

# **ANALYSIS OF PHYSICAL EDUCATION STANDARDS, BENCHMARKS AND RELATED TEACHER DECISIONS FROM SIXTEEN INDEPENDENT SCHOOL DISTRICTS**

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## **ABSTRACT**

This project assessed the alignment of physical education curricula in 16 school districts. The PECAT instrument was used to assess each school district's written physical education standards and benchmarks. PECAT content coverage scores ranged from 0-64% ( $m=35.2\%$ ), seven districts had scores of 44% or more. The curriculum map analysis of 1060 benchmarks produced 27% fully aligned, 52% partially aligned and 21% autonomous benchmarks. Five districts had at least one fully aligned benchmark for content associated with their district standards. PECAT and the curriculum maps scores were correlated ( $r=.58, p=.0001$ ). Teachers reported little to no professional development related to curriculum. Better district curriculum maps and PECAT scores were associated with teacher decisions based on student assessment ( $e.s.=.86$ ) and student needs ( $e.s.=.81$ ).

Table 1. Examples from participating districts to demonstrate definitions of tracking of benchmarks across grades for vertical alignment of NASPE “Standard 1. Students will demonstrate competency in many movement forms and proficiency in a few movement forms”.

K-2 Benchmark	3-5 Benchmark	6-8 Benchmark	9-12 Benchmark	Type of Tracking
Use simple combinations of fundamental movement skills	Use mature form and appropriate sequence in combinations of fundamental locomotor object control and rhythmical skills that are components of selected modified games, sports and dances	Perform a variety of simple rhythmic dances	Demonstrate competency with a variety of complex social dance forms	<b>Full*</b>
Use control in weight-bearing and balance activities on a variety of body parts	Use mature form in balance activities on a variety of apparatuses			<b>Part*</b>
	Use basic sport-specific skills for a variety of physical activities	Use beginning strategies for net and invasion	Participate in sporting activities with consistency all of the basic skills, rules and strategies.	<b>Part*</b>
Use a variety of basic object control skills				<b>Autonomous**</b>

Note: \* indicates acceptable sequencing; \*\*indicates unacceptable sequencing

Table 2. Descriptive statistics for raw scores and PECAT percent coverage by grade level and overall from analysis of 16 school districts

NASPE Standard	PECAT Percent Coverage for Each Grade Level				Overall (K-12)
	K-2	3-5	6-8	9-12	
	Raw Score ( <i>SD</i> ) (%)	Raw Score ( <i>SD</i> ) (%)	Raw Score ( <i>SD</i> ) (%)	Raw Score ( <i>SD</i> ) (%)	
Standard 1 <sup>1</sup>	78.0 ± 22.3 48.8	67.0 ± 19.5 41.9	65.0 ± 21.8 40.6	68.0 ± 21.6 42.5	69.5 ± 21.3 46.4
Standard 4 <sup>2</sup>	65.0 ± 31.4 40.6	68.0 ± 34.0 42.5	71.0 ± 33.5 44.4	72.0 ± 33.3 45.0	69.0 ± 33.1 43.1
Standard 2 <sup>3</sup>	61.0 ± 29.5 38.1	61.0 ± 32.1 38.1	60.0 ± 31.6 37.5	67.0 ± 31.4 41.9	62.3 ± 31.2 38.9
Standard 3 <sup>4</sup>	41.0 ± 28.0 25.6	51.0 ± 30.6 31.9	59.0 ± 30.1 36.9	69.0 ± 29.9 43.1	55.0 ± 29.7 34.4

<sup>1</sup> Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

<sup>2</sup> Achieves and maintains a health enhancing level of physical fitness.

<sup>3</sup> Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.

<sup>4</sup> Participates regularly in physical activity.

Standard 5 <sup>5</sup>	42.0 ± 29.4 26.3	40.0 ± 31.9 25.0	52.0 ± 31.5 32.5	59.0 ± 31.3 36.9	48.3 ± 31.0 30.2
Standard 6 <sup>6</sup>	22.0 ± 25.7 13.8%	21.0 ± 28.3 13.1	24.0 ± 27.8 15.0	29.0 ± 27.6 18.1	24.0 ± 27.4 15.0
TOTAL	51.5 ± 27.7 32.2%	51.3 ± 29.4 32.1%	55.2 ± 29.3 34.2%	60.7 ± 29.2 39.8 %	54.7 ± 28.9 35.2 %

PECAT, Physical Education Curriculum Analysis Tool; NASPE, National Association of Sport and Physical Education; SD, standard deviation

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<sup>5</sup> Exhibits responsible personal and social behavior that respects self and others in physical activity settings.

<sup>6</sup> Values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.

Table 3. Descriptive information by district including source of the standards, number of standards, number of benchmarks, number of grade levels with benchmarks, number of benchmarks labeled as fully aligned, partially aligned and autonomous, PECAT percent coverage score, and number of teachers in the district completing the survey.

District ID	Standard source	Number standards	Number benchmarks	Number of grade levels	Fully aligned	Partially aligned	Autonomous	Percent of fully aligned standards	PECAT percent coverage	Teachers completing survey
1	District	4	176	8	4	32	18	75%	64%	3 <sup>3</sup>
12*	District	5	91	4	8	12	10	100%	64%	2 <sup>2</sup>
6	NASPE '95	7	63	4	3	18	3	43%	64%	3 <sup>1</sup>
4	NASPE '95	7	247	8	6	41	16	43%	63%	2 <sup>1</sup>
2*	District	5	82	3	18	8	19	100%	52%	5 <sup>3</sup>
3*	District	5	80	5	5	16	6	100%	52%	3 <sup>0</sup>
5*	NASPE '95	7	66	3	11	7	8	100%	52%	5 <sup>0</sup>
8*	District	5	54	3	4	9	19	100%	45%	3 <sup>0</sup>
15	NASPE 2004	6	60	6	6	9	1	67%	32%	1 <sup>1</sup>

13	NASPE '95	7	73	4	0	16	6	0%	26	3 <sup>3</sup>
16	District	6	26	4	1	3	13	0%	16%	2 <sup>2</sup>
10	District	6	16	1	0	0	16	0%	13	1 <sup>0</sup>
7	District	3	12	1	0	0	12	0%	10	3 <sup>2</sup>
14	District	4	8	1	0	0	8	0%	7	1 <sup>1</sup>
9	NASPE '95	7	6	1	0	0	6	0%	3	2 <sup>2</sup>
11	NASPE '04	6	0	0	0	0	0	0%	0	3 <sup>2</sup>

<sup>0</sup> indicates no teachers from study were involved in standard/benchmark development

<sup>1</sup> indicates 1 teacher from study was involved in standard/benchmark development

<sup>2</sup> indicates 2 teachers from study were involved in standard/benchmark development

<sup>3</sup> indicates 3 teachers from study were involved in standard/benchmark development

\*indicates full alignment of the district standards (one benchmark that tracked across all levels for each standard)

Table 4. Descriptive data from vertical alignment by NASPE standard and overall for 16 school districts including number of full, part, and autonomous benchmarks.

Type of Alignment	Vertical Alignment by NASPE Standard												overall	%
	Standard 1 <sup>[1]</sup>		Standard 2 <sup>[2]</sup>		Standard 3 <sup>[3]</sup>		Standard 4 <sup>[4]</sup>		Standard 5 <sup>[5]</sup>		Standard 6 <sup>[6]</sup>			
	#	%	#	%	#	%	#	%	#	%	#	%		
Full	74	24.0%	39	20.6%	36	28.1%	53	23.9%	57	48.7%	28	29.2%	287	27.1%
Part	159	51.6%	104	55.0%	50	39.1%	121	54.5%	38	32.5%	53	55.2%	552	52.0%
Autonomous	48	15.6%	46	24.3%	42	32.8%	48	21.6%	22	18.8%	15	15.6%	221	20.9%
Total	308	100%	189	100%	128	100%	222	100%	117	100%	96	100%	1060	100%

Full, benchmarks track across all levels (K-12) for a given standard; Part, benchmark sequences track across at least two levels, but not all levels (K-12); Autonomous, a single benchmark is present at one grade level only

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