

APPENDIX TABLES

Year-Three (1997) Composites by Cohort:

K-8 Science

K-8 Mathematics

7-12 Mathematics

Year-Three (1997) Composites by Treatment:

K-8 Science

K-8 Mathematics

7-12 Mathematics

Comparison of 1996 and 1997 Composites for Cohort 1

K-8 Science

Comparison of 1996 and 1997 Composites for Cohort 2

K-8 Science

K-8 Mathematics

Year-Three (1997) Composites by Cohort: K–8 Science

	Overall		Cohort 1		Cohort 2		Cohort 3	
	Mean	STD	Mean	STD	Mean	STD	Mean	STD
Quality of LSC Professional Development	58.4	19.6	60.1	20.0	58.1	19.4	56.2	19.6
Attitudes Towards Teaching	87.2	9.7	87.7	9.6	87.3	9.7	86.5	9.9
Pedagogical Preparedness	74.5	14.0	75.0	13.8	75.0	14.2	72.6	13.5
Content Preparedness	58.8	17.2	58.9	16.2	60.0	17.6	55.1	16.4
Traditional Teaching Practices	51.1	19.0	48.4	17.2	53.9	19.7	45.9	17.1
Investigative Culture	76.9	14.6	77.7	14.7	77.0	14.2	76.0	15.4
Investigative Practices	53.6	14.2	55.1	14.4	53.9	14.3	51.4	13.4
Collegiality	72.2	17.4	72.8	17.3	72.3	17.4	71.3	17.4
Principal Support	74.0	15.2	74.1	15.0	74.6	15.4	72.2	14.5
Resource Availability	65.6	22.6	66.3	21.9	66.3	22.7	62.5	23.1
Parent Support	42.5	16.1	45.8	14.6	40.9	16.4	43.9	16.2

Year-Three (1997) Composites by Cohort: K–8 Mathematics

	Overall		Cohort 2		Cohort 3	
	Mean	STD	Mean	STD	Mean	STD
Quality of LSC Professional Development	57.3	19.2	57.1	19.2	58.0	19.1
Attitudes Towards Teaching	88.1	10.0	87.1	10.3	89.3	9.4
Pedagogical Preparedness	78.3	13.5	78.8	13.1	77.8	13.9
Content Preparedness	70.6	17.6	73.0	17.3	67.4	17.7
Traditional Teaching Practices	75.4	14.3	75.5	14.0	75.3	14.6
Investigative Culture	81.3	11.8	80.6	11.5	82.1	12.0
Investigative Practices	53.8	14.2	53.1	13.7	54.8	14.9
Use of Calculators/Computers	53.2	19.9	53.6	18.8	52.7	21.2
Collegiality	73.3	17.2	74.2	16.8	72.2	17.5
Principal Support	77.8	14.4	78.5	14.4	77.0	14.3
Resource Availability	69.8	22.0	69.8	21.5	69.8	22.5
Parent Support	37.8	13.7	40.2	13.5	34.7	13.4

Year-Three (1997) Composites by Cohort: 7–12 Mathematics

	Overall	
	Mean	STD
Quality of LSC Professional Development	59.0	18.0
Attitudes Towards Teaching	82.1	11.8
Pedagogical Preparedness	73.1	13.7
Content Preparedness	74.2	14.7
Traditional Teaching Practices	76.1	12.0
Investigative Culture	78.9	13.0
Investigative Practices	46.4	14.1
Use of Calculators/Computers	68.1	19.9
Collegiality	74.1	17.0
Principal Support	72.4	15.0
Resource Availability	68.7	21.7
Parent Support	39.3	16.4
Department Chair Support	74.7	16.1

Year-Three (1997) Composites by Treatment: K-8 Science

	0 Hours		1-19 Hours		20-39 Hours		40 or More	
	Mean	STD	Mean	STD	Mean	STD	Mean	STD
Quality of LSC Professional Development	—	—	52.9	18.3	59.4	18.5	66.2	19.6
Attitudes Towards Teaching	86.2	10.3	86.9	9.7	87.2	9.7	88.7	8.8
Pedagogical Preparedness	70.8	14.4	73.7	13.6	76.5	13.2	79.1	12.1
Content Preparedness	55.6	17.2	58.4	16.7	60.5	16.8	61.7	16.8
Traditional Teaching Practices	47.4	18.7	53.2	19.6	53.3	19.0	52.1	18.1
Investigative Culture	72.8	16.3	76.3	13.7	79.4	12.5	81.9	11.7
Investigative Practices	48.9	13.7	53.3	13.9	56.3	13.6	58.7	13.0

Year-Three (1997) Composites by Treatment: K-8 Mathematics

	0 Hours		1-19 Hours		20-39 Hours		40 or More	
	Mean	STD	Mean	STD	Mean	STD	Mean	STD
Quality of LSC Professional Development	—	—	54.0	18.5	59.7	17.6	61.8	20.5
Attitudes Towards Teaching	89.0	9.7	86.8	9.9	88.5	8.5	86.5	12.3
Pedagogical Preparedness	77.1	14.2	77.5	13.2	80.0	11.5	80.3	12.2
Content Preparedness	67.6	18.0	71.2	17.2	73.1	16.1	73.4	17.3
Traditional Teaching Practices	74.4	15.4	75.6	14.4	78.1	11.2	76.7	11.4
Investigative Culture	80.6	12.6	79.9	11.4	83.7	10.4	82.2	10.8
Investigative Practices	53.2	14.8	51.4	12.9	55.4	12.9	57.8	14.4
Use of Calculators/Computers	49.4	20.9	53.5	18.2	57.1	19.3	59.1	19.3

Year-Three (1997) Composites by Treatment: 7-12 Mathematics

	0 Hours	
	Mean	STD
Quality of LSC Professional Development	—	—
Attitudes Towards Teaching	81.3	12.1
Pedagogical Preparedness	72.5	13.7
Content Preparedness	76.0	14.0
Traditional Teaching Practices	76.2	12.3
Investigative Culture	78.2	13.3
Investigative Practices	45.1	14.2
Use of Calculators/Computers	69.0	19.9

Comparison of 1996 and 1997 Composites for Cohort 1: K–8 Science

	1996		1997		Difference	Effect Size
	Mean	STD	Mean	STD		
Attitudes Towards Teaching	87.8	9.2	87.7	9.6	-0.2	—
Pedagogical Preparedness	73.2	14.1	75.0	13.8	1.8*	0.1
Content Preparedness	57.3	16.8	58.9	16.2	1.6*	0.1
Investigative Culture	78.4	13.0	77.7	14.7	-0.7	—
Investigative Practices	55.8	14.2	55.1	14.3	-0.7	—
Principal Support	73.1	14.6	74.1	15.0	1.0	—

* $p \leq 0.05$

Comparison of 1996 and 1997 Composites for Cohort 2: K–8 Science

	1996		1997		Difference	Effect Size
	Mean	STD	Mean	STD		
Attitudes Towards Teaching	87.9	9.3	87.3	9.7	-0.6	—
Pedagogical Preparedness	72.4	14.3	75.0	14.2	2.7*	0.2
Content Preparedness	58.6	17.1	60.0	17.6	1.3*	0.1
Investigative Culture	76.8	14.2	77.0	14.2	0.1	—
Investigative Practices	53.7	14.8	53.9	14.3	0.2	—
Principal Support	72.3	15.5	74.6	15.3	2.3*	0.1

* $p \leq 0.05$

Comparison of 1996 and 1997 Composites for Cohort 2: K–8 Mathematics

	1996		1997		Difference	Effect Size
	Mean	STD	Mean	STD		
Attitudes Towards Teaching	87.8	9.5	87.1	10.3	-0.8	—
Pedagogical Preparedness	79.0	12.7	78.8	13.1	-0.2	—
Content Preparedness**	70.2	17.9	73.0	17.3	2.8*	0.2
Investigative Culture	78.6	12.6	80.6	11.5	2.1*	0.2
Investigative Practices	48.6	13.8	53.1	13.7	4.5*	0.3
Principal Support	75.8	15.7	78.5	14.4	2.7*	0.2

* $p \leq 0.05$

** The 1996 mathematics questionnaire contained items that were split in 1997 (i.e., algebra/pre-algebra was split into two items in 1997, as was data analysis and probability). to maintain consistency in the composites, these items were counted twice when computing 1996 composites.