7
Type of assessment					
Cognitive function	8	.17	−.07–.41	NA	6
Phonological/phonemic awareness	13	.50	.34–.66	20	5
Reading fluency	11	.43	.29–.57	13	5
Mixed	2	.26	.12–.40	1	1

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Executive Functioning (EF)

Jacob and Parkinson (2015) - 67 Studies

Most of studies occurred in 2010 or later

EF and academic skills are correlated (equal for reading and math)

Changing skills in EF **did not** lead to increased skills in reading and math

No evidence for causal link between EF and reading or math

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Working Memory

Melby-Lervag & Hulme, 2012

Verbal Ability	0.13
Word Decoding	0.13
Arithmetic	0.07

"There was no convincing evidence of the generalization of working memory training to other skills."

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Table 1. Summary of Meta-Analyses Regarding Cognitive Processes and Academic Interventions

STUDY	DESCRIPTION	*k*	*d*
Burns et al. (in press)	Academic interventions from cognitive processing measures	37	0.17
Kearns & Fuchs (2013)*	Academic outcomes of cognitively focused intervention	34	0.44
	Matched to cognitive deficits	5	0.48
	Compared to no intervention	11	0.58
	Compared to academic interventions	34	0.26
Melby-Lervag & Hulme, (2013)	Working memory training and academic outcomes	8	0.11
	Mathematics	7	0.07
	Decoding	7	0.13
	Verbal ability (comprehension)	8	0.13
Scholin & Burns (2012)	Predicting response to intervention for reading with IQ	18	0.27
Stuebing et al. (2009)	Relationship between IQ and academic outcomes	22	0.32
Stuebing et al. (2015)	Cognitive characteristics and response to intervention	54	0.46
	Baseline characteristics and growth curves	36	0.65
	Baseline characteristics and gain scores	30	0.43
	Baseline characteristics and posttest	54	0.30
Schwaighofer et al. (2015)	Near and far transfers for working memory training	47	0.15
	Mathematics	15	0.09
	Decoding	14	0.15
	Verbal ability (comprehension)	29	0.21
Total		**203**	**0.27**

* One effect was identified as an outlier by Kearns and Fuchs (2013) and was removed.

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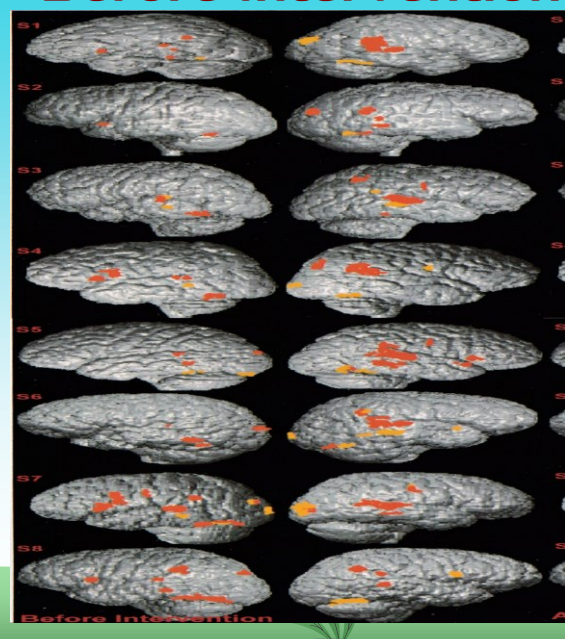
Before Intervention



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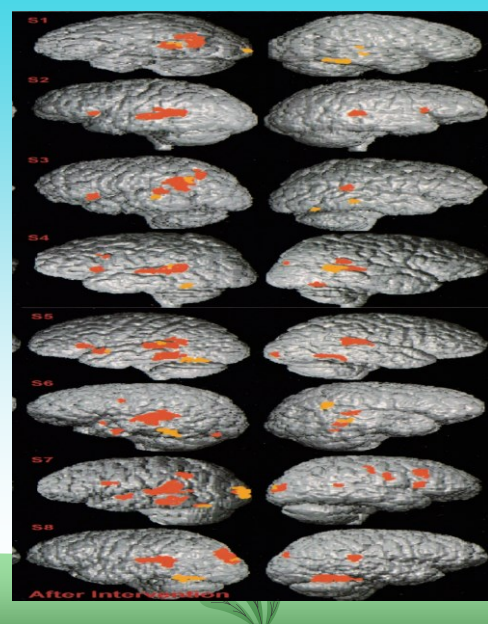
After Intervention



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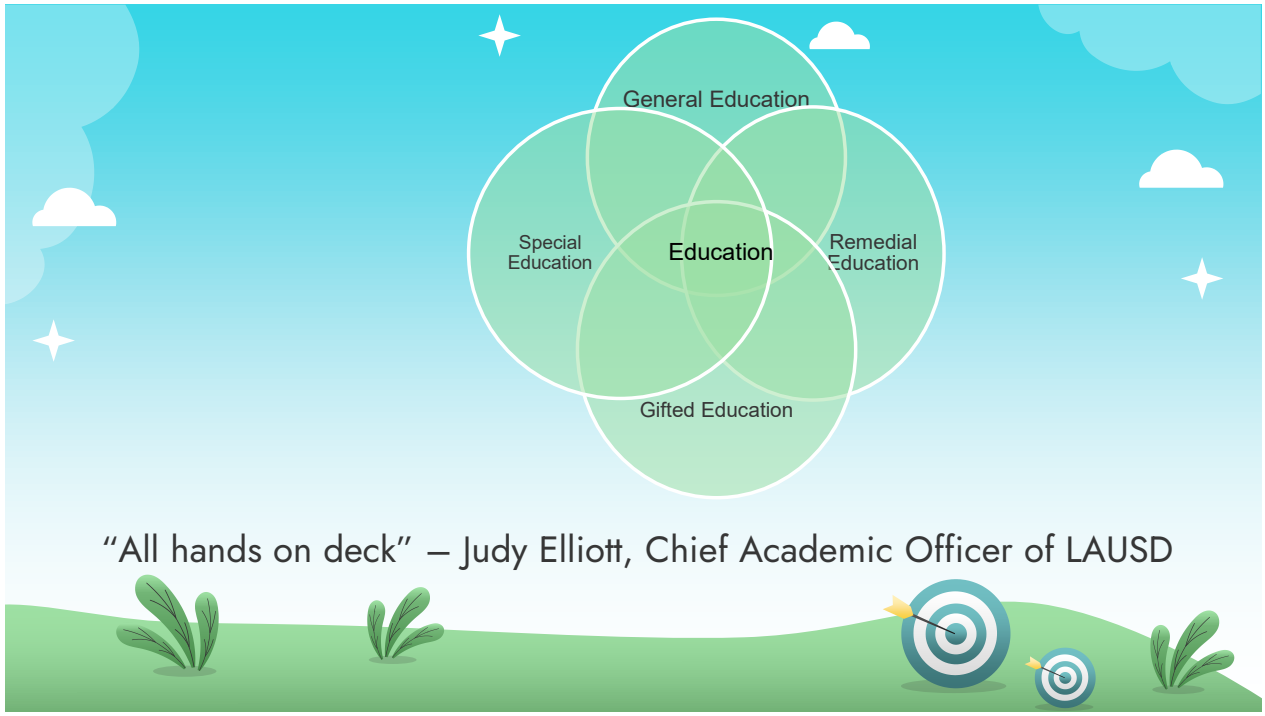
General Education
Special Education
Education
Remedial Education
Gifted Education
"All hands on deck" – Judy Elliott, Chief Academic Officer of LAUSD

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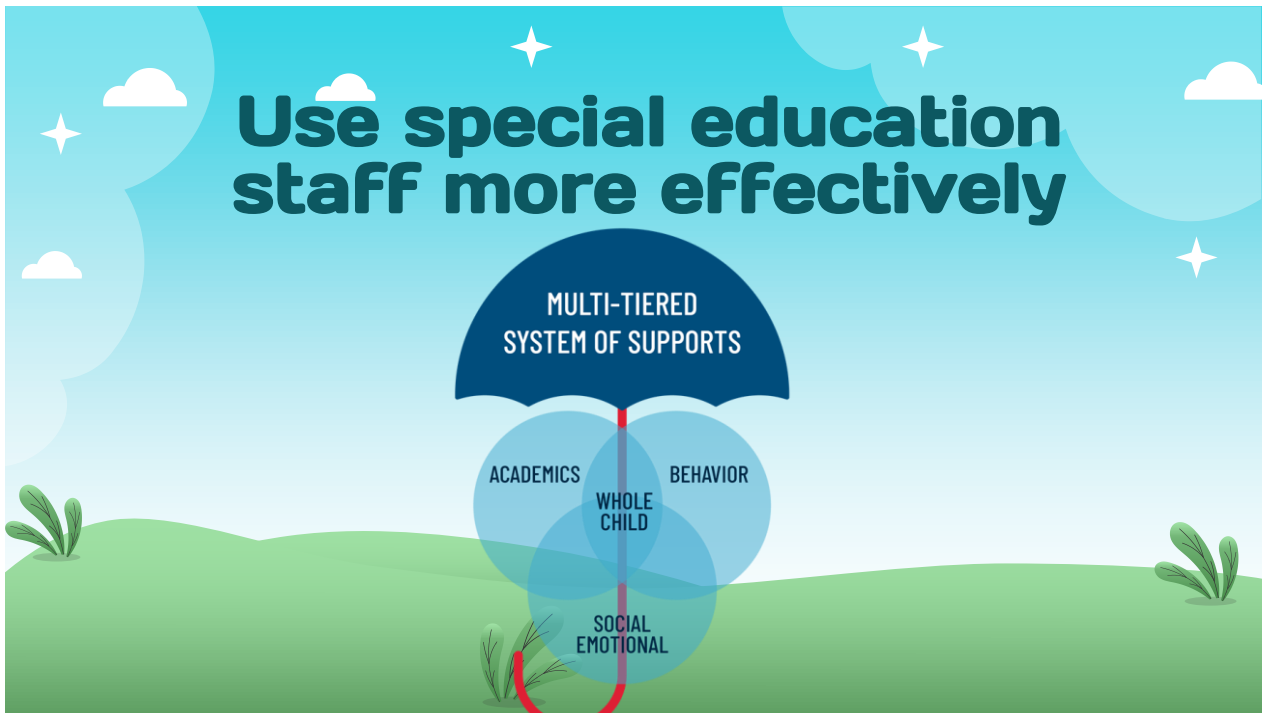
Use special education staff more effectively
MULTI-TIERED SYSTEM OF SUPPORTS
ACADEMICS
BEHAVIOR
WHOLE CHILD
SOCIAL EMOTIONAL

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MTSS

Systematic use of assessment data to efficiently allocate resources to enhance learning for all kids.

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Problem Solving

- Tier 1 – Identify discrepancy between expectation and performance for **class or individual – Is there a classwide need?**
- Tier 2 – Identify categorical discrepancy for individual. Assign small group solution. **What is the category of the problem?**
- Tier 3 – Identify discrepancy for individual. Implement individual intervention. **What is the causal variable?**
  - Environmental variable within school control that is most closely related to the problem.

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Analyses Conducted at Each Tier & Who Conducts Them

	Analysis	Data	By Which Team
Tier 1	Is there a classwide problem?	Universal screening data	Grade Level Team
Tier 2	Who needs intervention?	Universal screening data	Grade Level Team
	What is the category of the problem?	Comparisons of data from core instructional components	Grade Level Team
	Is the student making adequate progress?	Monitoring with a general outcome measure (GOM) and a skill measure	Grade Level Team
Tier 3	What is the causal variable?	Relevant student outcome and environmental data	Problem-Solving Team
	Is the student making adequate progress	Monitoring with a GOM and a skill measure	Grade Level Team

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Problem solving team

- Referring Teacher
- Another General Ed Teacher
- Principal
- Spec_Ed Teacher or School Psych

Others (SLP, SW, etc.) as needed

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Effect

Table 2.—Variance of Retention Rates Between Groups of Schools

Group	*n*	*M*	*SD*
Group 1	13	140.73	71.03
Group 2	12	38.60	156.22

Note. The *t* value for the comparison of Groups 1 and 2 is 2.08 ($p < .05$).

Table 3.—Variance of Referral Rates Between Groups of Schools

Group	*n*	*M*	*SD*
Group 1	13	44.05	20.69
Group 2	12	29.40	5.95

Note. The *t* value for the comparison of Groups 1 and 2 is 2.45 ($p < .05$).

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Problem-Solving Facilitator

1. Timer
2. Assessment
   a. Does the information align with the purpose for the assessment?
   b. Is the information about an alterable variable?
   c. Does this information directly link to instruction/intervention? (Hosp, 2008)
3. Research-based intervention?
4. Keeps conversation about that which is relevant and under school's control

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Problem-Solving Framework

Acquire

Back it up!

Make it easier

Retain

Increased repetition within lesson (IR)

Increased repetition across lessons or frequent review

Generalize

Comprehension or application interventions

Integrate a variety of forms of the letters, words, numbers etc., including those similar to how they are to be used

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Thanks!
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