

CHAPTER 4

PRESENTATION OF DATA

All school divisions in the Commonwealth of Virginia were surveyed to determine the current status of school/business collaborative activity in Virginia. This survey was a replication of one sent to public school divisions in Virginia by Larkin Phillips (1992) as a part of his study, The Current Status of Public School/Business Collaborative Activities in Virginia. The findings of the Phillips study will be compared to the findings of this study. The purpose of this chapter is to display information in a systematic way to the reader. The analysis is presented in summary tables and descriptive text (Miles & Huberman, 1984, p. 79).

Data

Fifty-four surveys (of 131) or 41 percent were returned in 21 days. A reminder letter was sent to all non-responding school divisions 21 days after the original letter was mailed. This resulted in 28 additional returns. A third mailing containing a new survey was sent to the remaining 49 school divisions that had not responded. The second survey resulted in 23 additional responses. The three mailings were returned by 99 school divisions or 76 percent of the school divisions in Virginia. These responses were compared with the responses presented in the Phillips study.

Phillips Research Question 1

What percent of the school divisions in Virginia had one or more school/business collaborative activities during the 1990-91 school year?

Phillips reported that of the 88 school divisions or 80 percent of the school divisions reporting to his survey had conducted collaborative activities during the 1990-91 school year. This compared to 71 (71.71%) of the school divisions that reported collaborative activities in this study. This is a decline of 8 percent of school divisions reporting school/business collaborative activities in 1999 as compared to 1991.

In the current study respondents were asked when they first started collaborative activities with business and industry, prior to 1990-91 1991-92 or later. Seventy-one (71) school divisions responded to this question with 33 reporting that their activities began after the 1990-91 school year, and 39 reported starting prior to the 1990-91 school year.

Characteristics of the school divisions who participated in school/business activities were analyzed in the Phillips and the current study. In the current study 32 (45.07%) of the school divisions reporting collaborative activities were classified as rural. Twenty-three (32.39%) were classified as cities and 16 (22.53%) were classified as suburban. In the Phillips study, 44 (50.00%) of the school divisions with collaborative activities were classified as rural. Twenty-nine (32.95%) were classified as cities or towns and 15 (17.04%) were classified as suburban. Survey results are summarized in Table 1.

Table 1

Characteristics of School Divisions That Participated in Collaborative Activity by Division Type

	<i>School Division Type</i>					
	Rural		City		Suburban	
1990-91	44	50.00%	29	32.95%	15	17.04%
1998-99	32	45.07%	23	32.39%	16	22.53%
Change	12	04.93%	6	-00.56%	1	05.49%

Phillips Research Question 2

What percent of the school/business collaborative activities in Virginia were located in rural, city, or suburban school divisions?

In this study 28 (28.28%) of the 99 divisions responding reported no collaborative activities with business and industry. In the earlier study, 22 school divisions of the 110 (20.00%) of the divisions responding reported no collaborative activity with business and industry.

Characteristics of the school divisions who did not report collaborative activity were analyzed in the past and the current study. Of the 28 school divisions who reported no collaborative activities, 25 (89.28%) were classified as rural in the current study. In the Phillips Study 20 (90.90%) were classified as rural. The remaining 3 (10.71%) divisions who did not participate in collaborative activities in the current study were classified as suburban. In the earlier study the remaining 2 (09.09%) divisions were classified as cities and towns.

In the current study 18 (64.28%) of the school divisions who reported no collaborative activities were classified as small divisions, 8 (28.57%) were classified as average size, and 2 (07.14%) were classified as large. In the Phillips study 15 (68.18%) of the 22 school divisions reporting no collaborative activities were classified as small and 7 (31.81%) were classified as average. The school divisions were also characterized by the division's composite index. In the current study 17 (60.71%) of the 28 divisions with no collaborative activities had a composite index between .2000-. 4000. Eight (28.57%) had a composite index between .4001-. 6000 and 3 (10.71%) had a composite index between .6001-.8000. In the Phillips study 8 (36.36%) of the 22 school divisions reporting no collaborative activity had a composite index between.2000-.4000 and 11 (50.00%) of the school divisions had a composite index between .4001-.6000, 2 (09.09%) had one between .6001-.8000, and 1 or (04.54%) had a composite index of .8001-1.000. These results can be found in Table 2.

Table 2

Characteristics of School Divisions That Did Not Participate in Collaborative Activity by Division Type, Size, and Composite Index

		<i>School Division Type</i>							
		Rural		City		Suburban			
1990-91	20	91%	2	9%	0	0%			
1998-99	25	89%	0	0%	3	11%			
Change	5	2%	2	9%	3	11%			
		School Division Size							
		Small		Average		Large		Very Large	
1990-91	15	68%	7	32%	0	0%	0	0%	
1998-99	18	64%	8	29%	2	7%	0	0%	
Change	3	4%	1	3%	2	7%	0	0%	
		School Division Composite Index							
		.2000- .4000		.4001- .6000		.6001- .8000		.8001- 1.000	
1990-91	8	36%	11	50%	2	9%	1	4%	
1998-99	17	60%	8	29%	3	11%	0	0%	
Change	9	24%	3	21%	1	2%	1	4%	

Phillips Research Question 3

What was the number and the percent of school divisions in Virginia that can be classified as small, average, large or very large, based on student enrollment K-12, with collaborative activities.

For the purpose of the two studies the following four school division size classifications were used:

Small school division - 0 to 2,500

Average-size division - 2,501 to 9,000

Large school division – 9,001 to 15,000

Very large division – above 15,000 students.

In the current study 13 (18.30%) of the 71 school divisions conducting collaborative activities were categorized as small. Thirty-four (47.88%) were classified as average size, 10 (14.08%) were large, and 14 (19.71%) were classified as very large school divisions. The Phillips study found 29 (32.95%) of the 88 school divisions conducting collaborative activities were classified as small size. Thirty-eight (43.18%) were average size, 12 (13.63%) were large divisions, and 9 (10.22%) were very large school divisions. Survey results are summarized in Table 3.

Table 3

**Number and Percent of School Divisions with Collaborative Activities,
Classified by Size**

<i>Division Size</i>	<i>Number</i>		<i>Percent</i>	
	1990-91	1998-99	1990-91	1998-99
Small School Divisions	29	13	32.95%	18.30%
Average Size	38	34	43.18 %	47.88%
Large School Divisions	12	10	13.63%	14.08%
Very Large Divisions	9	14	10.22 %	19.71%
Total	88	71	90.00%	100.0 0%

Phillips Research Question 4

What was the number and percent of school divisions in Virginia with collaborative activities that could be placed into each of four levels of school division wealth based on composite index ranking between .2000 and .4000, between .4001 and .6000, between .6001 and .8000, and between .8001 and 1.000?

Exploring the survey results in the current study show 49 (69.01%) of the 71 school divisions reporting collaborative activity with a composite index between .2000 and .4000. Sixteen (22.53%) had indexes between .4001 and .6000, 6 (08.45%) had indexes between .6001 and .8000. No divisions with an index between .8001 and 1.000 reported collaborative activity. In the Phillips study 43 (48.86%) of the 88 divisions reporting collaborative activities were classified between the .2000 and .4000 composite index. Twenty-seven (30.68%) were between .4001 and .6000, 12 (13.63%) were between .6001 and .8000, and 6 (06.81%) were between .8001 and 1.000. These survey results are summarized in Table 4.

Table 4

Number and Percent of School Divisions in Virginia with Collaborative Activities by Composite Index

<i>Composite Index Group</i>	<i>Number</i>		<i>Percent</i>	
	1990-91	1998-99	1990-91	1998-99
.2000 - .4000	43	49	48.86%	69.01%
.4001 - .6000	27	16	30.68%	22.53%
.6001 - .8000	12	6	13.63%	08.45%
.8001 - .1.000	6	0	06.81%	00.00%
Total	88	71	100.00%	100.00%

Phillips Research Question 5

In Virginia, what school/business collaborative activities were found in elementary schools, in middle/junior high schools and in high schools?

In the Phillips study collaborative activity in Virginia was categorized according to school division type, composite index groups, and school division size groups. The same data analysis was completed in the current study.

5.A. Collaborative Activity Reported by School Level

Five of the most common collaborative activities found in the elementary schools in the Phillips study included:

1. providing personnel to assist in career awareness activities, shadowing and mentoring;
2. the donation or loan of equipment or other materials;
3. giving special awards and recognition of pupils, teachers, or the school;
4. adopt-a-school programs; and
5. use of business facilities or equipment for programs.

Five of the most common collaborative activities found at the elementary level in the current study included:

1. donation or loan of equipment or other materials;
2. providing tutoring for pupils;
3. providing personnel to assist in career awareness, shadowing, and mentoring;
4. adopt-a-school programs; and

5. giving special awards and recognition of pupils, teachers and the school.

This data is illustrated in Table 5.

Table 5

Number and Percent of School Divisions Conducting Identified Collaborative Activities at the Elementary School Level

<i>Collaborative Program</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=70	Number	Percent N=65	
Adopt-A-School Program	33	47.14%	37	56.92%	09.78%
Collaborated on Curriculum Revision or Development	12	17.17%	21	32.30%	15.16%
Provided Special Curriculum Unit or Class	20	28.57%	26	40.00%	11.43%
Provided Tutoring for Pupils	35	50.00%	51	78.46%	28.46%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	37	52.85%	43	66.15%	13.30%
Provided Teachers	3	04.28%	7	10.76%	06.48%
Provided Assistance to Pupils with Special Needs	20	28.57%	24	36.92%	08.35%
Provided On-the-Job Training, Internships for Academic Students	1	01.42%	1	01.53%	00.11%
Donation or Loan of Equipment or Other Materials	37	52.85%	47	72.30%	19.45%
Use of Business Facilities or Equipment for Programs	25	35.71%	19	29.23%	-06.48%
Assisted with Teacher's Professional Development	18	25.71%	28	43.07%	17.36%
Gave Special Awards and Recognition of Pupils, Teachers or the School	34	48.57%	37	56.92%	08.35%
Participated in an Educational Foundation	9	12.85%	22	33.84%	20.99%

Five of the most common collaborative activities that were found in the Phillips study at the middle or junior high level included:

1. providing personnel to assist in career awareness, shadowing and mentoring;
2. the donation or loan of equipment or other materials;
3. giving special awards and recognition of pupils, teachers or the school;
4. adopt-a-school programs; and
5. providing tutoring for pupils.

In the current study the five most common collaborative activities at the middle or junior high level included:

1. providing personnel to assist in career awareness, shadowing, and mentoring;
2. the donation or loan of equipment or other materials;
3. providing tutoring for pupils;
4. giving special awards and recognition of pupils, teachers or the school;
and
5. providing special curriculum students or classes.

This data is illustrated in Table 6.

Table 6

Number and Percent of School Divisions Conducting Identified Collaborative Activities at the Middle/Junior High School Level

<i>Collaborative Program</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>Change</i>
	Number	Percent	Number	Percent	Percent
	Number	N=67	Number	N=64	
Adopt-A-School Program	29	43.28%	24	37.50%	-05.78%
Collaborated on Curriculum Revision or Development	14	20.89%	22	34.37%	13.48%
Provided Special Curriculum Unit or Class	22	32.83%	28	43.75%	10.92%
Provided Tutoring for Pupils	28	41.79%	40	62.50%	20.71%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	41	61.19%	51	79.68%	18.49%
Provided Teachers	3	04.47%	4	06.25%	01.78%
Provided Assistance to Pupils with Special Needs	19	28.35%	29	45.31%	16.96%
Provided On-the-Job Training, Internships for Academic Students	3	04.47%	9	14.06%	09.59%
Donation or Loan of Equipment or Other Materials	34	50.74%	42	65.62%	14.88%
Use of Business Facilities or Equipment for Programs	25	37.31%	19	29.68%	-07.63%
Assisted with Teacher's Professional Development	19	28.35%	26	40.62%	12.27%
Gave Special Awards and Recognition of Pupils, Teachers or the School	30	44.77%	34	53.12%	08.35%
Participated in an Educational Foundation	9	13.43%	22	34.37%	20.94%

Five of the most common collaborative activities found in the Phillips study at the high school level included:

1. providing personnel to assist in career awareness, shadowing, and mentoring;
2. the donation or loan of equipment or other materials;
3. giving special awards and recognition of pupils, teachers or the school;
4. the use of business facilities or equipment for programs; and
5. assisting with teachers professional development;

In the current study the five most common collaborative activities found at the high school level included;

1. providing personnel to assist in career awareness, shadowing and mentoring;
2. the donation or loan of equipment;
3. giving special awards and recognition of pupils, teachers or the school;
4. providing on the job training and internships for academic students;
and
5. assisting with teachers professional development.

Table 7 summarizes collaborative activity at the high school level.

Table 7**Percent of School Divisions Conducting Identified Collaborative Activities
at the High School Level**

<i>Collaborative Program</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=85	Number	Percent N=71	Change
Adopt-A-School Program	28	32.94%	24	33.80%	00.86%
Collaborated on Curriculum Revision or Development	22	25.88%	35	49.29%	23.41%
Provided Special Curriculum Unit or Class	25	28.41%	32	45.07%	16.66%
Provided Tutoring for Pupils	17	19.31%	31	43.66%	24.35%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	59	69.41%	61	85.91%	16.50%
Provided Teachers	4	04.54%	10	14.08%	09.54%
Provided Assistance to Pupils with Special Needs	21	24.70%	26	36.61%	11.91%
Provided On-the-Job Training, Internships for Academic Students	32	37.64%	43	60.56%	22.92%
Donation or Loan of Equipment or Other Materials	54	63.52%	53	74.64%	11.12%
Use of Business Facilities or Equipment for Programs	36	42.35%	35	49.29%	06.94%
Assisted with Teacher's Professional Development	36	42.35%	41	57.74%	15.39%
Gave Special Awards and Recognition of Pupils, Teachers or the School	47	55.29%	44	61.97%	06.68%
Participated in an Educational Foundation	26	30.58%	36	50.70%	20.12%

5.B. Collaborative Activity Reported by School Division Type

Th Phillips study cited the most popular collaborative activities at the elementary level by the three division types, they were: adopt a school programs, providing personnel to assist in career awareness, shadowing and mentoring, the donation or loan of equipment or other materials, and giving special awards and recognition of pupils, teachers, or the school. In the current study, the rural and city school divisions data mirrored the first study. However, at the suburban type two activities were more popular than in the other two types. The activities were providing assistance to pupils with special needs, and participating in educational foundations. Tables 8, 8A and 8B detail the data for elementary schools.

Table 8

Percent of School Divisions by Type Conducting Identified Collaborative Activities at the Elementary School Level

<i>Activity Rural</i>	1990-91	1990-91	1998-99	1998-99	%Change
	Number	Percent N=44	Number N=57	Percent	Change
Adopt-A-School Program	11	25.00%	14	24.56%	-00.44%
Collaborated on Curriculum Revision or Development	6	13.63%	7	12.28%	-01.35%
Provided Special Curriculum Unit or Class	6	13.63%	9	15.78%	02.15%
Provided Tutoring for Pupils	12	27.21%	21	36.84%	09.63%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	13	29.54%	21	36.84%	07.30%
Provided Teachers	2	04.54%	3	05.26%	00.72%
Provided Assistance to Pupils with Special Needs	5	11.36%	6	10.52%	-00.84%
Provided On-the-Job Training, Internships for Academic Students	1	02.27%	0	00.00%	-02.27%
Donation or Loan of Equipment or Other Materials	15	34.09%	21	36.84%	2.75%
Use of Business Facilities or Equipment for Programs	9	20.45%	8	14.03%	-06.42%
Assisted with Teacher's Professional Development	8	18.18%	12	21.05%	02.87%
Gave Special Awards and Recognition of Pupils, Teachers or the School	14	31.81%	14	24.56%	-07.25%
Participated in an Educational Foundation	4	09.09%	6	10.52%	01.43%

Table 8A**Percent of School Divisions by Type Conducting Identified Collaborative Activities at the Elementary School Level**

<i>Activity City</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=28	Number	Percent N=23	Change
Adopt-A-School Program	16	57.14%	12	52.17%	-04.97%
Collaborated on Curriculum Revision or Development	5	17.85%	9	39.13%	21.28%
Provided Special Curriculum Unit or Class	10	35.71%	11	47.82%	12.11%
Provided Tutoring for Pupils	15	53.57%	18	78.26%	24.69%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	15	53.57%	12	52.17%	-01.40%
Provided Teachers	1	03.57%	3	13.04%	09.47%
Provided Assistance to Pupils with Special Needs	9	32.14%	9	39.13%	06.99%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	1	04.34%	04.34%
Donation or Loan of Equipment or Other Materials	15	53.57%	15	65.21%	11.64%
Use of Business Facilities or Equipment for Programs	11	39.28%	6	26.08%	-13.20%
Assisted with Teacher's Professional Development	7	25.00%	9	39.13%	14.13%
Gave Special Awards and Recognition of Pupils, Teachers or the School	14	50.00%	18	78.26%	28.26%
Participated in an Educational Foundation	5	17.85%	7	30.43%	12.58%

Table 8B

Percent of School Divisions by Type Conducting Identified Collaborative Activities at the Elementary School Level

<i>Activity Suburban</i>	1990-91	1990-91	1998-99	1998-99	% Change
	Number	Percent N=15	Number	Percent N=19	Change
Adopt-A-School Program	6	40.00%	11	57.89%	17.79%
Collaborated on Curriculum Revision or Development	1	06.66%	5	26.31%	19.65%
Provided Special Curriculum Unit or Class	3	20.00%	6	31.57%	11.57%
Provided Tutoring for Pupils	8	53.33%	12	63.15%	09.82%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	8	53.33%	10	52.63%	-00.07%
Provided Teachers	0	00.00%	10	05.26%	05.26%
Provided Assistance to Pupils with Special Needs	5	33.33%	9	47.36%	14.03%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	1	05.26%	05.26%
Donation or Loan of Equipment or Other Materials	6	40.00%	11	57.89%	17.89%
Use of Business Facilities or Equipment for Programs	5	33.33%	5	26.31%	-07.02%
Assisted with Teacher's Professional Development	2	13.33%	7	36.84%	23.51%
Gave Special Awards and Recognition of Pupils, Teachers or the School	6	40.00%	5	26.31%	-13.69%
Participated in an Educational Foundation	0	00.00%	9	47.36%	47.36%

Both the Phillips study and the current study revealed the following activities were popular at all three division types at the middle/junior high level: providing personnel to assist in career awareness activities, the donation or loan of equipment/materials, and giving special awards and recognition of pupils. In the current study three other activities were popular at the city and suburban types. These activities were providing personnel to assist in career awareness, shadowing and mentoring, providing assistance with pupils with special needs, and participating in educational foundations. Tables 9, 9A, and 9B summarize this information.

Table 9

Percent of School Divisions by Type Conducting Identified Collaborative Activities at the Middle/Junior High School Level

<i>Activity Rural</i>	1990-91	1990-91	1998-99	1998-99	% Change
	Number	Percent N=44	Number	Percent N=57	Change
Adopt-A-School Program	5	11.36%	7	12.28%	00.92%
Collaborated on Curriculum Revision or Development	6	13.63%	7	12.28%	00.92%
Provided Special Curriculum Unit or Class	6	13.63%	13	22.80%	09.17%
Provided Tutoring for Pupils	8	18.18%	13	22.80%	04.62%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	17	38.63%	20	35.08%	-03.75%
Provided Teachers	2	04.54%	1	01.75%	-02.79%
Provided Assistance to Pupils with Special Needs	5	11.36%	10	17.54%	06.18%
Provided On-the-Job Training, Internships for Academic Students	1	02.27%	3	05.26%	02.99%
Donation or Loan of Equipment or Other Materials	14	31.81%	16	28.07%	-03.74%
Use of Business Facilities or Equipment for Programs	7	15.90%	6	10.52%	-05.38%
Assisted with Teacher's Professional Development	4	09.09%	10	17.54%	08.45%
Gave Special Awards and Recognition of Pupils, Teachers or the School	12	27.27%	12	21.05%	-06.22%
Participated in an Educational Foundation	3	06.81%	6	10.52%	03.71%

Table 9A**Percent of School Divisions by Type Conducting Identified Collaborative Activities at the Middle/Junior High School Level**

<i>Activity City</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=44	Number	Percent N=57	Change
Adopt-A-School Program	17	60.71%	10	43.47%	-17.24%
Collaborated on Curriculum Revision or Development	5	17.85%	8	34.78%	16.93%
Provided Special Curriculum Unit or Class	13	46.42%	9	39.13%	-07.29%
Provided Tutoring for Pupils	17	60.71%	15	65.21%	04.50%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring			17	73.91%	-44.93%
Provided Teachers	15	53.57%	2	08.69%	35.56%
Provided Assistance to Pupils with Special Needs	1	03.57%	9	39.13%	-18.32%
Provided On-the-Job Training, Internships for Academic Students	10	35.71%	4	17.39%	53.72%
Donation or Loan of Equipment or Other Materials	2	07.14%	14	60.86%	-19.57%
Use of Business Facilities or Equipment for Programs	14	50.00%	7	30.43%	-03.72%
Assisted with Teacher's Professional Development	12	42.85%	9	39.13%	33.85%
Gave Special Awards and Recognition of Pupils, Teachers or the School	10	35.71%	16	69.56%	-08.85%
Participated in an Educational Foundation	11	39.28%	7	30.43%	-08.85

Table 9B

**Percent of School Divisions by Type Conducting Identified Collaborative
Activities at the Middle/Junior High School Level**

<i>Activity Suburban</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=15	Number	Percent N=17	Change
Adopt-A-School Program	6	40.00%	7	41.17%	01.17%
Collaborated on Curriculum Revision or Development	3	20.00%	7	41.17%	21.17%
Provided Special Curriculum Unit or Class	3	20.00%	6	35.29%	15.29%
Provided Tutoring for Pupils	3	20.00%	12	70.58%	20.58%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	9	60.00	14	82.35%	22.35%
Provided Teachers	0	00.00%	1	05.88%	05.88%
Provided Assistance to Pupils with Special Needs	4	26.66%	10	58.82%	32.16%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	2	11.76%	11.76%
Donation or Loan of Equipment or Other Materials	6	40.00%	12	70.58%	30.58%
Use of Business Facilities or Equipment for Programs	6	40.00%	6	35.29%	-04.71%
Assisted with Teacher's Professional Development	5	33.33%	7	41.17%	07.84%
Gave Special Awards and Recognition of Pupils, Teachers or the School	7	46.66%	6	35.29%	-11.37%
Participated in an Educational Foundation	1	06.66%	9	52.94%	46.28%

At the high school level both studies revealed that providing personnel to assist in career awareness, shadowing and mentoring activities were popular. Also the donation or loan of equipment or materials, and giving special awards and recognition of pupils, teachers or the school were also popular. In the current study, three additional activities were popular at the suburban school divisions. Providing assistance to pupils with special needs, providing on-the-job-training and internships for academic students, and participating in educational foundations were all popular. Collaborative activity in high schools in each type school division is summarized in Tables 10, 10A and 10B.

Table 10**Percent of School Divisions by Type Conducting Identified Collaborative Activities at the High School Level**

<i>Activity Rural</i>	1990-91	1990-91	1998-99	1998-99	% Change
	Number	Percent N=44	Number	Percent N=57	Change
Adopt-A-School Program	8	18.18%	6	10.52%	-07.66%
Collaborated on Curriculum Revision or Development	9	20.45%	13	22.80%	02.35%
Provided Special Curriculum Unit or Class	9	20.45%	12	21.05%	00.60%
Provided Tutoring for Pupils	5	11.36%	12	21.05%	09.69%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	30	68.18%	27	47.36%	-20.82%
Provided Teachers	2	04.15%	3	05.45%	00.91%
Provided Assistance to Pupils with Special Needs	7	15.90%	8	14.03%	-01.87%
Provided On-the-Job Training, Internships for Academic Students	12	27.27%	18	31.57%	04.30%
Donation or Loan of Equipment or Other Materials	25	56.81%	23	40.35%	-16.46%
Use of Business Facilities or Equipment for Programs	16	36.36%	16	28.07%	-08.29%
Assisted with Teacher's Professional Development	12	27.27%	18	31.57%	04.30%
Gave Special Awards and Recognition of Pupils, Teachers or the School	24	54.54%	19	33.33%	-21.21%
Participated in an Educational Foundation	10	22.72%	13	22.80%	00.08%

Table 10A**Percent of School Divisions by Type Conducting Identified Collaborative Activities at the High School Level**

<i>Activity City</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=28	Number	Percent N=23	Change
Adopt-A-School Program	14	50.00%	11	47.82%	-02.18%
Collaborated on Curriculum Revision or Development	9	32.14%	11	47.82%	15.68%
Provided Special Curriculum Unit or Class	11	39.28%	12	52.17%	12.89%
Provided Tutoring for Pupils	11	39.28%	11	47.82%	08.54%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	21	75.00%	20	86.95%	11.95%
Provided Teachers	1	03.57%	4	17.39%	13.82%
Provided Assistance to Pupils with Special Needs	11	39.28%	8	34.78%	-04.50%
Provided On-the-Job Training, Internships for Academic Students	13	46.42%	14	60.86%	14.44%
Donation or Loan of Equipment or Other Materials	19	67.85%	17	73.91%	06.06%
Use of Business Facilities or Equipment for Programs	14	50.00%	11	47.82%	-02.18%
Assisted with Teacher's Professional Development	10	35.71%	15	65.21%	29.50%
Gave Special Awards and Recognition of Pupils, Teachers or the School	15	53.57%	17	73.91%	20.34%
Participated in an Educational Foundation	9	32.14%	13	56.52%	24.38%

Table 10B**Percent of School Divisions by Type Conducting Identified Collaborative Activities at the High School Level**

<i>Activity City</i>	1990-91	1990-91	1998-99	1998-99	% Change
	Number	Percent N=15	Number	Percent N=17	Change
Adopt-A-School Program	6	40.00%	7	41.17%	01.17%
Collaborated on Curriculum Revision or Development	4	26.66%	11	64.70%	38.04%
Provided Special Curriculum Unit or Class	4	26.66%	8	47.05%	20.39%
Provided Tutoring for Pupils	1	06.66%	8	47.05%	40.39%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	8	53.33%	14	82.35%	29.02%
Provided Teachers	0	00.00%	3	17.64%	17.64%
Provided Assistance to Pupils with Special Needs	1	06.66%	10	58.82%	52.16%
Provided On-the-Job Training, Internships for Academic Students	6	40.00%	11	64.70%	24.70%
Donation or Loan of Equipment or Other Materials	9	60.00%	13	76.47%	16.47%
Use of Business Facilities or Equipment for Programs	6	40.00%	8	47.08%	07.05%
Assisted with Teacher's Professional Development	5	33.33%	8	47.08%	13.75%
Gave Special Awards and Recognition of Pupils, Teachers or the School	8	53.33%	8	47.08%	-06.25%
Participated in an Educational Foundation	4	26.66%	10	58.82%	32.16%

5.C. Collaborative Activity Reported by School Division Composite Index Group.

The Phillips Study found that school divisions in the composite index between .2000 and .4000 most often reported the following types of activities at all levels: providing personnel to assist in career awareness activities, adopt a school programs, special awards for pupils, teachers, or the school, the donation or loan of equipment, and the use of business facilities.

In the current study, the most frequent collaborative activities were very similar to the Phillips study. The activities included: adopt-a-school programs, special awards for pupils, teachers, or the school, the donation or loan of equipment, and the use of business facilities. One notable activity that was very popular at the high school level was providing on-the-job training internships for academic students. In the Phillips study 37.20% of the reporting school divisions had this activity compared to 42.42% in the current study. The results for this category of responses are found in Tables 11, 11A and 11B.

Table 11

Number and Percent of School Divisions in Composite Index Group .2000-.4000 at the Elementary Level Conducting Specified Collaborative Activities during the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=43	Number	Percent N=66	Change
Adopt-A-School Program	15	34.88%	23	34.84%	00.04%
Collaborated on Curriculum Revision or Development	4	09.30%	13	19.69%	10.39%
Provided Special Curriculum Unit or Class	11	25.58%	16	24.24%	01.34%
Provided Tutoring for Pupils	18	41.86%	35	53.03%	11.17%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	22	51.16%	28	42.42%	-08.74%
Provided Teachers	0	00.00%	5	07.57%	07.57%
Provided Assistance to Pupils with Special Needs	10	23.85%	13	19.69%	-03.56%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	1	01.51%	01.51%
Donation or Loan of Equipment or Other Materials	12	27.90%	32	48.48%	20.58%
Use of Business Facilities or Equipment for Programs	12	27.90%	13	19.69%	-08.21%
Assisted with Teacher's Professional Development	10	23.25%	19	28.78%	05.53%
Gave Special Awards and Recognition of Pupils, Teachers or the School	14	32.55%	27	40.90%	08.35%
Participated in an Educational Foundation	6	13.95%	16	24.24%	10.29%

Table 11A

**Number and Percent of School Divisions in Composite Index Group .2000-.
4000 at the Middle/Junior High School Level Conducting Specified
Collaborative Activities during the 1990-91 and 1998-99 School Year.**

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=43	Number	Percent N=66	Change
Adopt-A-School Program	15	34.88%	16	24.24%	10.64%
Collaborated on Curriculum Revision or Development	4	09.30%	12	18.18%	08.88%
Provided Special Curriculum Unit or Class	11	25.58%	17	25.75%	00.17%
Provided Tutoring for Pupils	18	41.86%	26	39.39%	-02.47%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	22	51.16%	32	48.48%	-02.68%
Provided Teachers	0	00.00%	2	03.03%	03.03%
Provided Assistance to Pupils with Special Needs	10	23.25%	19	28.78%	05.53%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	5	07.55%	07.55%
Donation or Loan of Equipment or Other Materials	12	27.90%	26	39.39%	11.49%
Use of Business Facilities or Equipment for Programs	12	27.90%	13	19.69%	-08.21%
Assisted with Teacher's Professional Development	10	23.25%	16	24.24%	00.99%
Gave Special Awards and Recognition of Pupils, Teachers or the School	14	32.55%	24	36.36%	03.81%
Participated in an Educational Foundation	6	13.95%	16	24.24%	10.29%

Table 11B

**Number and Percent of School Divisions in Composite Index Group .2000-.
4000 at the High School Level Conducting Specified Collaborative
Activities during the 1990-91 and 1998-99 School Year.**

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=43	Number	Percent N=66	Change
Adopt-A-School Program	14	32.55%	16	24.24%	-08.31%
Collaborated on Curriculum Revision or Development	10	23.25%	22	33.33%	10.08%
Provided Special Curriculum Unit or Class	10	23.25%	19	28.78%	05.53%
Provided Tutoring for Pupils	6	13.95%	19	28.78%	14.83%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	29	67.44%	42	63.63%	-03.81%
Provided Teachers	1	02.32%	7	10.60%	08.28%
Provided Assistance to Pupils with Special Needs	10	23.25%	16	24.24%	00.99%
Provided On-the-Job Training, Internships for Academic Students	16	37.20%	28	42.42%	05.22%
Donation or Loan of Equipment or Other Materials	23	53.48%	36	54.54%	01.06%
Use of Business Facilities or Equipment for Programs	16	37.20%	24	36.36%	-00.84%
Assisted with Teacher's Professional Development	12	27.90%	27	40.90%	13.00%
Gave Special Awards and Recognition of Pupils, Teachers or the School	20	46.51%	32	48.48%	01.97%
Participated in an Educational Foundation	14	32.55%	26	39.39%	06.84%

School divisions with composite indexes between .4001-.6000 in the Phillips Study reported popular collaborative activities at all levels were:

1. providing special curriculum units or classes;
2. providing personnel to assist in career awareness, shadowing, and mentoring;
3. the donation or loan of equipment or materials;
4. the use of business facilities or equipment for programs;
5. the giving of special awards to pupils, teachers or the school.

In the current study the same activities were most often reported.

As in the .2000-.4000 group providing on the job training or internships for academic students was popular with 50.00% percent of the school divisions reporting this activity. Fifty percent of the school divisions at the high school level reported that businesses assisted with teacher's professional development. This was a 9% percent increase from the Phillips study. These results are summarized in Tables 12, 12A, and 12B.

Table 12

Number and Percent of School Divisions in Composite Index Group .4001-.6000 at the Elementary Level Conducting Specified Collaborative Activities during the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=27	Number	Percent N=24	Change
Adopt-A-School Program	10	37.03%	10	41.66%	04.63%
Collaborated on Curriculum Revision or Development	5	18.51%	7	29.16%	10.65%
Provided Special Curriculum Unit or Class	8	29.62%	8	33.33%	03.71%
Provided Tutoring for Pupils	12	44.44%	12	50.00%	05.56%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	10	37.03%	11	45.83%	08.80%
Provided Teachers	3	11.11%	1	04.16%	-06.95%
Provided Assistance to Pupils with Special Needs	8	29.62%	9	37.50%	-07.88%
Provided On-the-Job Training, Internships for Academic Students	1	03.70%	1	04.16%	00.46%
Donation or Loan of Equipment or Other Materials	15	55.55%	11	45.83%	-09.72%
Use of Business Facilities or Equipment for Programs	12	44.44%	4	16.66%	-27.78%
Assisted with Teacher's Professional Development	5	18.51%	7	29.16%	10.65%
Gave Special Awards and Recognition of Pupils, Teachers or the School	15	55.55%	10	41.66%	17.60%
Participated in an Educational Foundation	2	07.40%	6	25.00%	17.60%

Table 12A

Number and Percent of School Divisions in Composite Index Group .4001-.6000 at the Middle/Junior High School Level Conducting Specified Collaborative Activities during the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=27	Number	Percent N=24	Change
Adopt-A-School Program	7	25.92%	6	25.00%	-00.92%
Collaborated on Curriculum Revision or Development	7	25.92%	8	33.33%	07.41%
Provided Special Curriculum Unit or Class	10	37.03%	9	37.50%	00.47%
Provided Tutoring for Pupils	12	44.44%	11	43.83%	01.39%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	15	55.55%	14	58.33%	02.78%
Provided Teachers	3	11.11%	1	04.16%	-06.95%
Provided Assistance to Pupils with Special Needs	9	33.33%	7	29.16%	-04.17%
Provided On-the-Job Training, Internships for Academic Students	1	03.70%	4	16.66%	12.96%
Donation or Loan of Equipment or Other Materials	13	48.14%	12	50.00%	01.86%
Use of Business Facilities or Equipment for Programs	11	40.74%	3	12.50%	-28.24%
Assisted with Teacher's Professional Development	6	22.22%	9	37.50%	15.28%
Gave Special Awards and Recognition of Pupils, Teachers or the School	12	44.44%	10	41.66%	-02.78%
Participated in an Educational Foundation	3	11.11%	6	25.00%	13.89%

Table 12B

Number and Percent of School Divisions in Composite Index Group .4001-.6000 at the High School Level Conducting Specified Collaborative Activities during the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=27	Number	Percent N=24	Change
Adopt-A-School Program	8	29.62%	6	25.00%	-04.62%
Collaborated on Curriculum Revision or Development	10	37.03%	10	41.66%	-04.63%
Provided Special Curriculum Unit or Class	13	48.14%	12	50.00%	01.86%
Provided Tutoring for Pupils	6	22.22%	10	41.66%	19.44%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	22	81.48%	13	54.16%	-27.32%
Provided Teachers	3	11.11%	2	08.33%	-02.78%
Provided Assistance to Pupils with Special Needs	7	25.92%	8	33.33%	07.41%
Provided On-the-Job Training, Internships for Academic Students	12	44.44%	12	50.00%	05.56%
Donation or Loan of Equipment or Other Materials	21	77.77%	12	50.00%	-27.77%
Use of Business Facilities or Equipment for Programs	16	59.25%	8	33.33%	-25.92%
Assisted with Teacher's Professional Development	11	40.74%	12	50.00%	09.26%
Gave Special Awards and Recognition of Pupils, Teachers or the School	16	59.25%	12	50.00%	-09.25%
Participated in an Educational Foundation	7	25.92%	9	37.50%	11.58%

In school divisions with composite indexes between .6001-.8000 Phillips reported popular activities included the donation of equipment or materials, the use of business facilities or equipment, assisting with teachers professional development, and giving special awards and recognition to the school, teachers or students. In the current study those activities once again were popular. However, three other activities were also popular. Adopt-a-school programs were evident in 44.44% of the elementary schools. Providing assistance to students with special needs was popular at the middle/junior high schools with 33.33% reporting this activity. At the high school level 33.33% percent of the divisions reported on the job training or internships for academic students. These findings are illustrated in Tables 13, 13A, and 13B.

Table 13

Number and Percent of School Divisions in Composite Index Group .6001-.8000 at the Elementary Level Conducting Specified Collaborative Activities during the 1990-91 and 1998-99 School Year.

<i>Activity</i>	1990-91	1990-91	1998-99	1998-99	% Change
	Number	Percent N=12	Number	Percent N=9	Change
Adopt-A-School Program	3	25.00%	4	44.44%	19.44%
Collaborated on Curriculum Revision or Development	2	16.66%	1	11.11%	-05.55%
Provided Special Curriculum Unit or Class	1	08.33%	2	22.22%	13.89%
Provided Tutoring for Pupils	2	16.66%	4	44.44%	27.78%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	0	00.00%	4	44.44%	44.44%
Provided Teachers	0	00.00%	1	11.11%	11.11%
Provided Assistance to Pupils with Special Needs	0	00.00%	2	22.22%	22.22%
Provided On-the-Job Training, Internships for Academic Students	6	50.00%	0	00.00%	-50.00%
Donation or Loan of Equipment or Other Materials	3	25.00%	4	44.44%	19.44%
Use of Business Facilities or Equipment for Programs	3	25.00%	2	22.22%	-02.78%
Assisted with Teacher's Professional Development	3	25.00%	2	22.22%	-02.78%
Gave Special Awards and Recognition of Pupils, Teachers or the School	3	25.00%	0	00.00%	-25.00%
Participated in an Educational Foundation	0	00.00%	0	00.00%	00.00%

Table 13A

Number and Percent of School Divisions in Composite Index Group .6001-.8000 at the Middle/Junior High Level Conducting Specified Collaborative Activities during the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=12	Number	Percent N=9	Change
Adopt-A-School Program	4	33.33%	2	22.22%	-11.11%
Collaborated on Curriculum Revision or Development	1	08.22%	2	22.22%	-13.89%
Provided Special Curriculum Unit or Class	1	08.33%	2	22.22%	-13.89%
Provided Tutoring for Pupils	3	25.00%	3	33.33%	08.33%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	4	33.33%	5	55.55%	22.22%
Provided Teachers	0	00.00%	1	11.11%	11.11%
Provided Assistance to Pupils with Special Needs	0	00.00%	3	33.33%	33.33%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	0	00.00%	00.00%
Donation or Loan of Equipment or Other Materials	6	50.00%	4	44.44%	-05.56%
Use of Business Facilities or Equipment for Programs	4	33.33%	3	33.33%	00.00%
Assisted with Teacher's Professional Development	3	25.00%	2	22.22%	-02.78%
Gave Special Awards and Recognition of Pupils, Teachers or the School	3	25.00%	0	00.00%	-25.00%
Participated in an Educational Foundation	0	00.00%	0	00.00%	-00.00%

Table 13B

Number and Percent of School Divisions in Composite Index Group .6001-.8000 at the High School Level Conducting Specified Collaborative Activities during the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=12	Number	Percent N=9	Change
Adopt-A-School Program	1	08.33%	2	22.22%	13.89%
Collaborated on Curriculum Revision or Development	2	16.66%	3	33.33%	16.67%
Provided Special Curriculum Unit or Class	2	16.66%	2	22.22%	05.56%
Provided Tutoring for Pupils	2	16.66%	2	22.22%	05.56%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	3	25.00%	6	66.66%	41.66%
Provided Teachers	0	00.00%	1	11.11%	11.11%
Provided Assistance to Pupils with Special Needs	1	08.33%	2	22.22%	13.89%
Provided On-the-Job Training, Internships for Academic Students	2	16.66%	3	33.33%	16.67%
Donation or Loan of Equipment or Other Materials	7	58.33%	5	55.55%	-02.78%
Use of Business Facilities or Equipment for Programs	7	58.33%	3	33.33%	-25.00%
Assisted with Teacher's Professional Development	3	25.00%	2	22.22%	-02.78%
Gave Special Awards and Recognition of Pupils, Teachers or the School	4	33.33%	0	00.00%	-33.33%
Participated in an Educational Foundation	3	25.00%	1	11.11%	-13.89%

The Phillips study reported six school divisions responding with composite indexes between .8001-1.0. The most popular activities in this group were the donation or loan of equipment, use of business facilities/equipment, assisting with teacher's professional development and giving special awards to pupils, teachers or schools. Of the 99 school divisions responding to the current survey none were in this composite index group. These results are summarized in Tables 14, 14A, and 14B.

Table 14

Number and Percent of School Divisions in Composite Index Group .8001-1.000 at the Elementary Level Conducting Specified Collaborative Activities during the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=6	Number	Percent N=0	Change
Adopt-A-School Program	5	83.33%	0	00.00%	-83.33%
Collaborated on Curriculum Revision or Development	1	16.66%	0	00.00%	-16.66%
Provided Special Curriculum Unit or Class	0	00.00%	0	00.00%	-00.00%
Provided Tutoring for Pupils	3	50.00%	0	00.00%	-50.00%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	3	50.00%	0	00.00%	-50.00%
Provided Teachers	0	00.00%	0	00.00%	00.00%
Provided Assistance to Pupils with Special Needs	2	33.33%	0	00.00%	-33.33%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	0	00.00%	-00.00%
Donation or Loan of Equipment or Other Materials	4	66.66%	0	00.00%	-66.66%
Use of Business Facilities or Equipment for Programs	1	16.66%	0	00.00%	-16.66%
Assisted with Teacher's Professional Development	0	00.00%	0	00.00%	00.00%
Gave Special Awards and Recognition of Pupils, Teachers or the School	2	33.33%	0	00.00%	-33.33%
Participated in an Educational Foundation	1	16.66%	0	00.00%	-16.66%

Table 14A

Number and Percent of School Divisions in Composite Index Group .8001-1.000 at the Middle/Junior High Level Conducting Specified Collaborative Activities during the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=6	Number	Percent N=0	Change
Adopt-A-School Program	5	83.33%	0	00.00%	-83.33%
Collaborated on Curriculum Revision or Development	1	16.66%	0	00.00%	-16.66%
Provided Special Curriculum Unit or Class	0	00.00%	0	00.00%	00.00%
Provided Tutoring for Pupils	3	50.00%	0	00.00%	-50.00%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	3	50.00%	0	00.00%	-50.00%
Provided Teachers	0	00.00%	0	00.00%	00.00%
Provided Assistance to Pupils with Special Needs	2	33.33%	0	00.00%	-33.33%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	0	00.00%	00.00%
Donation or Loan of Equipment or Other Materials	4	66.66%	0	00.00%	-66.66%
Use of Business Facilities or Equipment for Programs	1	16.66%	0	00.00%	-16.66%
Assisted with Teacher's Professional Development	0	00.00%	0	00.00%	00.00%
Gave Special Awards and Recognition of Pupils, Teachers or the School	2	33.33%	0	00.00%	-33.33%
Participated in an Educational Foundation	1	16.66%	0	00.00%	-16.66%

Table 14B

Number and Percent of School Divisions in Composite Index Group .8001-1.000 at the High School Level Conducting Specified Collaborative Activities during the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=6	Number	Percent N=0	Change
Adopt-A-School Program	5	83.33	0	00.00%	-83.33%
Collaborated on Curriculum Revision or Development	0	00.00	0	00.00%	00.00%
Provided Special Curriculum Unit or Class	0	00.00	0	00.00%	00.00%
Provided Tutoring for Pupils	3	50.00	0	00.00%	-50.00%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	5	83.33	0	00.00%	-83.33%
Provided Teachers	0	00.00	0	00.00%	00.00%
Provided Assistance to Pupils with Special Needs	3	50.00	0	00.00%	-50.00%
Provided On-the-Job Training, Internships for Academic Students	2	33.33	0	00.00%	-33.33%
Donation or Loan of Equipment or Other Materials	3	50.00	0	00.00%	-50.00%
Use of Business Facilities or Equipment for Programs	1	83.33	0	00.00%	-83.33%
Assisted with Teacher's Professional Development	1	83.33	0	00.00%	-83.33%
Gave Special Awards and Recognition of Pupils, Teachers or the School	4	66.66	0	00.00%	-66.66%
Participated in an Educational Foundation	2	33.33	0	00.00%	-33.33%

5.D. Collaborative Activity Reported by School Division Size Groups

Collaborative activity in schools was evaluated according to the size of the school division. Small divisions were classified as having 2500 or less students. In the first study 29 (33.33%) school divisions with collaborative activities were in this category. In the current study 13 divisions were classified as small. The activities most prevalent in the Phillips study were, providing personnel to assist in career awareness activities, the donation or loan of equipment, use of business facilities/equipment, and giving special awards and recognition.

In the current study, providing tutoring for pupils, providing personnel to assist in career awareness, shadowing, and mentoring, assisting with teacher's professional development, giving special awards and recognition of pupils, teachers and schools were popular at all three types of schools. At the middle school and high school levels participating in education foundations was popular. And at the middle school level, providing special curriculum units or classes were popular. These results are summarized in Tables 15, 15A and 15B.

Table 15

**Number and Percent of Small School Divisions at the Elementary Level
Conducting Specified Collaborative Activities During the 1990-91 and 1998-
99 School Year.**

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=29	Number	Percent N=13	Change
Adopt-A-School Program	9	31.03%	2	15.38%	-15.69%
Collaborated on Curriculum Revision or Development	4	13.79%	2	15.38%	01.59%
Provided Special Curriculum Unit or Class	3	10.34%	3	23.07%	12.73%
Provided Tutoring for Pupils	4	13.79%	5	38.46%	24.67%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	9	31.03%	6	46.15%	15.12%
Provided Teachers	0	00.00%	2	15.38%	15.38%
Provided Assistance to Pupils with Special Needs	2	06.89%	3	23.07%	16.18%
Provided On-the-Job Training, Internships for Academic Students	1	03.44%	0	00.00%	-03.44%
Donation or Loan of Equipment or Other Materials	13	44.82%	6	46.15%	01.33%
Use of Business Facilities or Equipment for Programs	6	20.68%	3	23.07%	02.39%
Assisted with Teacher's Professional Development	4	13.79%	5	38.46%	24.67%
Gave Special Awards and Recognition of Pupils, Teachers or the School	7	24.13%	5	38.46%	14.33%
Participated in an Educational Foundation	4	13.79%	3	23.07%	09.28%

Table 15A

Number and Percent of Small School Divisions at the Middle/Junior High Level Conducting Specified Collaborative Activities During the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=29	Number	Percent N=13	Change
Adopt-A-School Program	6	20.68%	3	23.07%	02.39%
Collaborated on Curriculum Revision or Development	3	10.34%	2	15.38%	05.04%
Provided Special Curriculum Unit or Class	4	13.79%	5	38.46%	24.67%
Provided Tutoring for Pupils	5	17.24%	5	38.46%	21.22%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	10	34.48%	8	61.53%	27.05%
Provided Teachers	0	00.00%	2	15.38%	15.38%
Provided Assistance to Pupils with Special Needs	3	10.34%	4	30.76%	20.42%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	1	07.69%	07.69%
Donation or Loan of Equipment or Other Materials	11	37.93%	5	38.46%	00.53%
Use of Business Facilities or Equipment for Programs	6	20.68%	3	23.07%	02.39%
Assisted with Teacher's Professional Development	2	06.89%	4	30.76%	23.87%
Gave Special Awards and Recognition of Pupils, Teachers or the School	6	20.68%	5	38.46%	17.78%
Participated in an Educational Foundation	3	10.34%	4	30.76%	20.42%

Table 15B

**Number and Percent of Small School Divisions at the High School Level
Conducting Specified Collaborative Activities During the 1990-91 and
1998-99 School Year.**

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=29	Number	Percent N=13	Change
Adopt-A-School Program	6	20.68%	4	30.76%	10.08%
Collaborated on Curriculum Revision or Development	6	20.68%	6	46.15%	25.47%
Provided Special Curriculum Unit or Class	4	13.79%	5	38.46%	24.67%
Provided Tutoring for Pupils	3	10.34%	3	23.07%	12.73%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	18	62.06%	12	92.30%	30.24%
Provided Teachers	1	03.44%	3	23.07%	19.63%
Provided Assistance to Pupils with Special Needs	4	13.79%	4	30.76%	16.97%
Provided On-the-Job Training, Internships for Academic Students	6	20.68%	6	46.15%	25.47%
Donation or Loan of Equipment or Other Materials	17	58.62%	9	69.23%	10.61%
Use of Business Facilities or Equipment for Programs	10	34.48%	7	53.84%	19.36%
Assisted with Teacher's Professional Development	7	24.13%	8	61.53%	37.40%
Gave Special Awards and Recognition of Pupils, Teachers or the School	10	34.48%	6	46.15%	11.67%
Participated in an Educational Foundation	8	27.58%	8	61.53%	33.95%

Average size school divisions were defined as school divisions with between 2,501 and 9,000 students. There were 38 (43.18%) of the 88 responding school divisions in the Phillips study that fell into this category. In the current study, there were 34 (48%) of the 71 responding school divisions with collaborative activities who were in this category.

The most often activities reported in this category in the Phillips study included: giving special awards for pupils, teachers or the school, providing personnel to assist with career awareness activities, and the donation of equipment. Providing tutoring for pupils, providing personnel to assist in career awareness, shadowing, mentoring activities, the donation or loan of equipment/materials, the giving of special awards or recognition of students, teachers or schools were reported most often in the current study. At the middle school and high school levels two additional activities were popular, assisting with teacher's professional development, and the donation or loan of equipment/materials. The data for this category is summarized in Table 16, Table 16A and Table 16B.

Table 16

Number and Percent of Average-Size School Divisions at the Elementary Level Conducting Specified Collaborative Activities During the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=38	Number	Percent N=42	Change
Adopt-A-School Program	13	34.21%	17	40.47%	06.26%
Collaborated on Curriculum Revision or Development	5	13.15%	9	21.42%	08.27%
Provided Special Curriculum Unit or Class	9	23.68%	12	28.57%	04.89%
Provided Tutoring for Pupils	20	52.63%	27	64.28%	11.65%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	16	42.10%	21	50.00%	07.90%
Provided Teachers	2	05.26%	3	07.14%	01.88%
Provided Assistance to Pupils with Special Needs	9	23.68%	10	23.80%	00.12%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	1	02.38%	02.38%
Donation or Loan of Equipment or Other Materials	15	39.47%	27	64.28%	24.81%
Use of Business Facilities or Equipment for Programs	10	26.31%	9	21.42%	-04.89%
Assisted with Teacher's Professional Development	10	26.31%	15	35.71%	09.40%
Gave Special Awards and Recognition of Pupils, Teachers or the School	18	47.36%	21	50.00%	02.64%
Participated in an Educational Foundation	3	07.89%	9	21.42%	13.53%

Table 16A

Number and Percent of Average Size School Divisions at the Middle/Junior High Level Conducting Specified Collaborative Activities During the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=38	Number	Percent N=42	Change
Adopt-A-School Program	13	34.21%	6	14.28%	19.93%
Collaborated on Curriculum Revision or Development	9	23.68%	9	21.42%	-02.26%
Provided Special Curriculum Unit or Class	8	21.05%	15	35.71%	14.66%
Provided Tutoring for Pupils	14	36.84%	18	42.85%	6.01%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	19	50.00%	25	59.52%	09.52%
Provided Teachers	3	07.89%	1	02.38%	-05.51%
Provided Assistance to Pupils with Special Needs	8	21.05%	13	30.95%	09.90%
Provided On-the-Job Training, Internships for Academic Students	1	02.63%	5	11.90%	09.27%
Donation or Loan of Equipment or Other Materials	17	44.73%	22	52.38%	07.65%
Use of Business Facilities or Equipment for Programs	8	21.05%	7	16.66%	-04.39%
Assisted with Teacher's Professional Development	8	21.05%	13	30.95%	09.90%
Gave Special Awards and Recognition of Pupils, Teachers or the School	15	39.47%	17	40.47%	01.00%
Participated in an Educational Foundation	3	07.89%	8	19.04%	11.15%

Table 16B

Number and Percent of Average-Size School Divisions at the High School Level Conducting Specified Collaborative Activities During the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=38	Number	Percent N=42	Change
Adopt-A-School Program	12	31.57%	5	11.90%	-19.67%
Collaborated on Curriculum Revision or Development	10	26.31%	15	35.71%	09.40%
Provided Special Curriculum Unit or Class	10	26.31%	16	38.09%	11.78%
Provided Tutoring for Pupils	8	21.05%	17	40.47%	19.42%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	27	71.05%	30	71.42%	00.37%
Provided Teachers	3	7.89%	2	04.76%	-03.13%
Provided Assistance to Pupils with Special Needs	11	28.94%	11	26.19%	-02.75%
Provided On-the-Job Training, Internships for Academic Students	19	50.00%	22	52.38%	02.38%
Donation or Loan of Equipment or Other Materials	26	68.42%	26	61.90%	-06.52%
Use of Business Facilities or Equipment for Programs	16	42.10%	17	40.47%	-01.63%
Assisted with Teacher's Professional Development	13	34.21%	21	50.00%	15.79%
Gave Special Awards and Recognition of Pupils, Teachers or the School	27	71.05%	25	59.52%	-11.53%
Participated in an Educational Foundation	8	21.05%	16	38.09%	17.04%

Large school divisions were defined as those with between 9,001 and 15,000 students. In the Phillips study, there were 12 (13.63%) divisions of the 88 school divisions reporting in this category. In the current study, there were 10 (14.08%) divisions of the 71 divisions who reported collaborative activities.

Career awareness activities, giving special awards and recognition, providing a special curriculum unit or class, and teacher development activities were reported by Phillips as the most often utilized collaborative activities in large school divisions. In the 1998-99 study, the most often reported activities at all schools included: collaboration on curriculum revision or development, providing tutoring for pupils, providing personnel to assist in career awareness, shadowing, mentoring, providing assistance to pupils with special needs, the donation of equipment and giving special awards or recognition to students, teachers and schools. This information can be found in Tables 17, 17A, and 17B.

Table 17

Number and Percent of Large-Size School Divisions at the Elementary Level Conducting Specified Collaborative Activities During the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=12	Number	Percent N=12	Change
Adopt-A-School Program	5	41.66%	6	50.00%	08.34%
Collaborated on Curriculum Revision or Development	2	16.66%	7	58.33%	41.67%
Provided Special Curriculum Unit or Class	4	33.33%	6	50.00%	16.67%
Provided Tutoring for Pupils	6	50.00%	8	66.66%	16.66%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	8	66.66%	7	58.33%	08.33%
Provided Teachers	1	08.33%	0	00.00%	08.33%
Provided Assistance to Pupils with Special Needs	4	33.33%	7	58.33%	-25.00%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	0	00.00%	00.00%
Donation or Loan of Equipment or Other Materials	6	50.00%	6	50.00%	00.00%
Use of Business Facilities or Equipment for Programs	5	41.66%	4	33.33%	-08.33%
Assisted with Teacher's Professional Development	1	08.33%	5	41.66%	33.33%
Gave Special Awards and Recognition of Pupils, Teachers or the School	6	50.00%	6	50.00%	00.00%
Participated in an Educational Foundation	2	16.66%	5	41.66%	25.00%

Table 17A

Number and Percent of Large-Size School Divisions at the Middle/Junior High School Level Conducting Specified Collaborative Activities During the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=12	Number	Percent N=12	Change
Adopt-A-School Program	4	33.33%	6	50.00%	16.67%
Collaborated on Curriculum Revision or Development	2	16.66%	6	50.00%	33.34%
Provided Special Curriculum Unit or Class	6	50.00%	4	33.33%	-16.67%
Provided Tutoring for Pupils	5	41.66%	8	66.66%	25.00%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	8	66.66%	8	66.66%	00.00%
Provided Teachers	0	00.00%	0	00.00%	00.00%
Provided Assistance to Pupils with Special Needs	4	33.33%	7	58.33%	25.00%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	1	08.33%	08.33%
Donation or Loan of Equipment or Other Materials	4	33.33%	6	50.00%	16.67%
Use of Business Facilities or Equipment for Programs	5	41.66%	4	33.33%	-08.33%
Assisted with Teacher's Professional Development	5	41.66%	5	41.66%	00.00%
Gave Special Awards and Recognition of Pupils, Teachers or the School	6	50.00%	6	50.00%	00.00%
Participated in an Educational Foundation	2	16.66%	5	41.66%	25.00%

Table 17B

Number and Percent of Large-Size School Divisions at the High School Level Conducting Specified Collaborative Activities During the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=12	Number	Percent N=12	Change
Adopt-A-School Program	4	33.33%	6	50.00%	16.67%
Collaborated on Curriculum Revision or Development	4	33.33%	7	58.33%	25.00%
Provided Special Curriculum Unit or Class	6	50.00%	5	41.66%	08.34%
Provided Tutoring for Pupils	4	33.33%	5	41.66%	08.33%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	10	83.33%	9	75.00%	-08.33%
Provided Teachers	0	00.00%	1	08.33%	08.33%
Provided Assistance to Pupils with Special Needs	3	25.00%	6	50.00%	25.00%
Provided On-the-Job Training, Internships for Academic Students	3	25.00%	7	58.33%	33.33%
Donation or Loan of Equipment or Other Materials	7	58.33%	9	75.00%	16.67%
Use of Business Facilities or Equipment for Programs	5	41.66%	5	41.66%	00.00%
Assisted with Teacher's Professional Development	6	50.00%	6	50.00%	00.00%
Gave Special Awards and Recognition of Pupils, Teachers or the School	7	58.33%	7	58.33%	00.00%
Participated in an Educational Foundation	7	58.33%	7	58.33%	00.00%

Very large school divisions were classified as divisions with more than 15,000 students. In the first study, there were 9 (10.22%) of the respondents who had collaborative activities that were classified as very large school divisions. In the current study, there were 14 (19.71%) of the school divisions in this category. Three of the most often reported collaborative activities at all three school levels were: providing a special curriculum unit or class, providing personnel to assist in career awareness activities, and the use of business facilities/equipment. In the current study three of the most popular at all levels included: adopt-a-school programs, providing tutoring for pupils, and providing personnel to assist in career awareness, shadowing and mentoring. At the high school level providing on the job training and internships for academic students and the donation of equipment were also popular. Tables 18, 18A and 18B summarize these results.

Table 18**Number and Percent of Very-Large-Size School Divisions at the Elementary Level Conducting Specified Collaborative Activities During the 1990-91 and 1998-99 School Year.**

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=9	Number	Percent N=14	Change
Adopt-A-School Program	6	66.66%	12	85.71%	19.05%
Collaborated on Curriculum Revision or Development	1	11.11%	3	21.42%	10.31%
Provided Special Curriculum Unit or Class	4	44.44%	5	35.71%	-08.73%
Provided Tutoring for Pupils	5	55.55%	11	78.57%	23.02%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	4	44.44%	9	64.28%	19.84%
Provided Teachers	0	00.00%	2	14.28%	14.28%
Provided Assistance to Pupils with Special Needs	5	55.55%	4	28.57%	-26.98%
Provided On-the-Job Training, Internships for Academic Students	0	00.00%	1	07.14%	07.14%
Donation or Loan of Equipment or Other Materials	3	33.33%	8	57.14%	23.81%
Use of Business Facilities or Equipment for Programs	4	44.44%	3	21.42%	-23.02%
Assisted with Teacher's Professional Development	3	33.33%	3	21.42%	-11.92%
Gave Special Awards and Recognition of Pupils, Teachers or the School	3	33.33%	5	35.71%	02.38%
Participated in an Educational Foundation	0	00.00%	5	35.71%	35.71%

Table 18A

**Number and Percent of Very-Large-Size School Divisions at the
Middle/Junior High School Level Conducting Specified Collaborative
Activities During the 1990-91 and 1998-99 School Year.**

<i>Activity</i>	1990-91	1990-91	1998-99	1998-99	% Change
	Number	Percent N=9	Number	Percent N=14	Change
Adopt-A-School Program	7	77.77%	9	64.28%	-13.49%
Collaborated on Curriculum Revision or Development	0	00.00%	5	35.71%	35.71%
Provided Special Curriculum Unit or Class	4	44.44%	4	28.57%	-15.87%
Provided Tutoring for Pupils	4	44.44%	9	64.28%	19.84%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	4	44.44%	10	71.42%	26.98%
Provided Teachers	0	00.00%	1	07.14%	07.14%
Provided Assistance to Pupils with Special Needs	4	44.44%	5	35.71%	-08.73%
Provided On-the-Job Training, Internships for Academic Students	2	22.22%	2	14.28%	-07.94%
Donation or Loan of Equipment or Other Materials	2	22.22%	9	64.28%	42.06%
Use of Business Facilities or Equipment for Programs	6	66.66%	5	35.71%	-30.95%
Assisted with Teacher's Professional Development	3	33.33%	4	28.57%	-04.76%
Gave Special Awards and Recognition of Pupils, Teachers or the School	3	33.33%	6	42.85%	09.52%
Participated in an Educational Foundation	1	11.11%	5	35.71%	24.60%

Table 18B

Number and Percent of Very-Large-Size School Divisions at the High School Level Conducting Specified Collaborative Activities During the 1990-91 and 1998-99 School Year.

<i>Activity</i>	<i>1990-91</i>	<i>1990-91</i>	<i>1998-99</i>	<i>1998-99</i>	<i>% Change</i>
	Number	Percent N=9	Number	Percent N=14	Change
Adopt-A-School Program	6	66.66%	9	64.28%	-02.38%
Collaborated on Curriculum Revision or Development	2	22.22%	7	50.00%	27.80%
Provided Special Curriculum Unit or Class	4	44.44%	6	42.85%	-01.59%
Provided Tutoring for Pupils	2	22.22%	6	42.85%	20.63%
Provided Personnel to Assist in Career Awareness, Shadowing, Mentoring	4	44.44%	10	71.42%	26.98%
Provided Teachers	0	00.00%	4	28.57%	28.57%
Provided Assistance to Pupils with Special Needs	3	33.33%	5	35.71%	-02.38%
Provided On-the-Job Training, Internships for Academic Students	4	44.44%	8	57.14%	12.70%
Donation or Loan of Equipment or Other Materials	4	44.44%	9	64.28%	-19.84%
Use of Business Facilities or Equipment for Programs	5	55.55%	6	42.85%	-12.70%
Assisted with Teacher's Professional Development	3	33.33%	6	42.85%	09.52%
Gave Special Awards and Recognition of Pupils, Teachers or the School	3	33.33%	6	42.85%	09.52%
Participated in an Educational Foundation	3	33.33%	5	35.71%	02.38%

Phillips Research Question 6

In Virginia, what percent of the elementary schools, middle/junior high schools, and high schools conducted school/business collaborative activities during the 1990-1991?

Respondents to the survey instrument were asked to indicate the total number of schools represented in their division at the elementary, middle/junior high schools, and high schools. In addition, the respondents were asked to identify the number of schools at each level that participated in collaborative activities with business. The Phillips study indicated there were 868 elementary schools in the respondent's school divisions, of that number 614 or (70.73%) participated in collaborative activities. This compares to 713 (90.13%) of the 791 elementary schools reported in the current study.

In the latter study, there were 225 middle/junior high schools represented in the returned surveys, of which 179 (79.55%) participated in collaborative activities. The current survey respondents indicated a total of 187 (90.77%) of the 206 middle/junior high schools that participated in collaborative activities. At the high school level there were 211 schools represented in the Phillips study, of that number 195 (92.41%) of the high schools participated in collaborative activities. The current study had 187 high schools represented 181 (96.79%) of the high schools who conducted collaborative activities with business and industry.

As compared to the Phillips study there was an increase in the percentage of schools at all three levels participating in collaborative activities. The increase

was 19 percent at the elementary level, 10 percent at the middle/junior high level and 5 percent at the high school level. This data is summarized in Table 19.

Table 19

Number and Percent of Schools Participating in Collaborative Activities by Level

<i>School level</i>	<i>Total Number of Schools</i>	<i>Number with Collaborative Activities</i>	<i>%</i>	<i>Total Number of Schools</i>	<i>Number with Collaborative Activities</i>	<i>%</i>	<i>% Change</i>
	1990-91			1998-99			
Elementary	868	614	71	791	713	90%	19%
Middle/Junior	225	179	80	206	187	90%	10%
High School	211	195	92	187	181	97%	5%

Phillips Research Question 7

How did school administrators in Virginia rate the school division's total collaborative program based on five identified standards?

Respondents in both studies were asked to evaluate their school division's collaborative activities based on five identified standards outlined in the Phillips study. The standards were:

1. meets the goals that have been established for the program;
2. has improved the business/community understanding of schools and school problems;
3. focuses on identified critical educational needs of student;
4. it is important to the teachers in the school or school system;
5. has been favorably received by the business community.

The school division's collaborative program was rated against the five statements using the following scale:

1. strong feature of our program(s)
2. satisfactory feature of our program(s)
3. possible program weakness
4. do not know/not important to us.

In the Phillips study 74 school divisions responded, to the evaluating collaborative activities questions, and 71 responded in the current survey. In the Phillips study 21 (28.37%) of the respondents reported that their collaborative activities were meeting the goals that had been established for the program(s), 37 (50.00%) responded that it was a satisfactory feature of their program(s). In

the current study, 21 (29.57%), virtually the same as in the Phillips study, answered that their collaborative activities were meeting the goals that had been established for the program(s). Thirty-eight (53.52%) responded that this was a satisfactory feature of their program. This was a 3% change from the Phillips study. In the Phillips study 12 or (16.21%) reported that this was a possible weakness of their program(s), 9 (12.67%) responded the same way in the current study. Both studies had 4 or 5% of the respondents reporting that they did not know or it was not important to their programs.

Respondents were asked to rate their collaborative activities on whether the activities had improved the business/community understanding of schools and school problems. In both studies 32 respondents reported that this was a strong feature of their programs. Thirty respondents (40.54%) in the Phillips study and 29 (40.84%) in the current study reported that this was a satisfactory feature of our program(s). Both studies respondent's reported that 6 or approximately 8% felt that this was a possible program weakness. In the Phillips study 5 (06.75%) and 5 (07.04 %) in the current study reported that they did not know or that this was not important to their program(s).

The next rating that was analyzed was whether the collaborative activities focused on identified critical educational needs of students. Twenty-two (29.72%) of the respondents in the Phillips study, and 30 (42.25%) in the current study, reported that this was a strong feature of their program. Thirty-three (44.59%) in the earlier study, and 37 (52.11%) in the current study, reported this was a satisfactory feature of our program(s). Thirteen (17.56%) responded that

this was a possible program weakness in the Phillips study. This is compared to 3 (04.22%) of the respondents in the current study. Six (08.10%) percent in the Phillips study and 2 (02.81%) in the current study reported that they did not know or it was not important.

Both survey instruments asked respondents to rate the business collaborative program on its importance to teachers in the school or in the school system. Nineteen (25.67%) in the Phillips study and 18 (25.35%) in the current study reported that this was a strong feature of their program(s). Thirty- five (47.29) in the latter study and 36 (50.70%) in the current study reported this was a satisfactory feature of their program(s). Fifteen (20.27%) in the Phillips study and 11 (15.49%) in the current study reported this was a possible program weakness. Five (06.75%) in the Phillips study and 6 (08.45) percent in the current study responded that they did not know or it was not important to them.

The final response on this section asked respondents to rate if the program(s) had been favorably received and supported by the business community. In the Phillips study, 39 (52.70%) responded that this was a strong feature of our program. In the current study there were 28 (39.43%), a 13.27% decrease, responding the same way. In the Phillips study 25 (33.78%) responded that this was a satisfactory feature of their programs, 29 (40.84%) responded the same way in the current program. Four (05.40%) respondents in the Phillips study, and 8 (11.26%) in the current study, said this was a possible program weakness. Both studies had six of the respondents reporting that they did not know or that it was not important to them.

These results are summarized in Table 20.

Table 20

Percent of Respondents Assigning Each of Four Ratings of Collaborative Program on Each of Five Evaluation Criteria

<i>Evaluation Criteria</i>	<i>Rating*</i>								
	1		2		3		4		
	#	%	#	%	#	%	#	%	
Meets the goals that have been established for the program(s) 1990-991	21	29%	37	50%	1	16%	4	5%	
1998-99	21	29%	38	53%	2	9	13%	4	5%
Percentage change		0%	1	3%	3	3%	0	0%	
Has improved the Business/community Understanding of schools and school problems 1990-91	32	43%	30	41%	6	8%	5	7%	
1998-99	32	44%	29	40%	6	8%	5	7%	
Percentage Change	0	1%	1	1%	0	0%	0	0%	
Focuses on identified critical educational needs of students 1990-91	22	30%	33	45%	1	18%	6	8%	
1998-99	30	42%	37	51%	3	4%	2	3%	
Percentage change	8	12%	4	6%	1	14%	4	5%	
					0				
It is important to teachers in the school or in the school system 1990-91	19	26%	35	47%	1	20%	5	7%	
1998-99	18	26%	36	47%	5	1	15%	6	8%
Percentage Change	1	0%	-1	42%	1	4	5%	-1	-1%
Has been favorably received and supported by the business community 1990-91	39	53%	25	34%	4	5%	6	8%	
1998-99	28	39%	29	40%	8	11%	6	8%	
Percent change	-11	-14%	4	6%	4	6%	0	0%	

*Rating:

- (1) strong feature of our program
- (2) satisfactory feature of our program(s)
- (3) possible program weakness
- (4) do not know/not important to us

Phillips Research Question 8

What are the number and the percent of school divisions in Virginia that have established business/community educational foundations?

Twenty-six (29.54%) of the school divisions who reported collaborative programs with business and industry reported having educational foundations in the Phillips study. Thirty-seven (52.11%) of the school divisions with collaborative activities in the current study had established educational foundations. This is a 22.57 percent increase from the Phillips study.

Phillips Research Question 9

What were the primary functions of business/community educational foundations in Virginia?

The survey identified four purposes of educational foundations and asked respondents to indicate the purpose(s) of their established foundations. In the Phillips study, 18 (69.23%) of the 26 divisions with educational foundations responded that foundations work to enrich both vocational and academic programs. Eight (30.76%) responded that the foundation manages funds/materials for the building trades home building project. Five (19.23%) reported the foundation manages or funds other special vocational education projects and four (16.66%) reported that they manage or fund non-vocational activities.

In the current study, 24 (68.86%) of the 37 respondents reported that the foundation works to enrich both vocational and academic programs. This is a 03.37 percent decrease from the earlier study. Three (08.10%) report that the

foundation manages funds/materials for a building trades home building project.

This is a 22.66% decrease from the previous study. Three (08.10%) reported that the foundation manages or funds other special vocational education projects.

This is an 11.13% decrease from the previous study. And 6 (16.21%) reported that the foundation manages or funds non-vocational activities, a 00.45% percent decrease from the earlier study. These findings are summarized in Table 21.

Table 21**Number and Percent of School Divisions Reporting Each of Four Purposes of Educational Foundations**

<i>Foundation Purpose</i>	<i>Number</i>	<i>Percent</i>
Works to Enrich Both Vocational and Academic Programs		
1990-91 N=26	18	69.23%
1998-99 N=37	24	65.86%
Change	6	-03.37%
Manages Funds/Materials for the Building Trades Home Building Project		
1990-91 N=26	8	30.76%
1998-99 N=37	3	08.10%
Change	5	-22.66%
Manages or Funds Other Special Vocational Education Projects		
1990-91 N=26	5	19.23%
1998-99 N=37	3	08.10%
Change	2	-11.13%
Manages or Funds Non-Vocational Activities		
1990-91 N=26	4	16.66%
1998-99 N=27	6	16.21%
Change	2	-00.45%

Note: Percents sum to more than 100 because of multiple responses

Phillips Research Question 10

What were the number and percent of school divisions in Virginia that used one of the following four management techniques to develop and coordinate school/business collaborative activities?

Respondents to both survey instruments were asked to choose from four possible choices to describe management types used by school divisions to manage collaborative activities. The choices were:

- (A) one person assumed responsibility for all collaborative activities in the division;
- (B) individual schools assumed total responsibility for activities within the school;
- (C) individual schools managed collaborative activities with assistance from a division coordinator/supervisor;
- (D) collaborative activity was managed by the business community.

In the Phillips study 22 (25.88%) of the respondents reported that one person in the school system assumed responsibility for all collaborative activities. This compares to 28 (39.43%) responding the same way in the current study, this is 13.55% increase in this category. Individual schools assumed total responsibility for activities within the school in 28 (32.94%) of the divisions responding to the Phillips survey. In the current study, 34 (47.88%) of the schools assumed total responsibility, a 14.94% increase. In the first study, 34 (40.00%) of the respondents reported that individual schools managed collaborative activities with assistance from a division coordinator. In the current study 9 or (12.67%)

responded in this manner, for a 27.33% decrease. Both studies indicated an approximate 1% of the respondents collaborative activities were managed by the business community. This data is summarized in Table 22.

Table 22

Number and Percent of School Divisions Reporting Each of Four Types of Collaborative Activity Management Styles

<i>Management Style</i>	<i>Number</i>	<i>Percent</i>
One person in the school system serves as coordinator, but each school manages the activity. 1990-91 N=85 1998-99 N=71	34 9	40.00% 12.67%
Change	25	-27.33%
Collaborative activity is managed totally by each participating school. 1990-91 N=85 1998-99 N=71	28 34	32.94% 47.88%
Change	6	14.94%
One person in the school system has primary responsibility for the development and coordination of collaborative activities. 1990-91 N=85 1998-99 N=71	22 28	25.88% 39.43%
Change	6	13.55%
Collaborative activity is managed by the business community. 1990-91 N=85 1998-99 N=71	1 1	01.23% 01.40%
Change	0	00.17%

School divisions were asked to respond to a survey question identifying the title of the person with primary responsibility for the development and coordination of all school/business collaborative activities if management

technique was used in their school division. In the Phillips study 5 divisions named school administrative staff other than assistant superintendent and vocational director, the current study produced the same answer 6 times. In the earlier study, 4 divisions named the vocational director as responsible the current study revealed this response 2 times. School business partnership specialist was named in 4 instances in the first study and 3 times in the second study. The assistant superintendent was named 3 times in the Phillips study but received no responses in the current study. Likewise, the school principal was named 2 times in the Phillips study but not any in the current study. The project yes coordinator was named 1 time in the first study, as was business partnership coordinator in the current study. Pertinent information can be found in Table 23 and Table 24.

Table 23

Titles Used by School Divisions for the Person Responsible for Collaborative Activities

<i>Title</i>	<i>Number</i> 1990-91	<i>Number</i> 1998-99
School administrative staff other than assistant superintendent and vocational director.	5	6
School/Business partnership specialist	4	3
Director of vocational education	4	2
Assistant superintendent	3	0
School principal	2	0
Project Yes coordinator	1	0
Business partnership coordinator	0	1

Table 24

**Distribution of Responses on Percent of Time Collaborative Activity
Manager Spent Working with Collaborative Activities**

<i>Percent of time</i>	<i>1990-1991</i>	<i>Number of Divisions</i>	<i>Percent</i>	<i>1998-1999</i>	<i>Number of Divisions</i>	<i>Percent</i>	<i>Percent Change</i>
		N=21			N=11		
100		3	70.00		1	09.09	-60.91
75		1	04.76		2	18.18	13.42
60		0	00.00		1	09.09	09.09
40		0	00.00		2	18.18	18.18
30		1	04.76		2	18.18	13.42
25		2	09.52		0	00.00	-09.52
20		2	09.52		0	00.00	-09.52
15		1	04.76		1	09.09	04.33
10		5	23.80		1	09.09	-14.71
Less than 10		6	28.57		1	09.09	-19.48

Phillips Research Question 11

What person(s) in the school division or in the community most often initiated collaborative activities during the 1990-91 and 1998-99 school years?

School divisions were asked to choose the representative or representatives who most often initiated collaborative programs between business and schools in the division. In the Phillips study, the principal was sited most often as the person who initiated collaborative activities in 50 of the reporting divisions. Business representatives were named by 41 of the divisions responding to the survey. The division superintendent was sited by 33 of the respondents. School teacher was named by 22, representative for a community organization was named by 14, school board member was sited by 3, and other was sited by 35 of the respondents.

Once again, in the current survey, the school principal was named by 43 respondents as the person who most often initiated collaborative agreements. Business representatives were named by 38, division superintendent 14, school teacher by 20, representative of business community 7, school board member 7 and other was sited by 11 percent. This data is summarized in Table 25.

Table 25**Titles of Persons Who Most Often Initiated the Collaborative Agreement
Between Area Business and the School Division**

<i>Activity Sponsor</i>	<i>Number</i>	
	1990-91	1998-99
School Principal	50	43
Business Representative	41	38
Division Superintendent	33	20
School Teacher	22	28
Representative for a Community Organization	14	7
School Board Member	3	7
Other	35	11

It can be argued that human resources play a vital role in determining the success of a collaborative arrangement between business and schools.

Therefore, in both studies respondents were asked if there was an umbrella organization, council or alliance that plans, brokers, administers or provides advice for any collaborative activities or programs. In the Phillips study, eighty-seven school divisions responded to this question with 54 (62.06%) responding no and 33 (37.93%) responding that assistance was received from an umbrella organization. In the current study, 29 (40.84%) of the respondents received assistance from outside organizations, 43 (60.56%) percent received no assistance.

Of the school divisions receiving assistance, the Chamber of Commerce gave the help in 23 (69.69%) of the cases in the Phillips study. However, in the current study only 16 (55.70%) received assistance from the Chamber of Commerce a decrease of 13.99% from the original study. Several other factors were asked about in the surveys. In the first study the umbrella organization served as a link to the business community in 42.42% of the cases, compared to 13.79% in the current study. Also, in the first study 7 (21.21%) organizations served more than on school division compared to 2 (06.89%) for a decrease of 14.32% in the current study. In 4 (12.12%) instances the organization provided financial support for administration of collaborative activities in the Phillips study. The percentage was 3 (10.34%) instances in the current study, a decrease of 1.78%. The organization assumed a major role in collaborative programs in 4 (12.12%) of the school divisions reporting umbrella organizations. This percentage increased to 11(37.93%) instances in the current study. This was 25.81% in the second study. The organization donated administrative time in 2 (06.06%) divisions in the Phillips study. This compares to 7 (24.13%) for an increase of 18.07% in the current study. Table 26 summarizes this data.

Table 26**Number and Percent of School Divisions Reporting Each of Six Functions of Umbrella Organizations**

	1990-91		1998-99		%Change
	Number N=33	%	N=29	%	
Chamber of Commerce served this role	23	69.69%	16	55.70%	-13.99%
Organization served as link to the business community	14	42.42%	4	13.79%	-28.63%
Organization served more than one school division	7	21.21%	2	06.89%	-14.32%
Organization provided financial support for administration of collaborative activity	4	12.12%	3	10.34%	-01.78%
Organization assumed a major role in collaborative programs	4	12.12%	11	37.93%	25.81%
Organization donated administrative time	2	06.06%	7	24.13%	18.07%

The existence of written policy is another indicator of the level of management used by school divisions to direct collaborative programs (Phillips, 1992, p. 113). Therefore, in both studies school divisions with collaborative activities were asked if the division had written policy regulating collaborative activities. In the Phillips study 28 of the 88 respondents who had collaborative activities also had written policy statements. While the current study found 21 of

the 71 school divisions with collaborative activity also had written policy regulating those activities. Responses were elicited as to the content of the policies. The current study shows a decrease in several areas from the first study. The largest included a decrease of 26.19% who had written procedures for communication between partners, 17.85% decrease who had written procedures for program evaluation, and a 22.62% decrease with a written requirement for needs assessment. Table 27 summarizes the findings of this data.

Table 27**Content of Division Policies on Collaborative Activities**

<i>Policy Statement</i>	<i>1990-91</i>		<i>1998-99</i>		<i>Percent Change</i>
	Number	Percent	Number	Percent	
	N=28		N=21		
Program goal and objectives	25	89.28%	16	76.19%	-13.09%
Name of the program	19	67.85%	11	52.38%	-15.47%
Procedures for communication between partners	18	64.28%	8	38.09%	-26.19%
Administrative provisions for program management	16	57.14%	13	61.90%	04.76%
Provisions for program publicity	15	53.57%	8	38.09%	15.48%
Provisions for establishment of collaborative programs	15	53.57%	11	52.38%	-01.19%
Procedures for program evaluation	13	46.42%	6	28.57%	-17.85%
Requirement for needs assessment	13	46.42%	5	23.80%	-22.62%
Provisions for program record-keeping	11	39.28%	7	33.33%	-05.95%
Other statements	2	07.14%	1	04.76%	-02.38%

Phillips Research Question 12

Using the U.S. Department of Commerce Classification system, what types of businesses in Virginia most often developed collaborative activities with school divisions in Virginia?

In both studies the top five types of businesses were the same who participated in collaborative activities. The most likely to participate were civic organizations 69 percent in both studies. Service industries in 64.77% and 73.23% of the instances. Manufacturing in 62.50% of the school divisions in the first study and in 69.01% in the second study. Retail trade was represented in 62.50% of the first study and 71.83% in the second study. Finance businesses were represented in 57.95% in the Phillips study and in 60.56% of the current study. Government agencies were not in the top five of the Phillips study, but in the later study they tied with finance businesses in 60.56% of the school divisions. This is a 17.38% increase from the Phillips study. Mining businesses were represented in 6% percent of the school divisions giving that classification the distinction of being the least represented type of business participating in business collaborative activities. This data is summarized in Table 28.

Table 28**Number and Percent of Business and Industries that Participated in Collaborative Activities During the 1990-91 and 1998-99 School Year**

<i>Business Industry Type</i>	1990-91		1998-99		Percent Change
	Number N=88	Percent	Number N=71	Percent	
Civic organizations	61	69.31%	49	69.01%	-00.30%
Service industry	57	64.77%	52	73.23%	08.46%
Manufacturing	55	62.50%	49	69.01%	06.51%
Retail trade	55	62.50%	51	71.83%	09.33%
Finance business	51	57.95%	43	60.56%	02.61%
Government agency	38	43.18%	43	60.56%	17.38%
Transportation, communication, sanitary services	36	40.90%	33	46.47%	05.57%
Construction trades	27	30.68%	33	46.47%	15.79%
Agriculture and forestry	27	30.68%	22	30.98%	00.38%
Wholesale trade	15	17.04%	18	25.35%	08.31%
Mining	5	05.68%	4	05.63%	-00.05%

The extent of business/industry partnership participation was measured by asking respondents to identify the number of business organizations and or civic organizations that participated in collaborative activities with the school division. In the Phillips study 72 of the 88 school divisions with collaborative activities responded to this question while all 71 divisions with collaborative activities

answered the question in the current study. In the Phillips study, the largest grouping of business partners was in the 1-10 range with 32 (43.24%) of the school divisions reporting this range. The second range was the 11-20 range with 12 (16.21%) reporting this range. These ranges were also the most popular in the current study, with 20 (28.16%) having between 1-10 and 11 (15.49%) having between 11-20 partners. However, the second study showed an increase in the number of divisions reporting more than one hundred business partners from 5 in the Phillips study to 14 in the current study. Two school divisions reported more than 160 partners in the first study and six reported more than 160 in the second study. A more complete analysis can be found in Table 29.

Table 29

Number and Percent of Different School Divisions Business/Industry Partners Reported by Divisions with Collaborative Activities

<i>Number of Different business firms</i>	<i>Number of School Divisions</i>	<i>Percent</i>	<i>Number of School Divisions</i>	<i>Percent</i>	<i>Percent Change</i>
	1990-91 N=74		1998-99 N=71		
1-10	32	43.24%	20	28.16%	-15.08%
11-20	12	16.21%	11	15.49%	-00.72%
21-30	6	08.10%	6	08.45%	00.00%
31-40	6	08.10%	5	07.04%	-01.06%
41-50	3	04.05%	3	04.25%	00.20%
51-60	2	02.70%	1	01.08%	-01.62%
61-70	2	02.70%	1	01.08%	-01.62%
71-80	3	04.05%	6	08.45%	04.40%
81-90	1	01.35%	2	02.81%	01.46%
91-100	2	02.70%	2	02.81%	00.11%
101-110	0	00.00%	4	05.63%	05.63%
111-120	1	01.35%	1	01.08%	-00.27%
121-130	1	01.35%	1	01.08%	-00.27%
131-140	1	01.35%	0	00.00%	-01.35%
141-150	0	00.00%	2	02.81%	02.81%
151-160	0	00.00%	1	01.08%	01.08%
More than 160	2	02.70%	6	08.45%	05.75%

Phillips Research Question 13

What services did school divisions in Virginia provide to businesses as part of collaborative activities?

Both the Phillips study and the current study sought to determine what if any resources or services did school divisions provide to business partners in exchange for service received from business and industry. In the Phillips study 88 school divisions reported collaborative activities with business, 52 (59.09%) of those school systems provided school business and grounds to business partners, 43 (48.86%) provided student entertainment, and 31 (35.22%) percent held special classes for business partners. In addition, 29 (32.95%) loaned school equipment and 4 (04.54%) provided testing services for use by business partners. In the current study all 71 school divisions answered this question. Of this number 39 (54.92%) provided school buildings and grounds for use by business and industry, 30 (42.25%) percent provided student entertainment, and 23 (32.39%) provided special classes for business and industry. In addition, 16 (22.53%) provide school equipment on loan to business partners and 2 (02.81%) provided testing services. In both studies approximately 15% of the school divisions provide no services for business partners. This data can be found in Table 30.

School divisions reported a number of services provided to business partners that were not included on the survey. The most prevalent of these included holding appreciation or recognition activities.

Table 30**Services Provided by Schools to Business Partners As a Part of Collaborative Activities**

<i>Service Provided</i>	<i>1990-91</i>		<i>1998-99</i>		<i>Percent Change</i>
	Number	Percent	Number	Percent	
	N=88		N=71		
School buildings and grounds	52	59.09%	39	54.92%	-04.17%
Student entertainment	43	48.86%	30	42.25%	-06.61%
Special classes	31	35.22%	23	32.39%	-02.83%
School equipment	29	32.95%	16	22.53%	-10.60%
Testing services	4	04.54%	2	02.81%	-01.73%
No services provided	13	14.77%	11	15.49%	00.72%