

“Assessing and affecting social-emotional skills”

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11th Itaú International Seminar on Economic Evaluation
on Social Projects: Noncognitive abilities for XXI century

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Programme

- conceptual model for 21st century SE skills
- its components relate to outcomes of interest
- effect evaluation of SEL interventions

... questions

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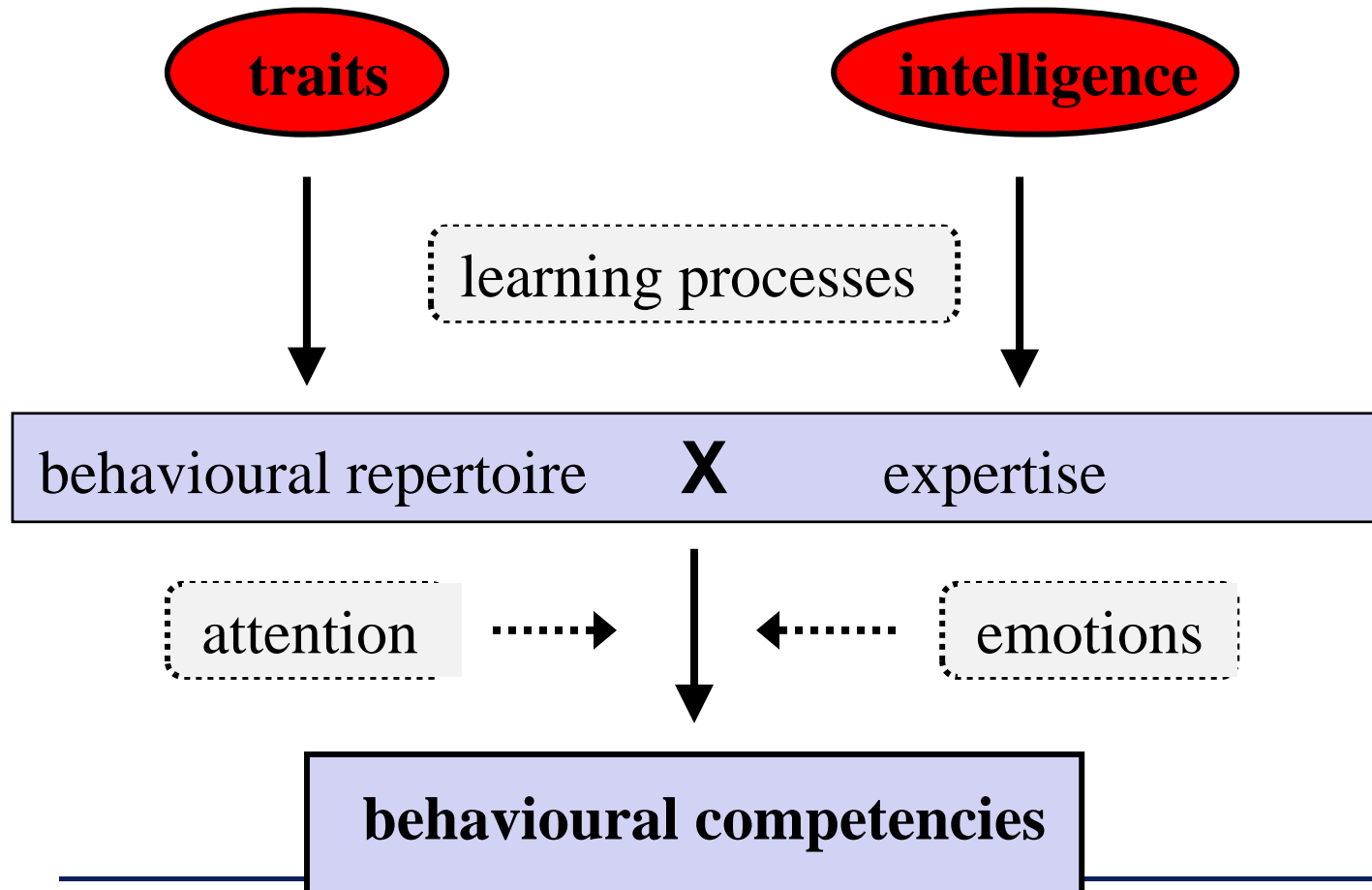
How to prepare for the challenges of the 21st century? (HBR, August 27, 2014; Chamorro-Premuzic)

“Society and life are getting more and more complex” – dealing with a lot of information and changing technology

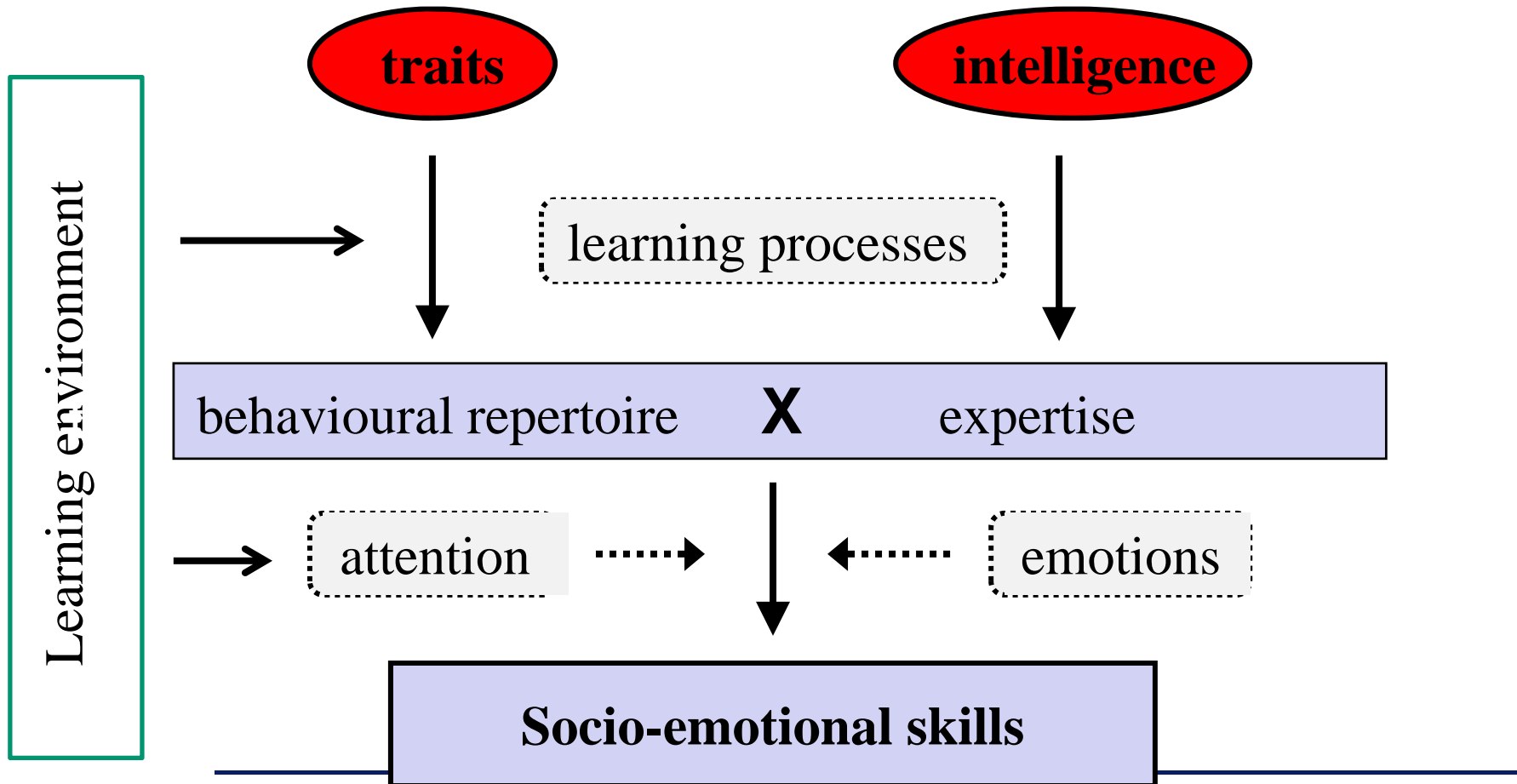
“In any event, the relative complexity of different eras is of little matter to the person who is simply struggling to cope with it in everyday life. So perhaps the right question is not “Is this era more complex?” but “*Why are some people more able to manage complexity?*”

“Being able to handle complexity is function of 3 Q’s: IQ, EQ and CQ”

What do they use in HR/business life? (Hoekstra, 2007)



Adaptation of Hoekstra & Van Sluijs' model (2007)



Focus on SE skill building blocks

... important for two main reasons:

- new competency/SE-skill: what are its building blocks? ~ fashion
 - valid across the life time:
 - childhood → adulthood
 - all major life tasks/stages (school, job, ...)
-

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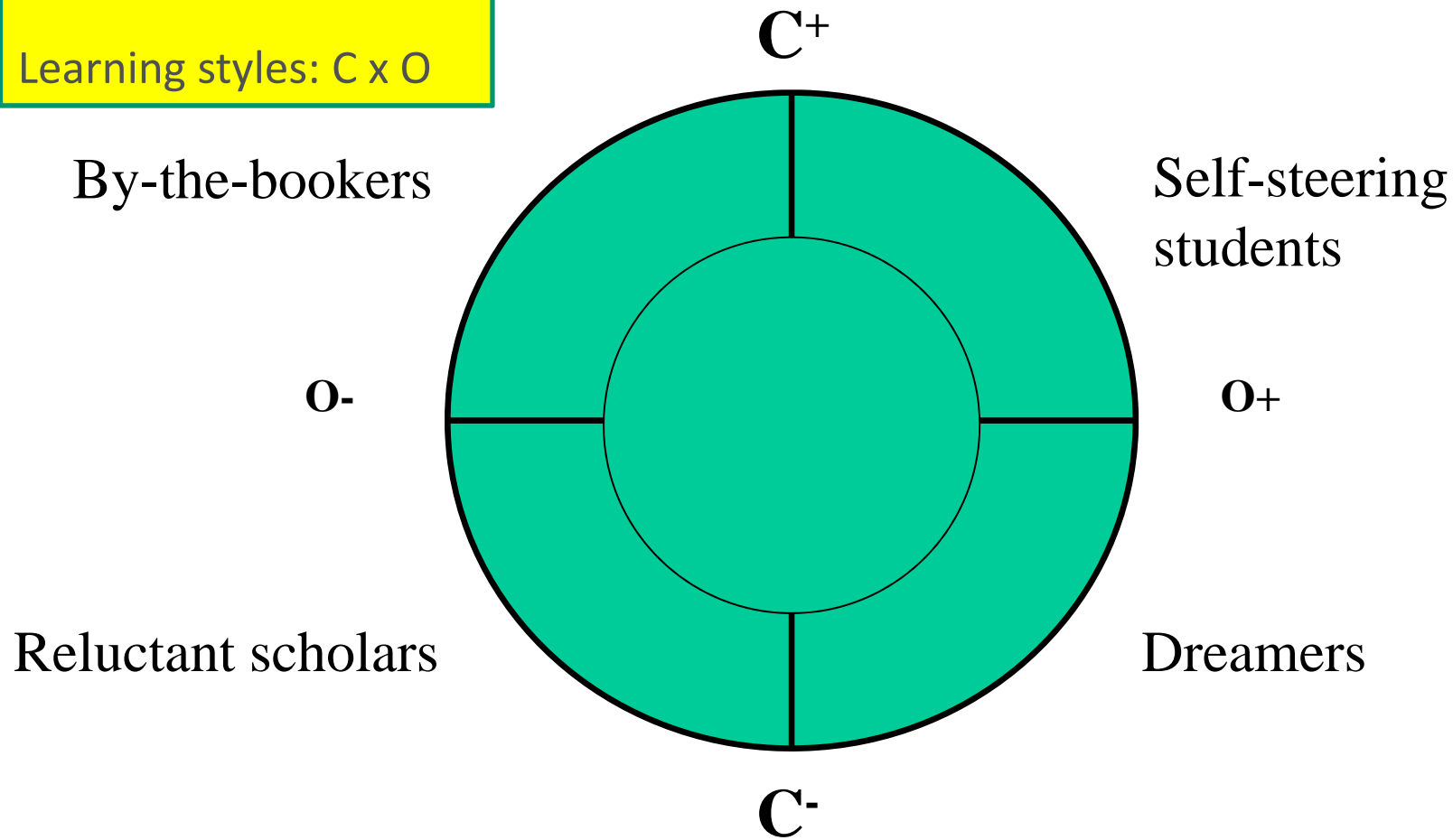
... questions

B5/SE-skills and consequential outcomes

- Peer interaction and relationships
 - Bullying
 - Learning achievement and outcomes
 - Mental health
 - Happiness and well-being
 - Physical health
 - Employability – labor market fitness
 - Civic duties – sustainable behavior
 -
- } education

See De Fruyt & De Clercq (in press)

How kids learn:
Learning styles: C x O



Learning achievement and outcomes

Intelligence:

Strenze (2007): intelligence and GPA: .56 (upper bound benchmark)

Poropat (2009): intelligence and GPA: .25 (lower bound benchmark)

Personality:

Series of interesting MA's by Poropat



FACULTEIT PSYCHOLOGIE EN
PEDAGOGISCHE WETENSCHAPPEN

Psychological Bulletin
2009, Vol. 135, No. 2, 322–338

© 2009 American Psychological Association
0033-2909/09/\$12.00 DOI: 10.1037/a0014996

A Meta-Analysis of the Five-Factor Model of Personality and Academic Performance

Arthur E. Poropat
Griffith University

This article reports a meta-analysis of personality–academic performance relationships, based on the 5-factor model, in which cumulative sample sizes ranged to over 70,000. Most analyzed studies came from the tertiary level of education, but there were similar aggregate samples from secondary and tertiary education. There was a comparatively smaller sample derived from studies at the primary level. Academic performance was found to correlate significantly with Agreeableness, Conscientiousness, and Openness. Where tested, correlations between Conscientiousness and academic performance were largely independent of intelligence. When secondary academic performance was controlled for, Conscientiousness added as much to the prediction of tertiary academic performance as did intelligence. Strong evidence was found for moderators of correlations. Academic level (primary, secondary, or tertiary), average age of participant, and the interaction between academic level and age significantly moderated correlations with academic performance. Possible explanations for these moderator effects are discussed, and recommendations for future research are provided.

Keywords: personality, intelligence, academic performance, meta-analysis, moderation

Table 1
Correlations Between FFM Scales, Intelligence, and Academic Performance

Variable	<i>k</i>	<i>N</i>	<i>r</i>	ρ	<i>d</i>	Grade diff.	ρ , 95% credibility interval		Q^2	I^2	ρ_g
							Lower	Upper			
FFM scale											
Agreeableness	109	58,522	.07	.07	0.14	0.10	-.16	.30	921.7	88.3%	.07
Conscientiousness	138	70,926	.19	.22	0.46	0.31	-.09	.54	1,990.4	93.1%	.24
Emotional Stability	114	59,554	.01	.02	0.03	0.02	-.29	.32	1,563.3	92.8%	.01
Extraversion	113	59,986	-.01	-.01	-0.02	-0.01	-.32	.30	1,599.5	93.0%	-.01
Openness	113	60,442	.10	.12	0.24	0.16	.09	.17	1,028.4	89.1%	.09
Intelligence	47	31,955	.23	.25	0.52	0.35	-.18	.68	1,606.5	97.1%	

Note. All estimates of *r*, ρ , and Q are significant at $p < .001$. FFM = five-factor model; *k* = number of samples; *N* = aggregate sample; *r* = sample-weighted correlation; ρ = sample-weighted correlation corrected for scale reliability; *d* = Cohen's *d*; Grade diff. = *d* expressed as grade difference; Q = Cochran's measure of homogeneity; I^2 = Higgins and Thompson's (2002) measure of heterogeneity; ρ_g = ρ as partial correlation, controlled for intelligence.

Table 2

Moderation of Academic Performance–Personality Correlations by Academic Level

Academic level	<i>k</i>	<i>N</i>	<i>r</i>	<i>r</i> ²	<i>B</i>	<i>SE B</i>	β	ρ	<i>d</i>	Grade diff.	ρ_g
Correlations with Agreeableness ^a											
Total sample of studies	107	56,628	.461	.212 ^{***}				.07			
Primary education (constant)	8	3,196			0.298 ^{***}	0.045		.30 _a	0.64	0.42	.2
Secondary education	24	25,488			−0.247 ^{***}	0.047	−1.009	.05 _b	0.10	0.07	.0
Tertiary education	75	27,944			−0.239 ^{***}	0.047	−.979	.06 _b	0.12	0.08	.0
Correlations with Conscientiousness ^a											
Total sample of studies	135	68,063	.187	.020				.24			
Primary education (constant)	8	3,196			0.283 ^{***}	0.045		.28 _a	0.58	0.40	.2
Secondary education	35	31,980			−0.077	0.048	−.335	.21 _a	0.42	0.29	.2
Tertiary education	92	32,887			−0.041	0.047	−.179	.23 _a	0.47	0.32	.2
Correlations with Emotional Stability ^a											
Total sample of studies	112	57,658	.400	.160 ^{***}				.02			
Primary education (constant)	8	3,196			0.242 ^{***}	0.051		.20 _a	0.40	0.27	.1
Secondary education	24	25,495			−0.228 ^{***}	0.054	−.822	.01 _b	0.03	0.02	−.0
Tertiary education	80	28,967			−0.246 ^{***}	0.054	−.893	−.01 _b	−0.02	−0.01	−.0
Correlations with Extraversion ^a											
Total sample of studies	111	58,518	.414	.171 ^{***}				.00			
Primary education (constant)	8	3,196			0.188 ^{***}	0.044		.18 _a	0.37	0.25	.0
Secondary education	25	25,648			−0.217 ^{***}	0.046	−.919	−.05 _b	0.06	0.04	−.0
Tertiary education	78	28,424			−0.202 ^{***}	0.046	−.859	−.01 _b	−0.03	−0.02	−.0
Correlations with Openness ^a											
Total sample of studies	110	58,739	.385	.148 ^{***}				.12			
Primary education (constant)	8	3,196			0.260 ^{***}	0.042		.24 _a	0.48	0.33	.1
Secondary education	25	25,909			−0.141 [*]	−0.045	−.631	.12 _b	0.23	0.16	.0
Tertiary education	77	28,471			−0.184 ^{***}	0.044	−.827	.07 _c	0.15	0.10	.0
Correlations with intelligence ^a											
Total sample of studies	47	31,955	.470	.221 ^{***}				.25			
Primary education (constant)	4	1,791			0.567 ^{***}	0.092		.58 _a	1.42	0.97	n.a
Secondary education	17	12,606			−0.323 [*]	0.099	−.963	.24 _b	0.49	0.33	n.a
Tertiary education	26	17,588			−0.341 ^{***}	0.097	−1.033	.23 _b	0.47	0.32	n.a

Note. Correlations were calculated using least squares regression weighted by sample size. Correlations at different academic levels within the same mode that do not share the same subscript are significantly different at $p < .05$. *k* = number of samples; *N* = aggregate sample; *r*² = multiple *r* for regression equation; *B* = regression weight; *SE B* = standard error of *B*; β = standardized regression weight; ρ = sample-weighted correlation corrected for scale reliability; *d* = Cohen's *d*; Grade diff. = *d* expressed as grade difference; ρ_g = ρ as partial correlation, controlled for intelligence. n.a. = not applicable.
^a The criterion variables for each analysis are the corrected correlations with academic performance.

Help ... my kid behavestoo energetic and uncontrolled

ADHD - core symptom set (DSM-IV-TR)

De Fruyt & De Clercq (2012): “From a specific temperamental perspective, strong associations with ADHD (De Pauw & Mervielde, 2011) and autism (De Pauw, Mervielde, Van Leeuwen, & De Clercq, 2011) have been confirmed for children.”

Subclinical manifestations of e.g. ADHD: how to distinguish between kids with high energy and low concentration and those with ADHD?

Personality developmental pattern is in line with normative personality development :

- Decline in N, E
- Increase in C

A. "Persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequently displayed and is more severe than is typically observed in individuals at comparable level of development." Individual must meet criteria for either (1) or (2):

(1) Six (or more) of the following symptoms of inattention have persisted for at least six months to a degree that is maladaptive and inconsistent with developmental level:

Inattention

- (a) often fails to give close attention to details or makes careless mistakes in schoolwork, work or other activities
- (b) often has difficulty sustaining attention in tasks or play activity
- (c) often does not seem to listen when spoken to directly
- (d) often does not follow through on instructions and fails to finish schoolwork, chores or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
- (e) often has difficulty organizing tasks and activities
- (f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
- (g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books or tools)
- (h) is often easily distracted by extraneous stimuli
- (i) is often forgetful in daily activities

(2) Six (or more) of the following symptoms of hyperactivity-impulsivity have persisted for at least six months to a degree that is maladaptive and inconsistent with developmental level:

Hyperactivity

- (a) often fidgets with hands or feet or squirms in seat
- (b) often leaves seat in classroom or in other situations in which remaining seated is expected
- (c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
- (d) often has difficulty playing or engaging in leisure activities quietly
- (e) is often "on the go" or often acts as if "driven by a motor"
- (f) often talks excessively

Impulsivity

- (g) often blurts out answers before questions have been completed
- (h) often has difficulty awaiting turn
- (i) often interrupts or intrudes on others (e.g., butts into conversations or games)

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Table 1. Group differences in means and variances (Level 1) and in reliability of measures (Level 2) for trait and problem behavior variables

	Level 1 analyses									Level 2 analyses			
	ADHD		Comparison		F	η_p^2	d	Levene	# items	ADHD		Comparison	
	M	SD	M	SD						α	95% CI	α	95% CI
Problem behaviors													
CBCL-externalizing	21.52	9.92	6.50	5.92	262.65 **	.34	2.33	44.39 **	35	.89	(.85, .93)	.86	(.84, .88)
CBCL-internalizing	14.48	7.90	5.02	5.03	148.70 **	.22	1.75	16.00 **	32	.83	(.76, .89)	.84	(.82, .86)
Temperament													
EATQ-R-Effortful Control	2.15	.37	3.37	.58	225.98 **	.30	-2.17	14.73 **	18	.68	(.54, .79)*	.87	(.84, .89)*
EAS-Emotionality	3.50	.92	2.58	.75	67.57 **	.12	1.20	6.40	5	.85	(.78, .91)	.79	(.76, .82)
EAS-Activity	4.12	.88	3.37	.70	51.01 **	.09	1.04	5.41	5	.85	(.77, .90)*	.72	(.68, .76)*
EATQ-R-Negative Affect	2.99	.74	2.47	.58	35.97 **	.07	.87	7.54 *	12	.84	(.77, .90)	.78	(.74, .81)
EAS-Shyness	2.32	.84	2.18	.68	2.03	.00	.20	7.13 *	5	.80	(.70, .87)	.74	(.70, .78)
EATQ-R-Surgency	3.59	.89	3.46	.62	1.93	.00	.21	.90	14	.83	(.76, .89)	.81	(.78, .84)
Personality													
HiPIC-Conscientiousness	2.17	.47	3.27	.60	171.24 **	.25	-1.87	2.86	32	.87	(.82, .92)*	.95	(.93, .95)*
HiPIC-Benevolence	2.65	.56	3.54	.51	145.09 **	.22	-1.73	3.20	40	.93	(.91, .96)	.94	(.93, .95)
HiPIC-Emotional Stability	2.76	.68	3.48	.60	68.31 **	.12	-1.18	.77	16	.86	(.80, .91)	.88	(.86, .89)
HiPIC-Imagination	3.41	.62	3.80	.54	23.84 **	.04	-.71	1.86	24	.89	(.84, .93)	.91	(.90, .92)
HiPIC-Extraversion	3.53	.57	3.64	.51	2.21	.00	-.21	.78	32	.90	(.86, .94)	.91	(.90, .92)

Note. . * $p \leq .01$, ** $p \leq .001$. Scales are ordered by decreasing magnitude of η_p^2 .

9/4/2014

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- conceptual model for 21st century SE skills
- its components relate to outcomes of interest
- *effect evaluation of SEL interventions*

... questions

Evaluation of interventions: some general principles

- Randomized
 - Control group – no intervention
 - Manualized intervention – monitor implementation (implementation integrity)
 - Evaluate short AND long term effects
 - Subjective and objective results (self-reports +)
 - Carefully designed outcome measures (reliable & valid)
 - Side effects (+ and -)
-

Evaluation of interventions: Available evidence?

Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology*, 45, 294-309.

Weare, K., & Nind, M. (2011). Mental health promotion and problem prevention in schools: what does the evidence say? *Health Promotion International*, 26, 29-69.

Durlak, J. A., Weissberg, R. P., et al. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82, 1, 405-432.

Sklad, M., Diekstra, R., De Ritter, M., & Ben, J.. (2012). Effectiveness of school-based universal social, emotional, and behavioral programs: do they enhance students' development in the area of skill, behavior, and adjustment? *Psychology in the Schools*, 49(9), 892-909.

What is Social and Emotional Learning (SEL)?

Elias et al. (1997): SEL is: “The process of acquiring core competencies to recognize and manage emotions, set and achieve positive goals, appreciate the perspectives of others, establish and maintain positive relationships, make responsible decisions, and handle interpersonal situations constructively.”

Child Development, January/February 2011, Volume 82, Number 1, Pages 474–501

The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions

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Durlak et al.. (2011): “setting the stage ...”

- MA of 213 school-based universal SEL programs; < 2007
 - N= 270.034
 - Kindergarten to high school
 - Range of outcomes: SE skills, attitudes, behavior, conduct problems, emotional distress and performance
 - Interesting moderators:
 - by teachers > < experts/consultants
 - within > < within + outside classroom
 - SAFE (sequenced, active, focused, explicit) > < not SAFE
 - presence > < absence of implementation problems
-

Table 2
Mean Effects and .05 Confidence Intervals at Post for Total Sample and Each Intervention Format

		Outcomes					
		SEL skills	Attitudes	Positive social behavior	Conduct problems	Emotional distress	Academic performance
Total sample	ES	0.57*	0.23*	0.24*	0.22*	0.24*	0.27*
	CI	0.48 to 0.67	0.16 to 0.30	0.16 to 0.32	0.16 to 0.29	0.14 to 0.35	0.15 to 0.39
	N	68	106	86	112	49	35
Class by Teacher	ES	0.62*	0.23*	0.26*	0.20*	0.25*	0.34*
	CI	0.41 to 0.82	0.17 to 0.29	0.15 to 0.38	0.12 to 0.29	0.08 to 0.43	0.16 to 0.52
	N	40	59	59	53	20	10
Class by Nonschool Personnel	ES	0.87*	0.14*	0.23	0.17*	0.21	0.12
	CI	0.58 to 1.16	0.02 to 0.25	-0.04 to 0.50	0.02 to 0.33	-0.01 to 0.43	-0.19 to 0.43
	N	21	18	11	16	14	3
Multi-component	ES	0.12	0.23*	0.19	0.26*	0.27*	0.26*
	CI	-0.35 to 0.60	0.15 to 0.31	-0.02 to 0.39	0.17 to 0.34	0.07 to 0.47	0.16 to 0.36
	N	7	26	16	43	15	22

Note. *Mean effect is significantly different from zero at the .05 level.

Table 3
Findings for Moderator Analyses at Post by Outcome Category for Total Sample

		Outcomes					
		Skills	Attitudes	Social behavior	Conduct problems	Emotional distress	Academic performance
Moderators							
Recommended training practices (SAFE)							
Met SAFE criteria	ES	0.69*	0.24*	0.28*	0.24*	0.28*	0.28*
	CI	0.52 to 0.86	0.18 to 0.29	0.18 to 0.38	0.18 to 0.31	0.14 to 0.42	0.17 to 0.38
	N	63	80	73	88	33	24
Did not meet SAFE criteria	ES	0.01	0.16*	0.02	0.16*	0.18	0.26*
	CI	-0.57 to 0.60	0.07 to 0.25	-0.21 to 0.26	0.04 to 0.28	-0.02 to 0.37	0.11 to 0.40
	N	5	26	13	24	16	11
Implementation							
Not mentioned	ES	0.58*	0.17*	0.32*	0.24*	0.21*	0.31*
	CI	0.33 to 0.83	0.09 to 0.24	0.17 to 0.47	0.13 to 0.34	0.04 to 0.38	0.18 to 0.45
	N	29	46	33	35	22	13
No problems	ES	0.86*	0.29 ^{ab}	0.31*	0.27*	0.35*	0.33*
	CI	0.59 to 1.12	0.21 to 0.37	0.17 to 0.45	0.18 to 0.36	0.16 to 0.54	0.20 to 0.46
	N	26	36	34	45	16	13
Implementation problems	ES	0.35	0.19 ^{ab}	0.01	0.15*	0.15	0.14
	CI	-0.01 to 0.71	0.10 to 0.28	-0.18 to 0.19	0.05 to 0.25	-0.08 to 0.38	-0.01 to 0.28
	N	13	24	19	32	11	9

Note. ^aMeans differ significantly from each other at the .05 level.
*Mean effect is significantly different from zero at the .05 level.

Source of outcome data		
Child	382	53
Other (parent, teacher, observer, school records)	422	47
Participant features		
Educational level of participants		
Elementary School (Grades K-5)	120	56
Middle School (Grades 6-8)	66	31
High School (Grades 9-12)	27	13
Intervention features		
Intervention format		
Classroom by Teacher	114	53
Classroom by Nonschool Personnel	44	21
Multi-component	55	26
Use of recommended training procedures		
Intervention rated as SAFE	176	83
Intervention not rated as SAFE	37	17
Number of Sessions		
Mean number of sessions	40.8	
Median number of sessions	24	

EFFECTIVENESS OF SCHOOL-BASED UNIVERSAL SOCIAL, EMOTIONAL, AND
BEHAVIORAL PROGRAMS: DO THEY ENHANCE STUDENTS' DEVELOPMENT IN THE
AREA OF SKILL, BEHAVIOR, AND ADJUSTMENT?

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CAROLIEN GRAVESTIJN

The Hague University

Sklad et al. (2012)

- 75 studies, universal school-based
 - Including 16 non-American based (21%)
 - 1995 – 2008: recent!
 - Average reported intervention size: $N=543$; (range 13 – 8280)
 - Examines immediate and delayed outcomes
 - Grouped outcomes into broader constructs
 - Expressed in d - effect size
-

Table 1
Time of Assessment and Outcomes Reported by Studies

	No. of Programs	Percentage of Programs
Time of Assessment		
Post-Test: 0–6 months	55	73.3
Follow-Up: 7–18 months	27	36.0
Follow-Up: 19+ months	16	21.3
Outcome Reported		
Social–Emotional Skills	35	46.7
Antisocial Behavior	35	46.7
Substance Abuse	21	28.0
Positive Self-Image	14	18.7
Academic Achievement	13	17.3
Mental Health Disorders	13	17.3
Prosocial Behavior	10	13.3
Total	75	

Table 2
Methodological Features of Studies

	No. of Programs	Percentage of Programs
Experimental Design		
Any Form of a Random Assignment	42	56.0
Nonrandom Assignment	33	44.0
Unit of Assignment		
Matched Pairs	10	13.3
Schools	13	17.3
Classes	28	37.3
Students	11	14.7
Other, e.g., Level of Cohorts	13	17.3
Implementation Integrity		
Not Reported	40	53.3
Reported Problems	3	4
Reported as Fine	32	42.7
Outcome Measurement		
Used Multiple Sources	15	20
Relied Solely on Self-Reports	45	60
Used Multiple Instruments	62	82.6
Intervention Manual		
Unavailable/Availability Not Reported (43%)	55	73.3
Reported as Available	20	26.7
Total	75	100.0

Table 5
Programs' Efficacy on Major Outcomes

Outcome	N	Effect Size and Its Standard Error		95% Confidence Interval		Test of Null Hypothesis (2-Tail)		Heterogeneity			
		d	SE (d)	Lower Limit	Upper Limit	Z Value	p Value	Q	df (Q)	p Value	I ²
Immediate Outcomes											
Academic Achievement	10	0.46	0.08	0.31	0.61	6.06	<.001	153.62	9.00	<.001	94.14
Antisocial Behavior	39	-0.43	0.06	-0.32	-0.54	-7.59	<.001	985.12	38	<.001	96.14
Mental Disorders	13	-0.19	0.05	-0.09	-0.29	-3.67	<.001	29.11	12	<.001	58.78
Positive Self-Image	8	0.46	0.12	0.22	0.69	3.83	<.001	143.59	7	<.001	95.14
Prosocial Behavior	6	0.39	0.12	0.15	0.63	3.20	<.001	163.37	9	<.001	94.49
Social-Emotional Skills	31	0.70	0.10	0.51	0.89	7.27	<.001	1086.26	31	<.001	97.15
Substance Abuse	10	-0.09	0.02	-0.06	-0.13	-5.06	<.001	25.00	19	.016	24.00
Follow-Up Outcomes											
Academic Achievement	7	.26	0.05	0.16	0.36	5.06	<.001	13.65	6	.03	56.04
Antisocial Behavior	16	-.20	0.05	-0.10	-0.30	-3.90	<.001	132.35	15	<.001	88.67
Mental Disorders	11	-.10	0.03	-0.04	-0.17	-3.21	<.001	8.85	10	.55	0.00
Positive Self-Image	12	.07	0.02	-0.03	0.10	3.42	<.001	5.82	11	.89	0.00
Prosocial Behavior	7	.12	0.03	0.06	0.18	3.94	<.001	8.61	6	.20	30.34
Social-Emotional Skills	15	.07	0.01	0.04	0.09	4.46	<.001	11.97	14	.61	0.00
Substance Abuse	24	-.18	0.04	-0.11	-0.25	-5.06	<.001	200.02	23	<.001	88.50

Note. For outcomes, which SEB programs intend to reduce (antisocial behavior, mental disorders, substance abuse), negative effect sizes represent an improvement; for the remaining, positive outcomes, positive effect sizes indicate improvement.

Table 7
Moderator Analysis, Mixed Effect Model Analysis

Moderators & Outcomes	Heterogeneity Within Group				Heterogeneity Within Group				Heterogeneity Between Groups			
	Effect <i>d</i> (<i>SE</i>)	<i>Q</i> _{within}	<i>df</i>	<i>p</i>	Effect <i>d</i> (<i>SE</i>)	<i>Q</i> _{within}	<i>df</i>	<i>p</i>	<i>Q</i> _{between}	<i>df</i>	<i>p</i>	
School Level	Primary school				Secondary school only							
SS	.67(.14)**	457.35	15	<.001	.74(.14)**	590.82	15	<.001	0.16	1	<i>ns</i>	
AB	-.59(.07)**	665.09	20	<.001	-.25(.19)**	272.60	17	<.001	7.33	1	.007	
Duration	At least 1 year				Less than 1 year							
SS	.20(.05)**	93.08	15	<.001	1.15(.26)**	558.08	13	<.001	13.37	1	.007	
AB	-.24(.06)**	262.38	15	<.001	-.50(.11)**	520.46	21	<.001	4.26	1	.039	
No. of Sessions	20 sessions or more				<20 sessions							
SS	.24(.07)**	53.54	11	<.001	.80(.19)**	323.57	10	<.001	7.38	1	.007	
AB	-0.22(.04)**	161.22	19	<.001	-.31(.14)**	221.89	11	<.001	0.40	1	<i>ns</i>	
Trainers	Only Teachers				Not only Teachers							
SS	.71(.16)**	99.46	10	<.001	.70(.12)**	980.80	20	<.001	0.00	1	<i>ns</i>	
AB	-.31(.08)*	81.64	13	<.001	-.48(.07)**	870.67	24	<.001	2.26	1	<i>ns</i>	
Professionals Involved	No professional delivering				Professionals delivering							
SS	.82(.11)**	1004.23	21	<.001	.82(.20)**	70.62	9	<.001	0.47	1	<i>ns</i>	
AB	-.45(.07)**	896.25	26	<.001	-.39(.11)**	76.83	11	<.001	0.24	1	<i>ns</i>	
Place	Outside of North America				North America							
SS	.51(.14)**	72.82	6	<.001	0.75(.12)**	1003.82	24	<.001	1.72	1	<i>ns</i>	
Focused Study	Focused				Not focused							
SS	0.70 (.15)**	773.21	17	<.001	0.68(.13)**	311.43	13	<.001	0.01	1	<i>ns</i>	
AB	-0.45(.07)**	896.25	26	<.001	-0.39(.11)**	76.83	11	<.001	0.24	1	<i>ns</i>	

Note. SS = social skills, AB = antisocial behavior. For outcomes, which SEB programs intend to reduce (antisocial behavior), negative effect sizes represent an improvement; for social skills, positive effect sizes indicate improvement.

p* < .005. *p* < .001.

SEL effects: General conclusions

- 0.7 SD immediate gains (~average program participant > skills than 76% of regular students)!! Good news
 - FU sizes small; median .12 SD (~average program participant outperforms an additional 5%)
 - Best long-term gains for academic achievement and reduced antisocial behavior
 - Universal class-based programs run by teachers can do the job!!
 - Effective across primary and secondary school
 - In both the US and abroad
 - “It’s a long way to the top”: multiple sessions (*), SAFE (*), ...
-

T-a-M:

- Model integrating cogs and noncogs
 - Components in this model + assessment
 - Predictive of outcomes
 - SEL programs work:
 - Manualize
 - Intervention integrity
 - Short – long term FU
 - Short versus long interventions
 - Encouraging awareness in Brazil!
-

Questions?

Many thx for your attention

Obrigado!

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