

A grayscale image of the Purdue University clock tower, centered in the background. The tower features a clock face with Roman numerals and a pointed top. The text 'PURDUE' is overlaid in large white letters, and 'UNIVERSITY' is overlaid in smaller yellow letters below it, separated by a thin yellow horizontal line.

**PURDUE**  
**UNIVERSITY**



**Gifted, Spatial Students, Rebecca Mann**

**Children from Poverty, Marcia Gentry**

**ADHD / Gifted, Jillian Gates**

**Young, Gifted Children, Yang Yang**

**Nurturing Highly Gifted Children,**

Rachelle Miller

**Gifted English Language Learners,**

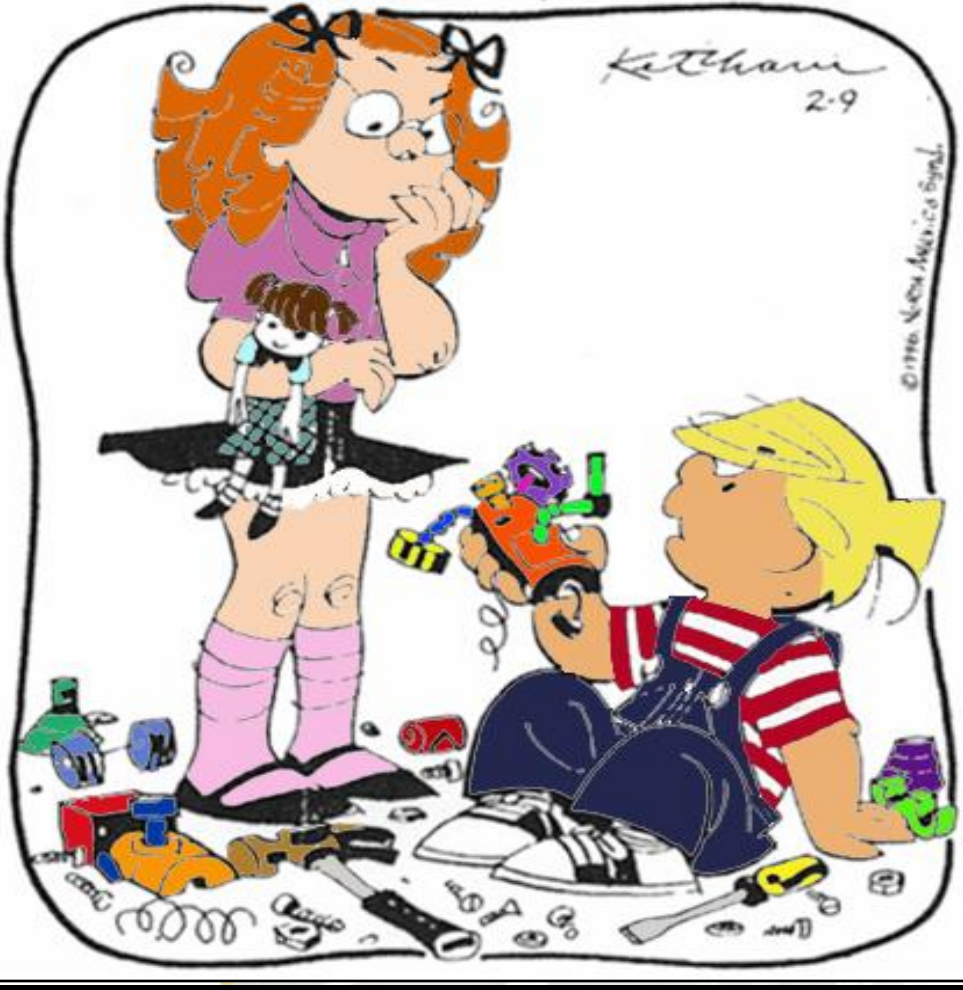
Nielsen Pereira

# Gifted Spatial Learners: Under-identified and Underserved

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# Who are they?

**DENNIS THE MENACE** By Hank Ketcham



- **Lego maniacs – the builders**
- **Problem finders**
- **Creative problem solvers**
- **Puzzle and maze doers**
- **Technological geniuses**

**None of my toys work because I took them all apart to see what makes them work.**





**They:**

**Pull things apart**

**They enjoy:**

**Blocks and Boxes**

**Construx & Legos**

**Computers**

**Daydreaming**

**Gears**

**Tinker Toys**

**Movies**

## Sequential

Profoundly influenced by time

Rapid processor

Step by step

Learn by trial and error

Good organization

Progresses from easy  
to difficult

## Spatial

Preoccupied with space

Slow processor

Whole to part

Learns concept all at once

Organizationally impaired

Gets difficult concepts,  
struggles with easy

# Report card of a visual spatial learner

## Concepts

Grade 3A Semester Second 1933

Teacher \_\_\_\_\_

Days Absent	2 1/2	6	3 1/2
Times Tardy	0	0	0
Arithmetic	A	A	B

Home Room 212 Grade 2B Semester 1st 1941-42

PERIODS	1	2	3	4	Exam.	FINAL	No. Cr.
Half Days Absent	1	3	5	1			
Times Tardy	0	0	1	0			
English							
French							
Latin							
Spanish <u>4</u>	B	A	B	B	A	B	1
Journalism							
Debate							
Dramatics							
Public Speaking <u>I</u>	C	B	C	A	B	B	1
Algebra							
Geometry							
Com'l Arithmetic							
Trigonometry	B	A	A	A	A	A	1
Practical Math							

## Computation





Individuals gifted in spatial ability undereducated and underemployed (Gohm, 1998)

Schools emphasize verbal, not spatial skills

Traditional assessments (SAT, GRE) do not assess spatial skills  
(Gohm, Humphreys, and Yao)

Undergraduate majors in 2000:

**Only 5.6 majored in engineering**

**A mere 0.8 majored in mathematics**

Doctorates earned in U.S. by non-citizens?

**Engineering = 51%**

**Mathematics = 43% (NSF)**

Selecting top 3% based on verbal or mathematical ability results in loss of more than half of students representing top 1% of spatial ability (Shea, Lubinski, & Benbow)







- ❑ Land Surveyor
- ❑ Geo-spatial Technician
- ❑ Satellite Operations
- ❑ Surgeon
- ❑ Cartographer
- ❑ GIS (Geographic Information Systems)
- ❑ Computer Programmer
- ❑ Architect
- ❑ Inventor
- ❑ Engineer
  - ❑ Electrical
  - ❑ Mechanical
  - ❑ Aeronautical
  - ❑ Environmental
  - ❑ Materials
- ❑ Physicist
- ❑ Chemist
- ❑ Geophysicist



# *How do they learn?*

- ◆ *Visualization*
- ◆ *Whole to part*
- ◆ *The why...then the how*
- ◆ *Difficult is easy*
- ◆ *Aha!*
- ◆ *Intuition*
- ◆ *Discovery*
- ◆ *On the job*



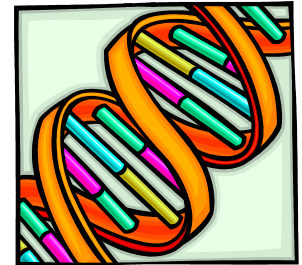
# Visualize

**Need to “see” everything**

**Visualize lists, patterns, situations**

**Make a picture of what the topic represents**

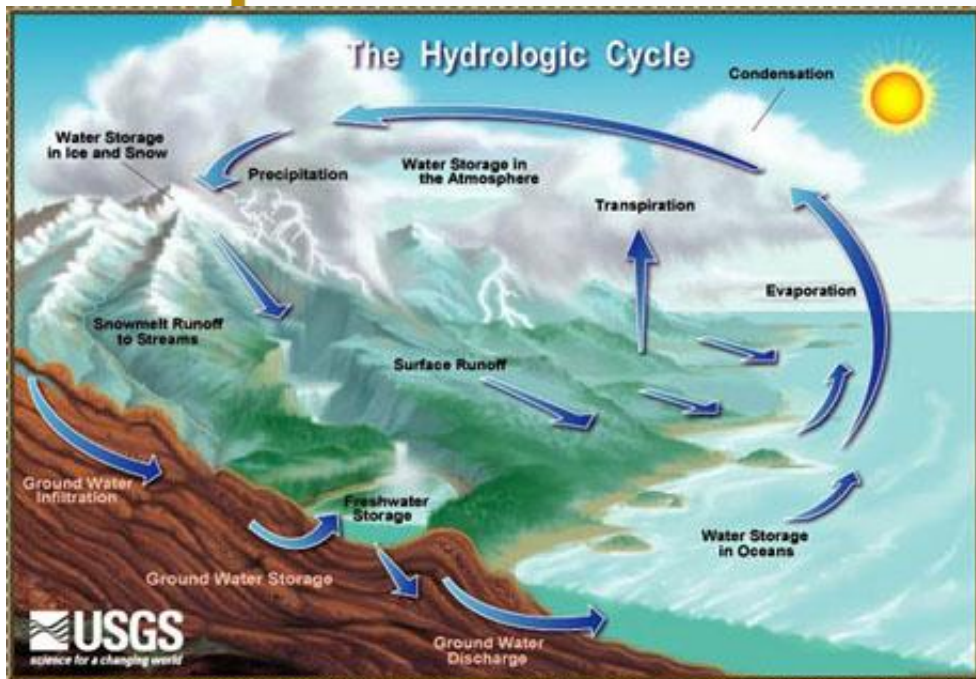
**Ask yourself, “How would I teach this concept to a deaf child?”**



Often perceived as “slow processors”

Perceive relationships between parts and whole

Don't understand if learning is doled out in small chunks



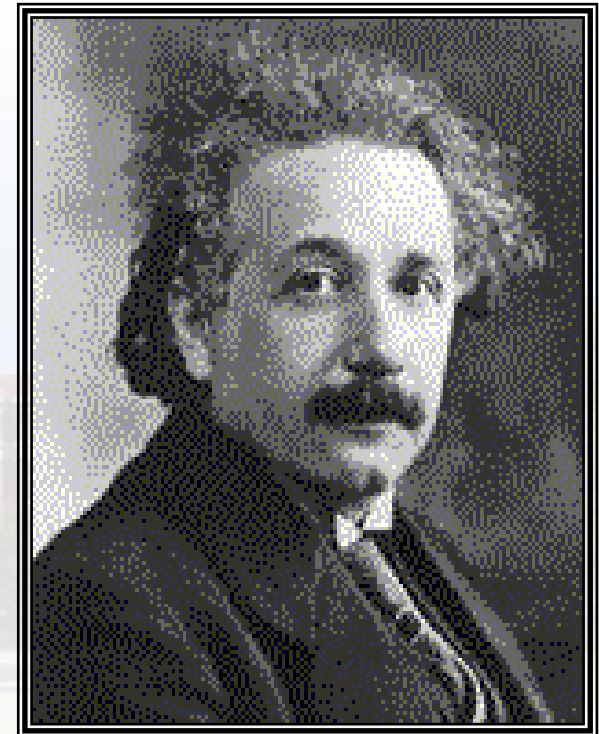
Can't grasp isolated facts until the big picture is in view

Difficulty attending to details



**Spatial Learners are  
reflective:**

**They need extra  
thinking time  
therefore, they can  
appear to be lazy or  
to be daydreaming.**

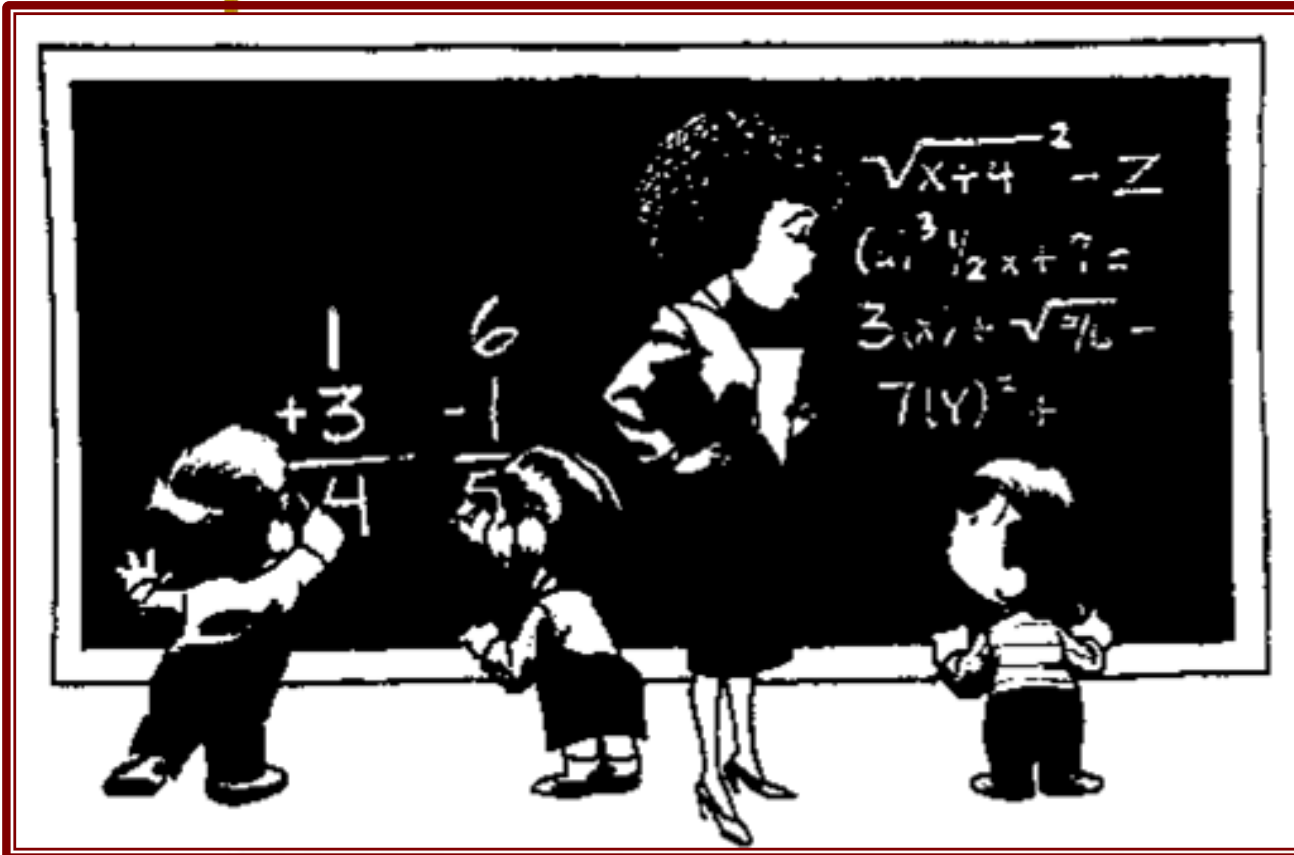


# Difficult is Easy



**Concepts vs. computation**

**Detest routine, repetitive tasks and does not learn by rote memorization**



How many times do I have to tell you, don't read ahead!

Often cannot explain the steps of thinking

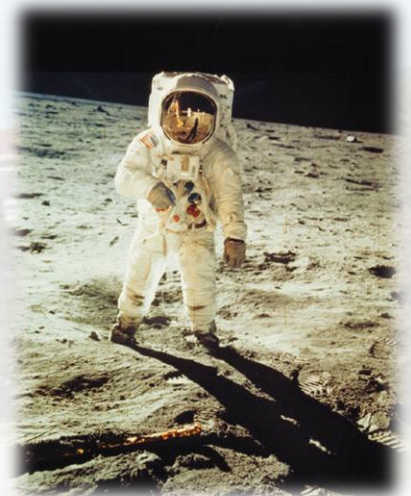
Understand all or nothing

Once the “Aha” occurs, learning is relatively permanent

# On the Job Training



- **Mentorships**
- **Opportunities to act like a practicing professional**
- **Problem Based Learning**
- **Simulations**





## Ravens, Cogat Nonverbal

### WISC-IV

- VCI 104
- PRI 133
- WMI 97
- PSI 112
- FSIQ 117

Einstein



da Vinci

Edison



**Encourage the child's strengths, don't dwell on his weaknesses. This can be difficult as their strengths are outside of the traditional educational system.**

# Identifying Students from Low-Income Families for Gifted and Talented Programs

Scott J. Peters

Marcia Gentry

# The Problem



Family income remains highly correlated with academic achievement

- Despite 40% of all student coming from low-income families, only 28% of students in the top achievement quartile come from such families
- For the last 25 years, children from African American, Native American, Hispanic, and low-income families have all been underrepresented in GT programs



# PURDUE UNIVERSITY Students from Low-income families



- Have yet to receive as much attention as racially / ethnically underrepresented students
- Often do not have enriched experiences outside of school and
- Often do not gain access to top educational programs, perpetuating the cycle of underrepresentation



- The inappropriate application of national over local / specific normative groups for comparison has contributed to this problem
- Many standardized tests at the state and national levels compare ALL students of a given grade level to ALL other students – ***What might be the problem with this?***



- When using national norms, we are inappropriately measuring an aspect of income, race, ethnicity, and personal experience in which we are not interested
- Comparing each student to more-specific and local normative groups can *help* addresses this issue and yield *more valid* information regarding student aptitude, ability, or achievement



Take, for example, the Mark Twain story of the Prince and the Pauper where two twins are born but separated at birth. One was raised in wealth while the other in extreme poverty. Because of the extreme differences in their upbringing, it is highly unlikely that the child raised in poverty will perform at the same level as his or her sibling, despite identical parentage. If, instead, the child raised in poverty was compared to other children raised in poverty, educators would be able to see how well each student performs or achieves given the same background, opportunities, or income status. Such a practice will yield a more accurate view of actual ability that is not as obstructed by income or past experiences.



- Once different normative groups are put into practice, the GT program will need to be expanded to include multiple levels and a continuum of services
- Students from low-income families may need support to succeed in a traditional g/t program, levels of services may help these students gain confidence and skills so that they can succeed



# Can Giftedness be Misdiagnosed as Attention Deficit Hyperactive Disorder? Empirical Evidence

Jillian C. Gates

Marcia Gentry

Purdue University



- Identification and understanding of learning difficulties and capabilities are important to help teachers address students' learning needs.
- A variety of available instruments provides flexibility for customizing identification procedures to the needs of students and to programs offered.
- Variety also provides opportunities for errors in diagnoses, identification, and interpretation of results.



- A study investigating the overlap of items in the Conners' Rating Scale (CRS: Conners, 1997) and the Overexcitabilities Questionnaire – Two (OEQII: Falk, Lind, Miller, Piechowski, & Silverman, 1999) was done prior to this study.



# Previous Study



Conners Teacher (S)	OEQ II Psychomotor Over Excitability								
	I am a competitive person	If an activity is physically exhausting, I find it satisfying	I love to be in motion	When I have a lot of energy, I want to do something really physical	I am more energetic than most people my age	The longer I have to sit still., The more restless I get	I feel like my body is constantly in motion	When I am nervous, I need to do something physical	I am the type of person who has to be active - walking, cleaning, organizing, doing something
Inattentive, easily distracted						X		X	
Defiant									
Restless in the "squirmy" sense			X	X		X	X	X	
Forgets things he/she has already learned									
Disturbs other children									
Actively defies or refuses to comply with adults' requests									
Is always "on the go" or acts as if driven by a motor			X	X	X			X	X
Poor in spelling									
Cannot remain still						X	X		
Spiteful or vindictive				X		X	X		
Leaves seat in classroom or in other situations in which remaining seated is expected			X	X			X	X	
Fidgets with hands or feet or squirms in seat									
Not reading up to par									
Short attention span									
Argues with adults									
Only pays attention to things he/she is really interested in									
Has difficulty waiting his/her turn									
Lacks interest in school work									
Distractibility or attention span a problem									
Temper outbursts; explosive, unpredictable behavior									
Runs about or climbs excessively in situations where it is inappropriate			X			X			
Poor in arithmetic									
Interrupts or intrudes on others (e.g. butts into others' conversations or games)									
Has difficulty playing or engaging in leisure activities quietly		X	X	X	X				
Fails to finish things he/she starts									
Does not follow through on instructions and fails to finish schoolwork									
Excitable, impulsive							X	X	X
Restless, always up and on the go			X	X					

1. How are gifted and ADHD behaviors of gifted students related to those of general students as measured by the CADS-A (Conners, 1997) and OEQII (Falk et al., 1999)?
2. What is the nature and extent of the correlations among subscales of the OEQII and the CADS-A on a sample of gifted fifth through twelfth grade students?
3. How might educators and clinicians use both the CADS-A (Conners, 1997) and the OEQII (Falk et al., 1999) to better understand the etiology of students' behaviors?



Purposive sample of 5th through 12th grade students ranging in age from 10 to 18 years ( $n=71$ )

- Participants in a university residential summer program for gifted students.
- Identified as gifted, but not diagnosed with ADHD by parent report.
- Forty-three students were male.
- Ethnic backgrounds: 51% white, non-Hispanic, 27% Asian, 8% African American, 5% Hispanic, 2% Native American, and 7% other.

- Conners' ADHD/DSM-IV Short Form – Adolescent (CADS-A)
- Overexcitabilities Questionnaire – Two (OEQII)



scores were obtained for the three subscales on the CADS-A (ADHD-Inattentive, ADHD-Hyperactive, and ADHD-Combined) (Conners, 1997).

- Alpha reliabilities were calculated for both instruments for the study sample in order to ascertain the reliability of results:
  - CADS-A: Inattentive = 0.84, Hyperactive = 0.87, Combined = 0.91
  - OEQII: Psychomotor= 0.88, Sensual= 0.88, Imaginational= 0.90, Intellectual= 0.85, Emotional=0.83.

*Table 2. Comparison of Means and Standard Deviations Across Samples and Sub-Sample*

	Study Sample		Sample scoring $\geq 6$ on Hyperactive Subscale		Normative Sample	
	<i>n</i> =71		<i>n</i> =39		<i>n</i> =872-879*	
OEQII Overexcitability	Mean Score	Standard Deviation	Mean Score	Standard Deviation	Mean	Standard Deviation
Psychomotor	3.04	0.95	3.43	0.82	3.35	0.79
Sensual	2.77	0.98	2.92	1.03	3.28	0.87
Imaginational	2.61	1.01	2.88	1.01	2.86	0.83
Intellectual	3.55	0.80	3.72	0.76	3.50	0.79
Emotional	2.87	0.83	2.92	0.82	3.72	0.77

Table 3. *Skewness and Kurtosis of Sample*

Statistic	Psychomotor	Sensual	Imaginational	Intellectual	Emotional
Mean	3.039	2.775	2.610	3.551	2.873
Median	3.1	2.8	2.5	3.6	2.8
Standard Deviation	0.954	0.984	1.005	0.803	0.835
Kurtosis	-0.533	0.108	-0.317	-0.345	0.086
Standard Error of Kurtosis	2.848	2.848	2.848	2.848	2.848
Skewness	-0.050	-0.200	0.503	-0.366	-0.218
Standard Error of Skewness	0.712	0.712	0.712	0.712	0.712



Table 4. Percentages of Study Sample Participants Scoring Above Study Sample Mean

OEQII Overexcitability	Study Sample				
	Mean Score	Standard Deviation	% $x^- - 1SD$	% $1SD - 2SD$	% $> 2SD$
Psychomotor	3.04	0.95	41	12	3
Sensual	2.77	0.98	37	11	4
Imaginational	2.61	1.01	28	13	6
Intellectual	3.55	0.80	49	13	0
Emotional	2.87	0.83	41	10	3

Table 5. Percentages of Study Sample Participants Scoring Above Normative Sample Mean

OEQII Overexcitability	Normative Sample (n=872-879)		Study Sample (n=71)		
	Mean	Standard Deviation	% $x^- - 1SD$	% $1SD - 2SD$	% $> 2SD$
Psychomotor	3.35	0.79	30	13	3
Sensual	3.28	0.87	30	7	0
Imaginational	2.86	0.83	15	13	4
Intellectual	3.50	0.79	42	20	0
Emotional	3.72	0.77	14	3	0

Table 6. *Simple and Bivariate Spearman Correlations of CADS-A Subscales and OEQII Overexcitabilities*

OEQII	CADS-A Simple Spearman Correlations			CADS-A Bivariate Spearman Correlations		
	Inattentive	Hyperactive	Combined	Inattentive	Hyperactive	Combined
Psychomotor	.340*	.516**	.453**	.304*	.433*	.375*
Sensual	.059	.189	.140	.121	.148	.139
Imaginational	.294*	.365*	.367*	.387*	.443**	.432*
Intellectual	.244*	.267*	.256*	.304*	.304	.322*
Emotional	.072	.139	.128	.154	.109	.145

		OEQII - Psychomotor OE Items									
		Q2 I am a competitive person	Q7 If an activity is physically exhausting, I find it satisfying	Q10 I love to be in motion	Q15 When I have a lot of energy, I want to do something really physical	Q18 I am more energetic than most people my age	Q21 The longer that I have to sit still, the more restless I get	Q29 I feel like my body is constantly in motion	Q39 When I am nervous, I need to do something physical	Q42 I am the type of person who has to be active - walking, cleaning, organizing, doing something	Q50 I thrive on intense physical activity, e.g. fast games and sports
CADS-A Hyperactive Subscale Items	B10 I fidget (with hands or feet) or squirm in my seat	.126	.039	.217	.170	<b>.274</b>	<b>.510</b>	<b>.365</b>	.115	.274	.081
	B11 I leave my seat when I am not supposed to (e.g. in school)	.104	-.023	.138	.085	.012	.170	.106	.068	-.002	.073
	B12 I am restless or overactive	.156	<b>.262</b>	<b>.329</b>	<b>.239</b>	<b>.330</b>	<b>.048</b>	<b>.400</b>	<b>.295</b>	.118	.154
	B13 I have trouble playing or doing leisure activities quietly	.200	.087	.169	.159	<b>.279</b>	<b>.412</b>	<b>.338</b>	.052	.202	.190
	B14 I am always on the go	<b>.255</b>	<b>.319</b>	<b>.361</b>	<b>.358</b>	<b>.336</b>	<b>.277</b>	<b>.267</b>	.201	<b>.353</b>	<b>.434</b>
	B15 I talk too much	.197	.128	.144	<b>.241</b>	<b>.329</b>	<b>.361</b>	<b>.471</b>	<b>.275</b>	<b>.346</b>	.138
	B16 I give answers to questions before the questions have been completed	<b>.295</b>	.102	<b>.279</b>	<b>.299</b>	<b>.287</b>	<b>.338</b>	<b>.474</b>	<b>.263</b>	<b>.305</b>	<b>.252</b>
	B17 I have trouble waiting in line or taking turns with others	.178	.013	.189	.094	.154	<b>.417</b>	.175	.081	.038	.059
	B18 I interrupt others when they are working or playing	.055	.103	<b>.243</b>	<b>.235</b>	.162	.085	.178	.012	.147	.166

Figure 1. Item-level correlations for the CADS-A hyperactive subscale and the psychomotor OE.

■  $p < .0001$  ■  $p < .001$  ■  $p < .05$

- A relationship existed between scores on the CADS-A subscales and the OEs for an academically gifted sample.
- Although both the CADS-A and OEQII are psychometrically sound instruments the results they yield are open to interpretation.
  - We found similar behaviors associated with both ADHD and giftedness.
    - Clustered in the ADHD-Hyperactive and Psychomotor OE indicators.





- The subsample of students who scored high on the CADS-A Hyperactive subscale scored similarly high on the Intellectual, Psychomotor, Sensual, and Emotional OEs.
- Overall, the gifted sample scored high on the Intellectual, Psychomotor, and Emotional OEs regardless of their score on the CADS-A Hyperactive subscale.
- However, those who did score highest on the CADS-A Hyperactive subscale had overall greater mean scores on these three OEs.

- Scores for the Intellectual and Psychomotor OEs that exceed the mean scores of the normative sample or the sample should give educators and psychologists pause to consider whether a possible misdiagnosis or dual diagnosis should be investigated.
- ADHD symptoms as measured by the CADS-A are congruent and common with behaviors of students who are identified as gifted and who are busy and active.

# **Identification of young, gifted children: An analysis of instruments and recommendations for practice**

Presenter: Yang Yang

Advisor: Dr. Marcia Gentry

Purdue University

August 3, 2009

## Why early identification Important?

Provide optimal  
education

(Sankar-Deleeuw, 2004;  
Wortham, 2008)

Prevent boredom and  
development of negative  
attitudes toward school

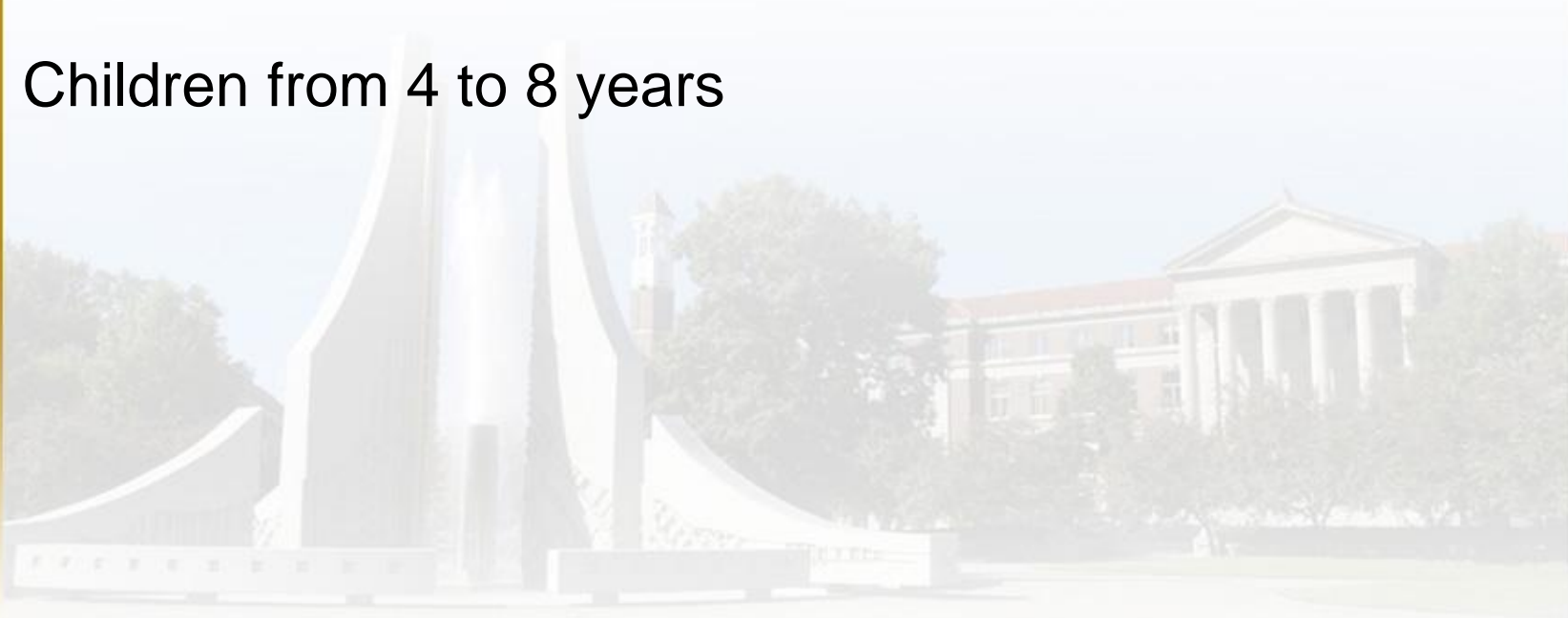
(Gridley, 1987; Puckett & Black,  
2008)

Children from low-income  
and minority background  
less likely to be  
recognized and nurtured  
later if not earlier  
(Moon & Brighton, 2008)

## Identification

- Individually-administered intelligence tests
- Group-administered intelligence/aptitude tests
- Teacher rating scales

Children from 4 to 8 years



## Individually-administered tests

- Stanford-Binet Intelligence Scales, Fifth Edition (SB5; Roid, 2003b)
- Wechsler Preschool and Primary Scale of Intelligence-Third Edition (WPPSI-III; Wechsler, 2002)
- Slosson Full-Range Intelligence Test (S-FRIT; Algozzine, Eaves, Mann, & Vance, 1993a)
- Kaufman Brief Intelligence Test (K-BIT; Kaufman & Kaufman, 1993)
- Woodcock-Johnson III Tests of Cognitive Abilities (WJ III COG; Woodcock, McGrew, & Mather, 2001)



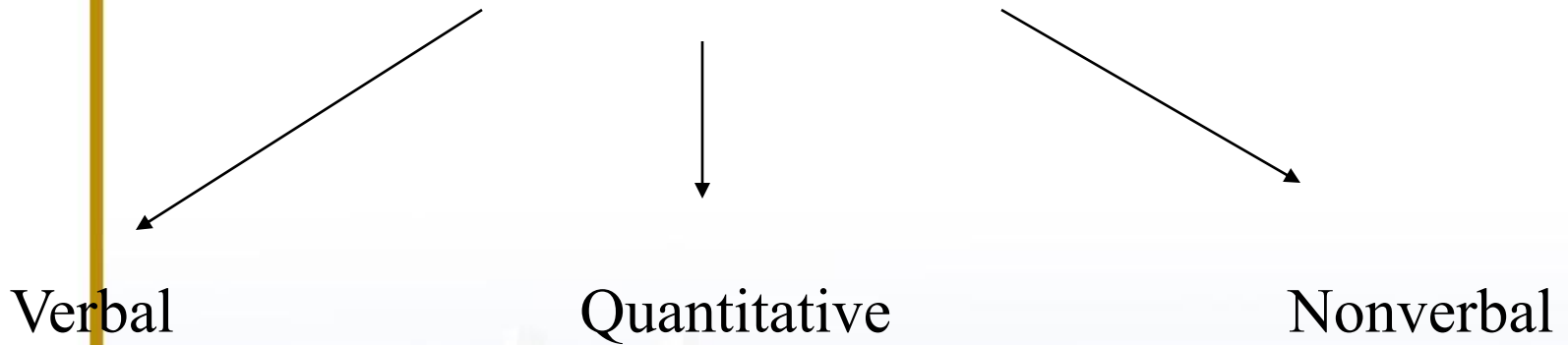
## Individually-administered tests (cont.)

Strengths	Weaknesses
<ul style="list-style-type: none"><li>• Strong psychometric properties</li><li>• Materials appealing to children</li><li>• Applicable to children as early as two years (Bracken &amp; Nagle, 2007)</li><li>• Single set of ability tests reduces errors of measurement (Ruf, 2003)</li><li>• Comprehensive subtests help find out children's developmental stages in both verbal and nonverbal domains (Ford &amp; Dahinten, 2005)</li></ul>	<ul style="list-style-type: none"><li>• Inconsistent rank order of the SB5 and WISC-III among same participants (Minton &amp; Pratt, 2006)</li><li>• Emphasis or requirement for verbal ability (Bell, Rucker, &amp; Finch, 2002), putting twice-exceptional children, children from low-income or culturally diverse background in a disadvantaged position (Puckett &amp; Black, 2008).</li><li>• Brief tests such as K-BIT can only roughly estimate students' performance (Prewett, 1995; Horn, 2006)</li><li>• Expensive, time-consuming, requiring well-trained personnel to administer</li><li>• Lack of longitudinal studies</li></ul>

## Group-administered tests

Test Features	Cognitive Abilities Test (CogAT, Form 6; Lohman & Hagen, 2001)	Otis –Lennon School Abilities Test, Seventh Edition (OLSAT-7; Otis & Lennon, 1996)
Standardization	More than 18,000 students from public, Catholic and private non-catholic schools, not broken down to ethnic groups	10,000 students from schools randomly selected, representing national population of 1994
Reliability	Subtest reliabilities high, with a median value of 0.90 in Primary Battery	Estimates for reliability within each level. Separate estimates available for 3-month age groups. Estimates of reliability for Verbal in Level A and B is 0.68
Validity	Supportive of criterion-related validity. No correlation with other tests reported.	Correlational data are presented regarding correlations between 6 <sup>th</sup> and 7 <sup>th</sup> editions, the OLSAT and the Stanford Achievement Test (9 <sup>th</sup> edition), and Verbal components of Level A and B.

# Cognitive Abilities Test, Form 6 Composite

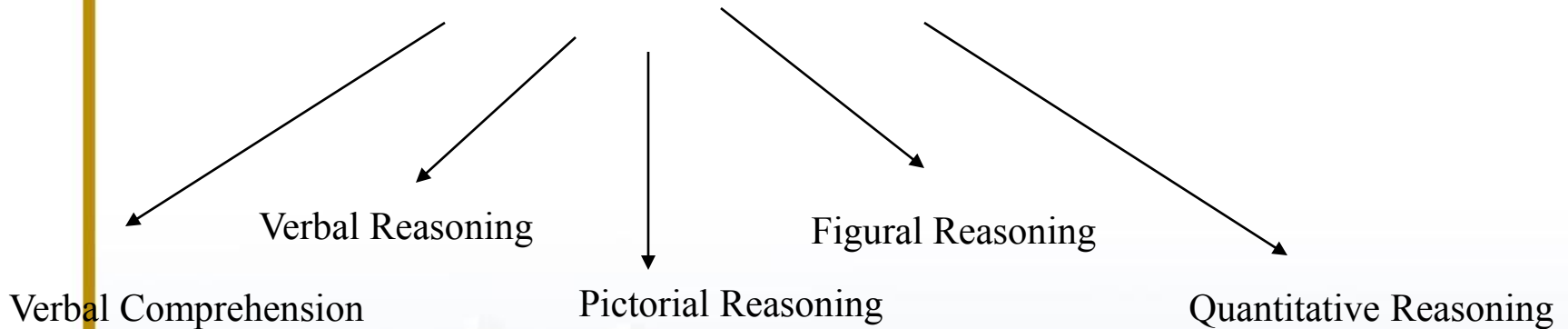


K level – administered in six 30-minute sessions



# Cognitive OLSAT

## Five Clusters



Level A for kindergarteners:

- Quantitative reasoning not included

## Group-administered tests (cont.)

### Strengths:

- Less costly, easier to administer
- Based on extensive norming procedures
- Adequate technical characteristics

### Concerns:

- Time-consuming for young children, may exhaust them
- Validity studies in using it to students with disabilities, ELLs and minority groups need to be explored
- Children's performance may be influenced by environment, emotional status when taking group-administered tests

# Teacher Rating Scales

Table 1. *Characteristics of four rating scales for identifying young, gifted children*

<i>Instrument</i>	<i>Factors and Reliability Estimates</i>	<i>Technical Reports</i>	<i>Scale Items</i>	<i>Norm Sample</i>	<i>Sample Demographics</i>	<i>Notes</i>
Gifted and Talented Evaluation Scale (GATES; Gilliam, Carpenter & Christensen, 1996)	Intellectual ability (.88), academic skills (.84), creativity (.87), leadership (.89), artistic talent (.88)	Content, criterion-related, and construct validity	50 nine-point response items	1,083 students aged 5 through 18 identified as gifted in 1995	32 states and Canada	68 out of 250 teachers returned checklists; test-retest reliability lower ( $r=.70$ to $.87$ ) rating GT students than those with handicaps ( $r=.93$ to $.98$ )
Gifted Rating Scales – Preschool/Kindergarten Form (GRS-P; Pfeiffer & Jarosewich, 2003)	Intellectual ability, academic ability, creativity, artistic talent, motivation ( $r$ ranges $.97$ to $.99$ )	Convergent and divergent validity	Total of 60 items with 12 items for each domain on a nine-point scale	375 students ages 4 through 6 yrs 11 months	About 78% Caucasian (62% Caucasian in national population 2000 census)	Caution for use among minority groups
HOPE Scale (Peters & Gentry, 2009)	Social and academic abilities	Rigorous model fit procedures including EFA, CFA, MCFA, and invariance analyses on gender, race, and income	13 items in original version; Eight social and nine academic items in revised version; Five social and six academic items after analyses	500 random samples out of 7,000 K-5 students in original scale; 1,700 K-5 students rated by 71 teachers with revised scale	Diverse ethnic groups, local norm sample in Indiana	Identifying students from low-income families and minority backgrounds
Scales for Identifying Gifted Students (SIGS; Ryser & McConnell, 2004)	General intellectual ability, language arts, mathematics, science, social studies, creativity, leadership ( $r$ average above $.90$ )	Convergent, discriminant, item functioning, and predictive validity	Total of 84 items with 12 items for each domain on a five-point scale	921 in General norm sample, 1,055 in Gifted norm sample ages 5 through 18	Race presented as White, African American, or other. 2% in General sample as “other”; 4.7% in Gifted sample	Incomplete test-retest reliability report; Low interrater reliability; Small sample size for validity tests



## Nonverbal intelligence instruments

- Do nonverbal tests measure intelligence nonverbally, or nonverbal intelligence?
- Assumption: equal opportunities for students with different cultural backgrounds
- Little is known about whether students from different language backgrounds will perform differently on nonverbal tests of intelligence (Braden & Athanasiou, 2005)
- Yoon & Gentry (2009) found overrepresentation among Asian and underrepresentation of other ethnic groups such as American Indian or Alaska Native, Hispanic, and African American in gifted education across the country from 2002 to 2006.

## Implications

- Comparisons should be made among children who are from similar backgrounds by using tests with similar normative samples (Lohman, 2006; Peters, 2009).
- In using multiple measures, the measures should be considered separately, not cumulatively with any high score considered as a potential score for inclusion, rather than requiring multiple high scores on multiple instruments.
- Dynamic evaluation (Gentry & Mann, 2009).



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# **Nurturing Giftedness Among Highly Gifted Youth**

Rachelle Miller

Doctoral Student

- What does our society admire?
- Who receives tremendous praise and recognition?
- Are educators praising students for having extraordinary intellectual abilities?
- What changes to pace and curriculum are needed to challenge and support the academic and affective growth of highly, exceptionally, or profoundly gifted students?

Levels	IQ
Mildly	115-129
Moderately	130-144
Highly	145-159
Exceptionally	160-179
Profoundly	180+

- Mildly and moderately gifted are much more likely to be part of a classroom.
- Exceptionally gifted occur 1:10,000 to 1: 1,000,000.
- Profoundly gifted occur less than 1:1,000,000.
- Mental and affective characteristics of a profoundly gifted child differ from those of a moderately or mildly gifted child.
- This significant discrepancy could lead to problems with social skills or social isolation.





- Little empirical evidence exists indicating that a child who enters Kindergarten will suffer challenges later in his educational career (Butterworth & Constable, 1982; Gross, 1993a, 2003)
- Principals' attitudes toward schools' early entry program (Vialle, Aston, Carlon, & Rankin, 2001)
- Wichita Public Schools in Kansas – Early Childhood Accelerated Program (Gould, Thorpe, & Weeks, 2001)
  - According to Gould et al., “During the two years of the pilot program, approximately 40 percent of the children in the program were from culturally diverse groups, a figure that is significantly higher than the percentages in most programs for gifted students” (p.50).



- Various four-year and two-year universities offer residential programs for early entrants
  - Students sometimes move a great distance for these programs (Booth, Sethna, Stanley, & Colgate, 1999).
- Early Entrance Program (EEP) – Halbert and Nancy Robinson Center for Young Scholars at UW (Noble, Vaughan, Chan, Childers, Chow, Federow, & Huges, 2007)
  - Transition School – provides support in content, study skills, and time management
- Essays from students who participated in early entrance programs (Olszewski-Kubilius, 1998)
  - Before acceptance, they experienced similar frustrations in school – lack of challenge, slow paced curriculum, and boredom
  - Lack of support from peers, teachers, and administrators
  - Challenges with early entrance – underdeveloped study skills or some academic failures



- Gifted students with IQs of 160-200
  - According to Gross (1992), “They suffered severe intellectual frustration, boredom, lack of motivation, and social rejection by age-peers and displayed significantly lowered levels of social self-esteem” (p. 98)
- Gross (1992) evaluated self-esteem with Coopersmith Self-Esteem Inventory (Coopersmith, 1981)
  - Before radical acceleration – experienced underachievement
  - After acceleration – no evidence of social and emotional problems, they all experienced intellectual satisfaction
- Australia, China, Taiwan, and Poland have also incorporated radical acceleration (Gross & van Vliet, 2005)
  - Satisfaction with academic and affective experiences, early career successes, significant academic gains, large number of accelerants



- Asynchrony – discrepancy between intellectual ability and physical ability (Silverman, 2007)
  - Intellectual ability of a 14-year old and physical maturity of an 8-year old – could lead to social and emotional difficulties (Gross, 1993b)
- Child's beliefs about herself and her self-efficacy can be influenced by how her classmates view her (Silverman, 1997)
- Difficult for a profoundly gifted child to find same aged classmates with similar mental interests (Hollingworth, 1930)
  - Child with IQ of 180 may like to play bridge, but may not be able to find any classmates who know how to play or who are even interested in learning



- Dabrowski (1972) believed that gifted children displayed one or more psychic overexcitabilities:
  - Psychomotor – excess of energy (love for movement, rapid speech, impulsiveness, or restlessness)
  - Sensual – heightened sensory awareness (constant desire for comfort)
  - Emotional – deep concern for others, deep relationships, or feelings of compassion and security
  - Imaginational – vivid imagery, inventiveness, or a love of fantasy
  - Intellectual – extreme love of knowledge, discovery, or independence of thought



- Various researchers have reported that accelerants experience positive esteem, satisfying social relationships, advanced social maturity, and no significant effects of acceleration (Gross, 1993; Noble, et al., Tsai, 2007)
- Administrators and teachers with backgrounds in gifted education did not have negative attitudes toward acceleration (Hoogeveen, van Hell, & Verhoeven, 2005)
- Providing teachers with information or training on acceleration may positively influence their opinions



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# Gifted, English Language Learners

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“A student's language background is in a language other than English, and the student's proficiency in English is such that the probability of the student's academic success in an English-only classroom is below that of an academically successful peer with an English language background.” (Iowa Department of Education)



Students who speak a language other than English at home comprise 19.2% of the entire population of the United States (U.S. Census Bureau, 2005)

Between 1993 and 2004, Indiana had the fourth largest rate of growth in the number of Limited English Proficient children in the entire U.S. (a 438% increase) (U.S. Census Bureau, 2005)

# Underrepresentation in gifted programs in 2006



- Hispanic students: underrepresented in 43 out of 50 states
  - African American students: underrepresented in 42 out of 50 states
  - Asian and Pacific Islander students: overrepresented in 41 out of 50 states
  - White students: moderately overrepresented in 26 out of 50 states
- (Yoon & Gentry, 2009)



- Highly curious
  - Unusual ways to solve problems
  - Independent and self-sufficient
  - Highly verbal
  - Understanding the importance of family/culture
  - Preference for older playmates
  - Engaging in abstract reasoning
  - Absorbed in self-selected tasks
  - Demonstrating social maturity at home and community

(Gallagher, 2007)

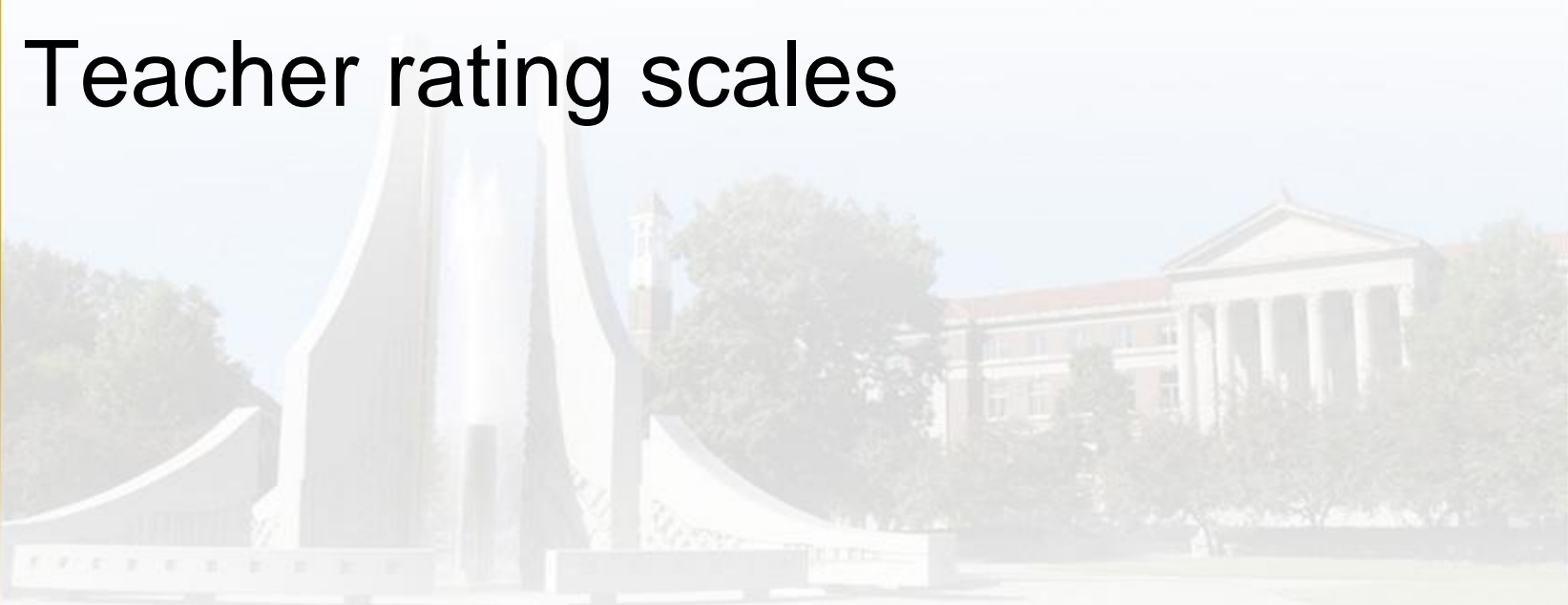


- Basic Interpersonal Communication Skills (BICS): everyday language needed in social situations. Children can acquire social English in 6-18 months.
- Cognitive Academic Language Proficiency (CALP): used in academic learning. Includes speaking, reading, and writing about materials in different content areas. Acquisition may take 5-7 years or 3-5 years for gifted individuals.

(Cummins, 1979; Gallagher, 2007)

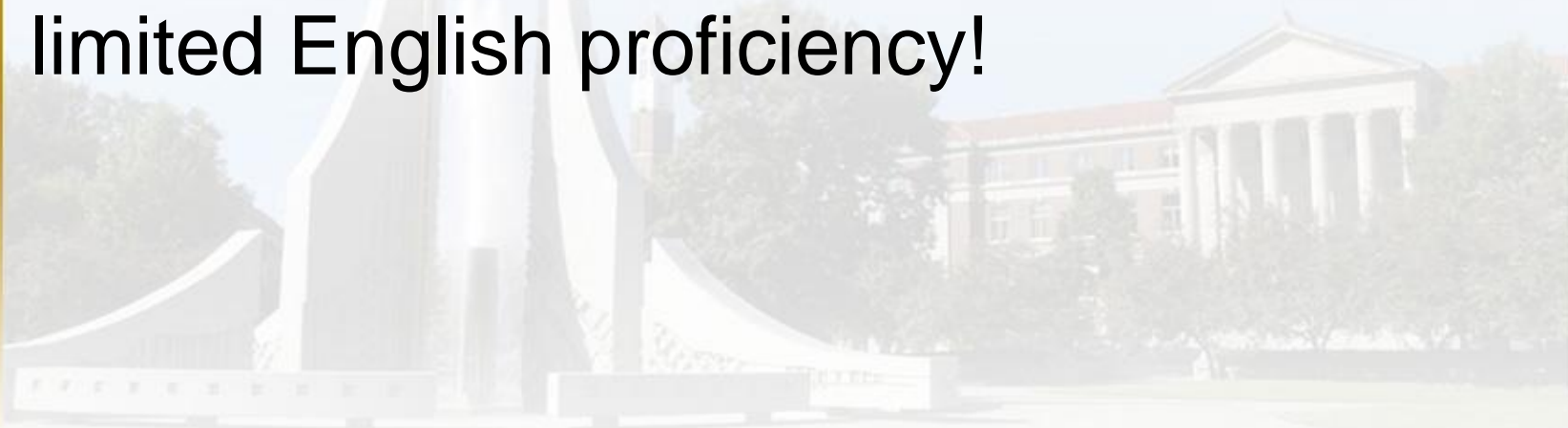


- Intelligence and General Aptitude tests
- Achievement tests
- Teacher rating scales





- Scores on verbal or nonverbal tests of intelligence are the traditional criteria for identification and placement in G/T programs (Harris et al., 2007)
- Advanced language cannot be one of the main selection criteria if students have limited English proficiency!



- **Multiple Measures:**
  - Achievement, Aptitude, and Ability
  - Rapidity of English Language Acquisition
  - Checklists
  - Portfolios
  - Recommendation (parent, teacher, peers, student)
  - Student interests, motivation, and persistence

(Laing, 2007)



- 1.0E The school district should provide information annually, in a variety of languages, regarding the process for nominating students for gifted education programming services
- 1.2E Nomination procedures and forms should be available in a variety of languages



2.0E Assessment instruments must measure the capabilities of students with provision for the language in which the student is most fluent, when available.

2.1M Assessments must be culturally fair



- Getting students to understand directions and idiomatic expressions
- Teaching the subject matter
- Assessing students work
- Meeting the needs of different students
- Lack of opportunity for one-on-one instruction
- Lack of knowledge of the best practices and methodologies for teaching ELLs

(de Oliveira & Pereira, 2008)

- Hands-on experiences implementing techniques and strategies learned
- Need for information (e.g. guidelines for dealing with ELLs)
- Crucial vocabulary in the students' first language
- Interpreters and aides in the classroom

(de Oliveira & Pereira, 2008)



- Socioculturally conscious: Multiple ways of perceiving reality
- Affirming views of students from diverse backgrounds: Resources for learning
- See themselves as both responsible and capable of bringing about educational change

(Villegas & Lucas, 2002)



- Understand how learners construct knowledge and promote learners' knowledge construction
- Know about the lives' of their students
- Use that knowledge to design lessons that build on what students already know

(Villegas & Lucas, 2002)



- Flexible grouping
  - Promoting first and second language development
  - Fostering questioning strategies
  - Promoting home/school partnerships
  - Differentiated instruction
  - Focus on advanced literacy
- (Gallagher, 2007; Schleppegrel, 2004)



- Assess and incorporate interests and background knowledge
- Model reading and thinking strategies
- Strategies promoting higher level and creative thinking
- Show rather than tell (graphic organizers, field trips, videos)
- Direct instruction for basic skills and developing automaticity

(Kitano, 2007)





The younger the child, the easier he or she will learn a second language

- Children have acquired a second language once they can speak it
- Children learn second languages quickly and easily
- All children learn an L2 the same way
- Many immigrant children have learning disabilities, not language problems
- Students will learn faster if material is adapted to their ability level

# Questions/Discussion?



A grayscale image of the Purdue University clock tower, centered in the background. The tower features a clock face with Roman numerals and a pointed top. The text 'PURDUE' is overlaid in large white letters, and 'UNIVERSITY' is overlaid in smaller yellow letters below it, separated by a thin yellow horizontal line.

**PURDUE**  
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