

**Physical Education Teacher Self-Efficacy for Standards Based Curriculum:  
A Test of Social Cognitive Theory**

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**ABSTRACT**

There is a need for sound self-efficacy measures in education that are based on Social Cognitive Theory. Physical education benefits public health by addressing physical inactivity and obesity. The purpose of this study was to develop and test a standards-based training program and virtual blog on self-efficacy. Participants were 60 physical education teachers recruited from 16 school districts. Three self-efficacy scales were administered at the beginning of a workshop and after a six-week collaborative blog. The major finding is that the intervention enhanced self-efficacy to a much greater extent than the control group. The average experimental group effect size for ESBI was .97 compared to .19 for the control group. This work could help guide future professional development opportunities.

Table 1. Descriptive data for the self-efficacy measures by group and time. Overall effect of Standards-based training intervention on physical educator self-efficacy.

Scale	Control Group ( $n = 25$ )			Experimental Group ( $n = 35$ )		
	Baseline $M$ ( $SD$ ) (95% CI)	End $M$ ( $SD$ ) (95% CI)	ES	Baseline $M$ ( $SD$ ) (95% CI)	End $M$ ( $SD$ ) (95% CI)	ES
<b>ESBI</b>	<b>76.92 (10.88)</b> (72.97-83.09)	<b>78.97 (9.95)</b> (74.84-83.10)	<b>.19</b>	<b>70.83 (15.22)</b> (67.77-76.69)	<b>84.31 (8.96)</b> (80.67-87.95)	<b>.97</b>
<i>Assessment</i>	18.12 (4.30) (17.60, 20.09)	18.66 (4.21) (17.18, 20.14)	.13	17.11 (4.05) (15.61, 18.69)	20.93 (2.54) (19.62, 22.23)	1.13
<i>Planning</i>	19.94 (3.28) (18.65, 21.79)	19.75 (2.86) (18.55, 20.95)	.06	17.48 (4.36) (16.27, 19.04)	21.13 (2.65) (20.07, 22.19)	1.01
<i>Instruction</i>	20.01 (1.96) (19.11, 21.68)	20.41 (1.38) (19.75, 21.07)	.23	18.74 (4.31) (18.05, 20.33)	21.65 (1.59) (21.07, 22.23)	.89
<i>Knowledge</i>	18.85 (3.27) (17.60, 20.56)	20.11 (3.61) (18.82, 21.51)	.38	17.5 (4.34) (16.94, 19.55)	20.60 (2.88) (19.42, 21.79)	.87
<b>TESPE</b>	<b>96.3 (10.7)</b> (93.6, 100.9)	<b>95.5 (7.5)</b> (92.7, 98.3)	<b>-.09</b>	<b>92.4 (5.3)</b> (91.3, 97.8)	<b>94.5 (6.6)</b> (89.9, 94.9)	<b>-.35</b>

Table 1. (Continued)

Scale	Control Group ( $n = 25$ )			Experimental Group ( $n = 35$ )		
	Baseline $M$ ( $SD$ ) (95% CI)	End $M$ ( $SD$ ) (95% CI)	ES	Baseline $M$ ( $SD$ ) (95% CI)	End $M$ ( $SD$ ) (95% CI)	ES
<i>Skill</i>	24.8 (2.6) (24.3, 26.1)	24.8 (1.9) (24.1, 25.5)	.00	23.9 (2.2) (22.9, 24.6)	22.9 (1.5) (22.2, 23.5)	-.53
<i>Preparation</i>	23.7 (3.5) (22.4, 25.2)	23.9 (3.2) (22.6, 25.2)	-.06	22.9 (2.5) (21.9, 24.3)	22.1 (2.8) (20.9, 23.3)	-.30
<i>Comm.</i>	24.3 (3.2) (23.6, 25.8)	23.5 (1.8) (22.8, 24.1)	.27	24.1 (2.2) (23.2, 25.1)	24.6 (1.1) (23.9, 25.1)	-.29
<i>Motivation</i>	23.5 (2.9) (22.5, 24.6)	23.3 (2.6) (22.3, 24.3)	-.11	23.6 (1.9) (22.6, 24.5)	23.2 (2.2) (22.3, 24.1)	-.20
<b>TSES</b>	<b>83.3 (9.2)</b> (80.7, 88.9)	<b>83.3 (9.1)</b> (80.4, 86.2)	<b>.00</b>	<b>82.5 (10.2)</b> (78.8, 86.0)	<b>83.0 (4.0)</b> (80.4, 85.6)	<b>.06</b>
<i>Instruction</i>	28.2 (4.6) (27.3, 30.7)	27.9 (3.5) (26.7, 29.2)	.07	27.8 (3.3) (26.4, 29.3)	28.9 (2.2) (27.8, 29.0)	-.39
<i>Engagement</i>	23.6 (5.0)	23.6 (5.3)	.00	24.9 (4.7)	24.4 (1.7)	.14

Table 1. (Continued)

Scale	Control Group ( $n = 25$ )			Experimental Group ( $n = 35$ )		
	Baseline $M$ ( $SD$ ) (95% CI)	End $M$ ( $SD$ ) (95% CI)	ES	Baseline $M$ ( $SD$ ) (95% CI)	End $M$ ( $SD$ ) (95% CI)	ES
<i>Management</i>	(21.7, 25.8) 31.5 (3.3) (30.4, 33.8)	(21.9, 25.2) 31.8 (2.8) (30.5, 33.1)	.09	(22.8, 26.4) 29.8 (4.4) (28.5, 31.5)	(23.0, 25.9) 29.4 (3.2) (28.2, 30.6)	-.10

SD, Standard Deviation; CI, Confidence Interval; ES, Effect Size

Table 2. Pearson-product correlations among blog use, education level and self-efficacy assessments.

Variable	1	2	3	4	5	6	7	8	9	10
1. Individual BC	-									
2. District BV	-.02	-								
3. Rating	-.29	.17	-							
4. Pre-ESBI	-.14	-.41*	-.03	-						
5. Pre-TESPE	.31	-.34*	-.07	.56**	-					
6. Pre-TSES	-.13	-.23	-.18	.49**	.53**	-				
7. Post-ESBI	.57*	.03	.32	-.13	-.11	.07	-			
8. Post-TESPE	-.17	-.10	-.00	-.11	-.07	-.22	.16	-		
9. Post-TSES	.49*	-.08	.08	-.12	.20	.09	-.25	-.08	-	
10. Educ. Level	-.02	.03	-.06	-.20	.16	-.01	-.18	.20	.03	-

Note: \* $p < .05$ , two-tailed. \*\* $p < .01$ , two-tailed

BV = Blog Views, BC = Blog Comments, Educ. Level = Education

## Efficacy for Standards-based Instruction (ESBI)

Directions: The attached form lists different teaching activities. In the column **Confidence**, rate how confident you are that you can do them **as of now**. Rate your degree of confidence by recording a number from 0 to 100 using the scale given below. Please be honest in your evaluation. Your answers are confidential.

0	10	20	30	40	50	60	70	80	90	100
Certain cannot do			Moderately certain can do				Certain can do			

Confidence  
(0-100)

### Understanding the Curriculum in the District

- Can analyze the strengths and weaknesses of written curricula \_\_\_\_\_
- Understand the framework and content of my district's physical education curriculum \_\_\_\_\_
- Understand the standards and benchmarks used in my district's physical education curriculum \_\_\_\_\_
- Am able to determine how feasible and affordable it is for the school district and physical education teachers to implement the curriculum successfully \_\_\_\_\_
- Understand the overall goals or focus on the physical education curriculum in my district \_\_\_\_\_

### Planning Based on the Curriculum Model

- Can align objectives, content, practice, feedback, and assessments for my specific grade level(s) \_\_\_\_\_
- Collaborate with colleagues to develop a district curriculum that meets national standards \_\_\_\_\_
- Plan lessons that help students master the content \_\_\_\_\_
- Develop multiple lesson plans that address each benchmark so students have many opportunities to master the content \_\_\_\_\_
- Can align lesson plans and curriculum with current local, state, and/or national standards \_\_\_\_\_

### Teaching the Curriculum Model

- Base instruction on local, state and /or national physical education standards \_\_\_\_\_
- Clearly communicate instructional goals to students \_\_\_\_\_
- Provide** content and tasks that are developmentally appropriate and properly sequenced \_\_\_\_\_
- Provide meaningful physical education content \_\_\_\_\_
- Provide instruction that facilitates student learning \_\_\_\_\_

### Assessment

- Continually assess student performance to guide instruction \_\_\_\_\_
- Base assessment on mastery of learning expectations which are outlined in district standards and benchmarks \_\_\_\_\_
- Can document student learning in physical education \_\_\_\_\_
- Use multiple assessment strategies to monitor student learning \_\_\_\_\_
- Modify lessons and/or instruction in response to information from assessment \_\_\_\_\_