

Professional Development and Teacher Consistency in Use of a Rating Scale

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Abstract

In gifted and talented education, teacher referrals are a common source for entry into an identification process; yet one key question is the degree of professional development teachers receive in recognizing the kinds of behaviors that might indicate high academic potential. This issue is particularly salient with students from traditionally underserved groups, whose high potential may emerge in ways that differ from what teachers expect. This study focuses on using professional development to support consistency in teacher use of a behavior rating scale to document students' high-potential behaviors. Linear regression analysis of scale scores over two years demonstrated that the treatment group teachers became more consistent in their use of the scale as compared to teachers in the comparison group.

Method

Sample

40 comparison teachers who rated 74 comparison students and 58 treatment teachers who rated 115 treatment students across 11 schools in three school districts in the Northeast.

Measure

The Gifted Behaviors Rating Scale (GBRS) is divided into four areas: exceptional ability to learn (learn), exceptional application of knowledge (apply), exceptional creative/productive thinking (create), and exceptional motivation to succeed (motivate). The frequency of expression is rated using a 4-point scale—1 is rarely, 2 is occasionally, 3 is frequently, and 4 is consistently.

Procedure

In the winter of the first year of the project, the researchers held small group professional development sessions with treatment and comparison teachers to acquaint them with the GBRS. In the spring of year 1, teachers were asked to use the GBRS to nominate students for participation in the project. In year 2 of the project, the treatment teachers received more intensive professional development on the application of the GBRS than the comparison teachers. We used *t* tests to compare students' year 1 and year 2 scores, as well as the comparison and treatment scores. We then used linear regression analyses to determine whether the scores from year 1 (total, learn, apply, create, and motivate) were predictive of the total score in year 2 for the treatment and comparison groups.

Findings

Table 1

Number of Students in Demographic Categories

	Comparison		Treatment	
	Year 1, Grade K	Year 1, Grade 1	Year 1, Grade K	Year 1, Grade 1
Female ^a	14 (46.6%)	25 (56.8%)	27 (55.1%)	36 (55.4%)
Minority ^b	17 (58.6%)	16 (36.4%)	26 (52.0%)	37 (56.9%)
English Language Learner ^c	5 (17.9%)	4 (9.1%)	4 (11.1%)	5 (11.1%)
Special Education ^d	0 (0.0%)	0 (0.0%)	1 (2.8%)	1 (2.2%)

^a Sex was out of 74 comparison students and 114 treatment.

^b The Ethnicity category was out of 73 comparison students and 115 treatment.

^c The English Language Learner category was 72 comparison students and 81 treatment.

^d The Special Education category had a total of 73 comparison students and 81 treatment.

Table 3

Comparison of GBRS year 1 and year 2 scores

Pair		Mean	SD	<i>t</i>	df	Sig.
		Year1	Year2			
Pair 1	Year1_learn	3.64	0.54	6.98	188	0.00*
	Year2_learn	3.17	0.86			
Pair 2	Year1_apply	3.40	0.65	5.52	188	0.00*
	Year2_apply	3.00	0.89			
Pair 3	Year1_create	3.25	0.67	2.52	188	0.01*
	Year2_create	3.05	0.78			
Pair 4	Year1_motivate	3.19	0.81	1.90	188	0.06
	Year2_motivate	3.03	0.88			
Pair 5	Year1_total	13.48	1.79	5.20	188	0.00*
	Year2_total	12.25	2.94			

Note. * denotes statistical significance at the $p \leq 0.01$ level

Table 2

Comparison of GBRS scores by year by group

	GBRS Year 1					GBRS Year 2				
	Comparison	Treatment	<i>t</i>	df	Sig.	Comparison	Treatment	<i>t</i>	df	Sig.
Total	13.60 (1.86)	13.40 (1.74)	-0.17	188	0.87	12.27 (3.40)	12.24 (2.61)	0.21	188	0.83
Learn	3.65 (0.51)	3.64 (0.57)	-1.44	188	0.15	3.15 (1.00)	3.19 (0.76)	0.77	188	0.44
Apply	3.49 (0.60)	3.35 (0.68)	-0.97	188	0.33	2.93 (0.97)	3.04 (0.84)	-0.96	188	0.34
Create	3.19 (0.73)	3.29 (0.63)	-1.16	188	0.25	3.12 (0.84)	3.01 (0.74)	-0.51	188	0.61
Motivate	3.27 (0.82)	3.13 (0.80)	-0.73	188	0.47	3.07 (0.97)	3.01 (0.82)	-0.11	188	0.91

Note. The *n* for the Comparison group was 74 and 115 for the Treatment group.

Table 4

Predictors of Year 2 GBRS Total Score

	Model 1		Model 2	
	Comparison	Treatment	Comparison	Treatment
Year1_Total ^a	-0.03	0.28*		
Year1_Learn ^a			0.07	0.23*
Year1_Apply ^a			0.11	0.12
Year1_Create ^a			-0.15	-0.20*
Year1_Motivate ^a			-0.08	0.22*
R ²	0.00	0.08	0.03	0.20
F	0.09	9.77	0.47	6.97
Sig.	0.77	0.00	0.47	0.00

^a given as *Beta* standardized regression coefficients

* statistically significant at the $p \leq 0.05$ level

Results

- Although not statistically significant in total, or any of the four construct subgroup scores, the treatment group year 2 scores did not see as big a drop overall from year 1, nor are they as variable as those same scores in the comparison group.
- Treatment teachers became more consistent in their use of the behavior rating scale.
- The comparison teachers were not as consistent in their use of the behavior rating scale between the two time points.
- In-school professional development, specifically demonstration lessons and one-on-one discussions, support teachers in developing consistent perspectives on the application of a behavior rating scale.
- The results justify further research related to the use of the scale, including additional analysis of consistency by teacher as well as consistency within demographic subgroups of students once sample size supports such analyses.
- These results have implications for how to work with teachers in using this scale or similar scales to document behaviors indicative of high potential.