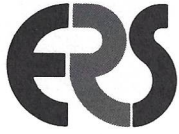




INFORMATION AID

**Measuring Trends
in Salaries and Wages
in Public Schools:
ERS Composite
Indicator of Changes**

EDUCATIONAL RESEARCH SERVICE, INC.



Measuring Trends in Salaries and Wages in Public Schools: ERS Composite Indicator of Changes

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INTRODUCTION

Are salary and wage trends in public education keeping up or falling behind in the race with inflation? Are salary increases for central-office administrators and school building administrators keeping pace with increases received by classroom teachers and support personnel? How do overall salary and wage changes in one school system compare with similar changes throughout a state and across the nation? These are questions frequently asked by school administrators, school board members, employee organizations, and the public.

To help answer these and related questions, the Educational Research Service has developed a statistical measure for gauging and comparing overall changes in salaries and wages paid by school systems. This measure is the *Composite Indicator of Changes in Average Salaries and Wages Paid by Public School Systems* (CIC) which is published annually by ERS.

The ERS *Composite Indicator* is designed to reflect overall changes in average salaries and wages paid by public school systems in much the same way that the Dow-Jones average of 30 selected industrial stocks or the Standard & Poor's index is designed to reflect changes in prices of all stocks traded on the New York Stock Exchange, or in the same way that the U.S. Department of Labor's Consumer Price Index is designed to reflect changes in the prices of goods and services purchased by consumers in urban areas.

When used properly and with appropriate precautions, the *Composite Indicator* can be a very helpful instrument in assessing changes and trends in salaries and wages paid various groups of public school employees.

The purpose of this ERS Information Aid is to provide a full description of the purpose and nature of the *Composite Indicator*, how it is compiled on a national and state basis, and how local school systems can compile CIC data for use in salary and wage decision-making. Procedures, work sheets, and outline graphs for making such local computations and comparisons are included as the final section of this Information Aid.

DESCRIPTION OF THE INDICATOR

The ERS *Composite Indicator* is based upon data for 28 of the 33 public school employee positions on which ERS collects and reports salary and wage data annually. Table 1 shows the *Composite Indicator of Changes* in average salaries and wages paid

by all school systems reporting data to ERS for 1978-79 and for the two previous school years. The *Composite Indicator* shows that, overall, changes in average salaries and wages paid by reporting school systems in 1978-79 increased by 6.7 percent over those paid in 1977-78. This compares with a 7.7 percent increase in the Consumer Price Index for calendar year 1978.

Table 1 also shows the six components of the *Composite Indicator*. For example, *Component Indicator No. 3* shows that the average of salaries paid classroom teachers by all reporting school systems increased 6.9 percent compared with a 7.1 percent average wage rate increase for hourly support personnel, and that average salaries paid central-office administrators increased the least, 6.3 percent. This 6.3 percent increase was larger than the 5.1 percent increase for this group the year before (1977-78 over 1976-77) but considerably below the 7.7 percent increase in the CPI for 1978. These examples illustrate some practical uses of this indicator.

Figure 1 shows graphically the relative changes in the CIC that are shown in Table 1 plus the change in each of the six *component indicators* of the *Composite Indicator*, which are described later, for school year 1978-79 and each of the two preceding years. Also shown for comparative purposes are changes in the Consumer Price Index for calendar year 1978 and the two previous years.

SOURCE OF CIC DATA

Until recently an index that would measure composite changes in salaries and wages paid public school personnel was not possible because there was no comprehensive, systematic, and reliable statistical base for such a measure. With the ERS experience of the past five years in developing, analyzing, and reporting data from the annual *National Survey of Salaries and Wages in Public Schools*, it is now possible to construct and maintain a reliable indicator of changes in average salaries and wages paid in public education on an annual basis.

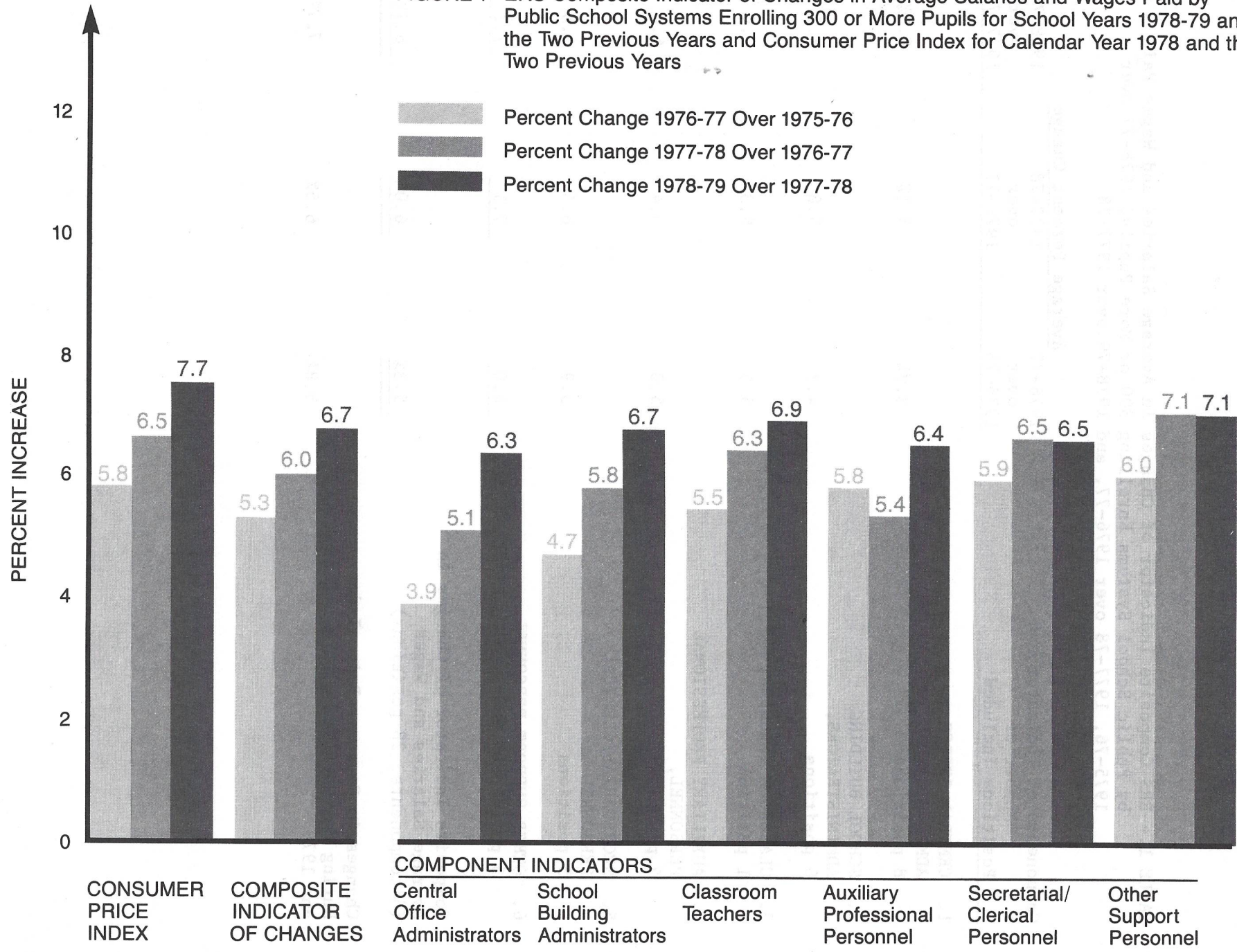
The *National Survey of Salaries and Wages in Public Schools* provides a dependable and representative data base for year-to-year trend analyses for two reasons:

1. *Scope of Coverage*--The annual survey reports comparable salary data for 23 professional positions including superintendents, central-office and school building level administrators, classroom teachers, and other professional personnel, plus 10 clerical and other support personnel positions.
2. *Quality of Data*--The survey universe of all school systems enrolling 300 or more pupils includes more than 98 percent of the public school students in the country. All districts enrolling 10,000 or more pupils are surveyed

TABLE 1.--ERS Composite Indicator of Changes in Average Salaries and Wages Paid by Public School Systems Enrolling 300 or More Pupils, 1976-77 over 1975-76, 1977-78 over 1976-77, and 1978-79 over 1977-78

Components of Indicator and Number of Positions Included	Average Percent Change		
	1976-77 over 1975-76	1977-78 over 1976-77	1978-79 over 1977-78
1. CENTRAL-OFFICE ADMINISTRATORS, 8 positions	3.9%	5.1%	6.3%
2. SCHOOL BUILDING ADMINISTRATORS, 6 positions	4.7	5.8	6.7
3. CLASSROOM TEACHERS, 1 position	5.5	6.3	6.9
4. AUXILIARY PROFESSIONAL PERSONNEL, 3 positions	5.8	5.4	6.4
5. SECRETARIAL/CLERICAL PERSONNEL 5 positions	5.9	6.5	6.5
6. OTHER SUPPORT PERSONNEL 5 positions (Hourly)	<u>6.0</u>	<u>7.1</u>	<u>7.1</u>
Composite Indicator of Changes in Average Salaries and Wages (6 components, 28 positions)	<u>5.3%</u>	<u>6.0%</u>	<u>6.7%</u>
Changes in Consumer Price Index During Calendar Years 1976, 1977, and 1978	5.8%	6.5%	7.7%

FIGURE 1 ERS Composite Indicator of Changes in Average Salaries and Wages Paid by Public School Systems Enrolling 300 or More Pupils for School Years 1978-79 and the Two Previous Years and Consumer Price Index for Calendar Year 1978 and the Two Previous Years



and a panel sample of 1 in 5 systems in the *small* (2,500 to 9,999 pupils) and 1 in 15 in the *very small* (300 to 2,499 pupils) enrollment strata is surveyed. Refinements in sampling and survey techniques have increased significantly the response rate in all enrollment strata, providing a large, representative, and stable sample from which to compile trend statistics. In the 1978-79 survey, 58.6 percent of the school systems in the sample and 79 percent of all school systems with 25,000 or more pupils reported usable data.

A complete description of the survey design and procedures, including sample sizes and return rates, is contained in each of the three volumes of the ERS *National Survey of Salaries and Wages in Public Schools, 1978-79*. Part 1 is *Salaries Scheduled for Professional Personnel in Public Schools, 1978-79*. Part 2 is *Salaries Paid Professional Personnel in Public Schools, 1978-79*. Part 3 is *Wages and Salaries Paid Support Personnel in Public Schools, 1978-79*. The volumes may be purchased separately or as a set of three from Educational Research Service.

HOW THE INDICATOR IS COMPUTED

The ERS *Composite Indicator of Changes* in average salaries and wages paid by public school systems is computed from data for 28 of the 33 professional and support positions reported by school systems that respond to the annual *National Survey of Salaries and Wages in Public Schools*. The 1978-79 National Survey reported data from 1,100 school systems. The *Composite Indicator* summarizes changes in average salaries and wages in these 28 positions by first grouping the changes into the six functional component groups as shown in Table 1. The staff positions making up each of the six components of the *Composite Indicator* are shown in Table 2.

To compute the *change indicator* for each of the six components, the percent changes in the average (mean) of salaries or wages paid by the 1,100 school systems reporting data for the specific staff positions are averaged. The *Composite Indicator of Change* is computed by averaging the average percentage changes for the six components. Thus the *Composite Indicator* gives equal weight to each of the six component indicators; however, each *component indicator* carries a weight for the categories it contains that is inversely related to the number of positions included.

It should be noted that the CIC computation can provide different results from those that might be obtained if the mean salaries or wages for the categories within a component group are averaged as a group for each of two years, and then the percent change calculated from these two averages. This method is not the

TABLE 2.--Staff Positions Comprising Each of the Six Components and Data Used in Computing the ERS Composite Indicator of Changes in Average Salaries and Wages Paid by Public School Systems, 1975-76, 1976-77, 1977-78, and 1978-79

Staff Positions and Components of Indicator	Mean of Average Salaries and Wages Paid				Percent Change		
	1975-76	1976-77	1977-78	1978-79	1976-77 over 1975-76	1977-78 over 1976-77	1978-79 over 1977-78
1. CENTRAL-OFFICE ADMINISTRATORS							
Superintendent (Contract Salary)	\$32,527	\$33,233	\$34,875	\$36,924	2.2%	4.9%	5.9%
Deputy/Assoc. Supt.	30,778	31,799	33,391	34,898	3.3	5.0	4.5
Assistant Supt.	27,082	28,099	29,719	31,513	3.8	5.8	6.0
Administrators for:							
Finance and Business	21,436	22,380	23,358	24,507	4.4	4.4	4.9
Instructional Services	22,830	23,874	25,268	27,034	4.6	5.8	7.0
Public Relations/Info.	19,519	20,308	21,412	22,207	4.0	5.4	3.7
Staff Personnel Services	22,239	23,523	24,434	26,857	5.8	3.9	9.9
Subject Area Supervisors	19,694	20,266	21,318	23,038	<u>2.9</u>	<u>5.2</u>	<u>8.1</u>
COMPONENT INDICATOR--					3.9%	5.1%	6.3%
2. SCHOOL BUILDING ADMINISTRATORS							
Principals:							
Elementary	19,865	20,816	22,132	23,618	4.8	6.3	6.7
Junior High/Middle	21,876	22,961	24,235	25,910	5.0	5.6	6.9
Senior High	23,306	24,225	25,642	27,422	3.9	5.9	6.9
Assistant Principals:							
Elementary	16,875	17,561	18,778	19,827	4.1	6.9	5.6
Junior High/Middle	18,690	19,617	20,682	22,171	5.0	5.4	7.2
Senior High	19,651	20,714	21,680	23,222	<u>5.4</u>	<u>4.7</u>	<u>7.1</u>
COMPONENT INDICATOR--					4.7%	5.8%	6.7%
3. CLASSROOM TEACHERS							
Classroom Teachers	12,437	13,119	13,941	14,899	<u>5.5</u>	<u>6.3</u>	<u>6.9</u>
COMPONENT INDICATOR--					5.5%	6.3%	6.9%
4. AUXILIARY PROFESSIONAL PERSONNEL							
Counselors	15,017	15,883	16,641	17,698	5.8	4.8	6.4
Librarians	13,207	13,921	14,739	15,727	5.4	5.9	6.7
School Nurses	11,046	11,729	12,357	13,113	<u>6.2</u>	<u>5.4</u>	<u>6.1</u>
COMPONENT INDICATOR--					5.8%	5.4%	6.4%
5. SECRETARIAL/CLERICAL PERSONNEL							
Central-Office:							
Secretaries/Stenographers	7,929	8,446	9,023	9,553	6.5	6.8	5.9
Accounting/Payroll Clerks	8,088	8,613	9,180	9,744	6.5	6.6	6.1
Clerk-Typists	6,593	6,934	7,397	7,863	5.2	6.7	6.3
School Building Level:							
Secretaries/Stenographers	6,521	6,849	7,328	7,772	5.0	7.0	6.1
Library Clerks	5,333	5,668	5,970	6,449	<u>6.3</u>	<u>5.3</u>	<u>8.0</u>
COMPONENT INDICATOR--					5.9%	6.5%	6.5%
6. OTHER SUPPORT PERSONNEL							
Teacher Aides:							
Instructional	\$3.12	\$3.26	\$3.51	\$3.77	4.5	7.7	7.4
Noninstructional	2.92	3.15	3.34	3.57	7.9	6.0	6.9
Custodians	3.78	3.99	4.25	4.53	5.6	6.5	6.6
Cafeteria Workers	2.83	3.00	3.24	3.48	6.0	8.0	7.4
Bus Drivers	4.04	4.28	4.59	4.93	<u>5.9</u>	<u>7.2</u>	<u>7.4</u>
COMPONENT INDICATOR--					6.0%	7.1%	7.1%
<u>COMPOSITE INDICATOR OF CHANGES IN AVERAGE SALARIES AND WAGES:</u>					<u>5.3%</u>	<u>6.0%</u>	<u>6.7%</u>
<u>CHANGES IN CONSUMER PRICE INDEX FOR CALENDAR YEARS 1976, 1977, and 1978</u>					5.8%	6.5%	7.7%

correct way to compute the *Composite Indicator of Changes* and should not be used in computing any data to be compared with the CIC. The proper computation of data intended to be comparable with the CIC is the *average* of the *percentage* changes in the average salary or wage rates for *each* of the *component indicators*.

It should be further noted that the mean salary levels are averages of school system data computed as follows: the average of salaries paid school personnel reported by each school system are summed. This sum is then divided by the number of responding systems providing data for that salary category. Therefore, the means of salaries for each school system are given equal weight regardless of the number of employees in that position in the system. Averages computed in this manner are statistically termed "unweighted means" and are directly comparable only to statistics that have been derived in a similar manner.

COMPARISONS WITHIN THE COMPONENTS

The *Composite Indicator* also facilitates analysis of relative changes in average salaries or wages paid to personnel in each of the categories comprising the six component groupings. For example, Table 2 shows that while the central-office administrator *component indicator* reflected a 6.3 percent increase between 1977-78 and 1978-79, salaries reported for administrators for staff personnel services increased by 9.9 percent, while salaries for administrators for instructional services increased 7.0 percent and salaries for superintendents increased by 5.9 percent.

COMPARISONS WITH THE CONSUMER PRICE INDEX

The *Composite Indicator* is an important development in education because it provides a way of measuring salary and wage changes in the whole range of public school employment, comparable with other indicators of economic change such as the U.S. Department of Labor's Consumer Price Index. For example, the CIC for 1978-79 indicates an average increase in salaries and wages in public school employment of 6.7 percent while the CPI for calendar year 1978 increased by 7.7 percent.

The monthly average changes in the CPI for the 12 months of the calendar year ending during the school year (September to August) are used for comparative purposes with the *Composite Indicator of Changes* because the CIC is published annually in February for the current school year and the preceding calendar year is the latest CPI data available at the time of publication. Later in the year, when more current

consumer price data are available, users may wish to compare relationships between the CIC and the CPI that occur during the 12 months, September to August, or some other 12-month period, that corresponds more closely with the school year. Table 3 presents a summary of the data currently available for use in CPI calculations. The table provides U.S. Bureau of Labor Statistics data on which such changes in the CPI may be computed. It includes data for the five latest calendar years and monthly data from September 1976 to December 1978. For a full explanation of the Consumer Price Indexes and how they can be appropriately applied, users may wish to consult the ERS Information Aid titled *The New and Revised Consumer Price Indexes (1978)* published by Educational Research Service.

PRECAUTIONS IN USING THE CIC

Although the *Composite Indicator of Changes* can be a very helpful measure in gauging changes and trends in salaries and wages paid public school employees, the CIC has limitations that users should understand.

One limitation is that the CIC and its *component indicators* are designed only to reflect changes in the means of salaries and wages actually *paid* to certain categories of school employees and *not* changes in salary schedules or wage scales on which employees are placed. Therefore, the CIC or its *component indicators* should not be interpreted as a measure of change in various levels of salary schedules or wage scales. To illustrate, the *component indicator* for classroom teachers for 1978-79 over 1977-78 shows an increase of 6.9 percent. This indicates that the average of the means of salaries actually paid teachers in the 1,100 school systems that reported data in the ERS *National Survey of Salaries and Wages in Public Schools* in 1978-79 increased by 6.9 percent over the average of the means of all reporting school systems in 1977-78. However, the average of the B.A. *minimum* scale on salary schedules for teachers in these same school systems increased by only 5.5 percent, while the average of the *maximums* of the salary schedules for teachers increased by 6.8 percent.

There are several reasons why the *component indicator* for a group of public school employees can be expected to differ from the percentage changes in specific points on salary schedules, such as minimums and maximums. Because they are based on salaries paid employees, the *component indicators*, unlike salary schedules or wage scales, are influenced by factors such as:

1. the movement of personnel from one step to another on the salary schedule because of annual increments or increased training

TABLE 3.--Consumer Price Index for All Items, U.S. City Average, Annually from 1974 to 1978 and Monthly for Calendar Year 1978 and School Year 1977-78*

A. Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), 1974-77 and Consumer Price Index for All Urban Consumers (CPI-U), 1978

<u>Year</u>	<u>Annual Average of Monthly Indexes</u>	<u>Percent Change from Previous Year</u>
1974	147.7	11.0%
1975	161.2	9.1
1976	170.5	5.8
1977	181.5	6.5
1978	195.4	7.7

B. CPI-U, Calendar Years 1977 and 1978 and School Years 1976-77 and 1977-78

<u>Month</u>	<u>1977</u>	<u>Index</u> <u>1978</u>	<u>Month</u>	<u>1976-77</u>	<u>Index</u> <u>1977-78</u>
January	175.3	187.2	September	172.6	184.0
February	177.1	188.4	October	173.3	184.5
March	178.2	189.8	November	173.8	185.4
April	179.6	191.5	December	174.3	186.1
May	180.6	193.3	January	175.3	187.2
June	181.8	195.3	February	177.1	188.4
July	182.6	196.7	March	178.2	189.8
August	183.3	197.8	April	179.6	191.5
September	184.0	199.3	May	180.6	193.3
October	184.5	200.9	June	181.8	195.3
November	185.4	202.0	July	182.6	196.7
December	186.1	202.9	August	183.3	197.8
	2,178.5	2,345.1		2,132.5	2,280.0
	÷12=	÷12=		÷12=	÷12=
	181.5	195.4		177.7	190.0

Percent Change (1978 over 1977) = $\frac{195.4-181.5}{181.5} = 7.7\%$ Percent Change (1977-78 over 1976-77) = $\frac{190.0-177.7}{177.7} = 6.9\%$

* Since the Bureau of Labor Statistics first released CPI-U data in January 1978, data before 1978 are taken from the CPI-W.

SOURCE: Bureau of Labor Statistics. *The Consumer Price Index*. (Monthly press releases from February 1978 through January 1979); *Monthly Labor Review*, 101 (March 1977), p. 81 and 100 (March 1977), p. 109.

2. the reduction of the number of personnel through attrition, usually at the upper end of the schedule
3. the laying off of personnel, usually at the lower end of the schedule
4. the hiring of new personnel, frequently at the lower end of the schedule

COMPARISONS BY ENROLLMENT GROUPING

The *Composite Indicator* approach also enables comparisons of changes in average salaries and wages paid by school systems grouped by enrollment strata. For example, Table 4 shows that the CIC in 1978-79 was nearly identical in each of the three enrollment groups with enrollments of 2,500 or more pupils--6.6 percent in both *large* school systems (25,000 or more pupils) and *small* systems (2,500 to 9,999 pupils) and 6.7 percent in *medium* systems (10,000 to 24,999 pupils). The CIC of the *very small* enrollment group (300 to 2,499 pupils) during this period was 8.5 percent.

Shown in Tables 5 through 8 are the staff positions comprising each of the six components and data used in computing the CIC for each of the four enrollment groups for school years 1976-77, 1977-78, and 1978-79. Presented in Figures 2 through 5 are data by enrollment group which illustrate the relationships between the CIC, the CPI (for calendar years 1977 and 1978), and the six *component indicators* for school years 1977-78 and 1978-79.

It should be pointed out, however, that in school systems with smaller enrollments, fewer staff members are employed and fewer personnel categories are represented, particularly at the central-office level. For these reasons the comparability and stability of CICs for these strata may diminish. Cautions such as those discussed in the section "Local School System Comparisons" should be observed when computing and interpreting CICs for such enrollment groups.

LOCAL SCHOOL SYSTEM COMPARISONS

If caution is employed, both in construction and in analysis, it is possible to compute an indicator for a local school system that is comparable to state, national, or enrollment size indicators. However, it is important to note that the degree of comparability and stability of local *composite indicators* and of most *component indicators* will diminish according to the number of staff employed and the number of staff categories represented.

TABLE 4.--CIC for Four Enrollment Groups, 1978-79 over 1977-78

Components of Indicator ' and Number of Positions Included	Enrollment Group				TOTAL-All Reporting Systems
	25,000 or more	10,000 to 24,999	2,500 to 9,999	300 to 2,499	
1. CENTRAL-OFFICE ADMINISTRATORS, 8 positions	6.6%	5.6%	7.9%	9.2%	6.3%
2. SCHOOL BUILDING ADMINISTRATORS, 6 positions	6.1	7.2	6.5	8.5	6.7
3. CLASSROOM TEACHERS, 1 position	6.2	7.3	6.1	8.3	6.9
4. AUXILIARY PROFESSIONAL PERSONNEL, 3 positions	5.9	6.4	6.0	8.4	6.4
5. SECRETARIAL/CLERICAL PERSONNEL, 5 positions	7.1	6.1	6.5	8.0	6.5
6. OTHER SUPPORT PERSONNEL 5 positions (Hourly)	7.7	7.3	6.4	8.5	7.1
Composite Indicator of Changes in Average Salaries and Wages	6.6	6.7	6.6	8.5	6.7
Change in Consumer Price Index During Calendar Year 1978	7.7

TABLE 5.--Staff Positions Comprising Each of the Six Components and Data Used in Computing the CIC, in School Systems Enrolling 25,000 or More Pupils, 1976-77, 1977-78, 1978-79

Staff Positions and Components of Indicator	School Year			Percent Change	
	1976-77	1977-78	1978-79	1977-78 over 1976-77	1978-79 over 1977-78
1. CENTRAL-OFFICE ADMINISTRATORS					
Superintendent (Contract Salary)	\$42,069	\$44,001	\$46,251	4.6%	5.1%
Deputy/Assoc. Supt.	34,662	36,341	37,945	4.8	4.4
Assistant Supt.	30,935	32,254	34,212	4.3	6.1
Administrators for:					
Finance and Business	23,662	24,710	26,631	4.4	7.8
Instructional Services	25,254	26,447	28,321	4.7	7.1
Public Relations/Info.	21,647	22,986	24,563	6.2	6.9
Staff Personnel Services	24,092	24,934	26,774	3.5	7.4
Subject Area Supervisors	21,540	22,573	24,339	4.8	7.8
COMPONENT INDICATOR--				4.7	6.6
2. SCHOOL BUILDING ADMINISTRATORS					
Principals:					
Elementary	22,103	23,340	24,668	5.6	5.7
Junior High/Middle	23,778	25,213	26,631	6.0	5.6
Senior High	25,760	27,456	28,964	6.6	5.5
Assistant Principals:					
Elementary	18,548	19,802	21,083	6.8	6.5
Junior High/Middle	19,724	20,848	22,248	5.7	6.7
Senior High	20,923	22,235	23,737	6.3	6.8
COMPONENT INDICATOR--				6.2	6.1
3. CLASSROOM TEACHERS					
Classroom Teachers	13,621	14,290	15,178	4.9	6.2
COMPONENT INDICATOR--				4.9	6.2
4. AUXILIARY PROFESSIONAL PERSONNEL					
Counselors	16,341	16,963	18,009	3.8	6.2
Librarians	14,180	15,076	15,996	6.3	6.1
School Nurses	11,934	12,833	13,511	7.5	5.3
COMPONENT INDICATOR--				5.9	5.9
5. SECRETARIAL/CLERICAL PERSONNEL					
Central-Office:					
Secretaries/Stenographers	8,754	9,327	10,064	6.6	7.9
Accounting/Payroll Clerks	8,750	9,348	9,942	6.8	6.4
Clerk-Typists	7,368	7,903	8,412	7.3	6.4
School Building Level:					
Secretaries/Stenographers	7,446	7,972	8,701	7.1	9.1
Library Clerks	6,319	6,528	6,895	3.3	5.6
COMPONENT INDICATOR--				6.2	7.1
6. OTHER SUPPORT PERSONNEL					
Teacher Aides:					
Instructional	\$3.38	\$3.65	\$3.91	8.0	7.1
Noninstructional	3.43	3.60	3.89	5.0	8.1
Custodians	3.97	4.25	4.58	7.1	7.8
Cafeteria Workers	3.13	3.37	3.64	7.7	8.0
Bus Drivers	4.14	4.60	4.94	11.1	7.4
COMPONENT INDICATOR--				7.8	7.7
<u>COMPOSITE INDICATOR OF CHANGES IN AVERAGE SALARIES AND WAGES:</u>				<u>6.0</u>	<u>6.6</u>
<u>CHANGES IN CONSUMER PRICE INDEX, 1977 and 1978:</u>				<u>6.5</u>	<u>7.7</u>

TABLE 6.--Staff Positions Comprising Each of the Six Components and Data Used in Computing the CIC, in School Systems Enrolling 10,000 to 24,999 Pupils, 1976-77, 1977-78, and 1978-79

Staff Positions and Components of Indicator	School Year			Percent Change	
	1976-77	1977-78	1978-79	1977-78 over 1976-77	1978-79 over 1977-78
1. CENTRAL-OFFICE ADMINISTRATORS					
Superintendent (Contract Salary)	\$36,303	\$38,227	\$40,786	5.3%	6.7%
Deputy/Assoc. Supt.	31,070	33,060	33,960	6.4	2.7
Assistant Supt.	28,617	30,618	32,764	7.0	7.0
Administrators for:					
Finance and Business	23,106	24,623	25,702	6.6	4.4
Instructional Services	24,481	26,145	28,080	6.8	7.4
Public Relations/Info.	20,068	21,174	21,567	5.5	1.9
Staff Personnel Services	24,095	25,365	27,415	5.3	8.1
Subject Area Supervisors	20,461	21,770	23,173	6.4	6.4
COMPONENT INDICATOR--				6.2	5.6
2. SCHOOL BUILDING ADMINISTRATORS					
Principals:					
Elementary	21,788	23,271	25,008	6.8	7.5
Junior High/Middle	23,752	25,263	27,052	6.4	7.1
Senior High	25,933	27,557	29,472	6.3	6.9
Assistant Principals:					
Elementary	17,054	18,697	19,987	9.6	6.9
Junior High/Middle	19,915	21,185	22,890	6.4	8.0
Senior High	21,611	22,794	24,353	5.5	6.8
COMPONENT INDICATOR--				6.8	7.2
3. CLASSROOM TEACHERS					
Classroom Teachers	13,660	14,664	15,732	7.4	7.3
COMPONENT INDICATOR--				7.4	7.3
4. AUXILIARY PROFESSIONAL PERSONNEL					
Counselors	16,463	17,414	18,543	5.8	6.5
Librarians	14,689	15,582	16,726	6.1	7.3
School Nurses	12,534	13,199	13,928	5.3	5.5
COMPONENT INDICATOR--				5.7	6.4
5. SECRETARIAL/CLERICAL PERSONNEL					
Central-Office:					
Secretaries/Stenographers	8,778	9,346	9,802	6.5	4.9
Accounting/Payroll Clerks	8,765	9,304	9,853	6.2	5.9
Clerk-Typists	7,175	7,571	8,030	5.5	6.1
School Building Level:					
Secretaries/Stenographers	7,405	7,899	8,249	6.7	4.4
Library Clerks	6,181	6,418	7,010	3.8	9.2
COMPONENT INDICATOR--				5.7	6.1
6. OTHER SUPPORT PERSONNEL					
Teacher Aides:					
Instructional	\$3.38	\$3.56	\$3.82	5.3	7.3
Noninstructional	3.26	3.41	3.64	4.6	6.7
Custodians	4.15	4.44	4.73	7.0	6.5
Cafeteria Workers	3.07	3.33	3.58	8.5	7.5
Bus Drivers	4.28	4.54	4.92	6.1	8.4
COMPONENT INDICATOR--				6.3	7.3
<u>COMPOSITE INDICATOR OF CHANGES IN AVERAGE SALARIES AND WAGES:</u>				<u>6.4</u>	<u>6.7</u>
<u>CHANGES IN CONSUMER PRICE INDEX, 1977 and 1978</u>				6.5	7.7

TABLE 7.--Staff Positions Comprising Each of the Six Components and Data Used in Computing the CIC, in School Systems Enrolling 2,500 to 9,999 Pupils, 1976-77, 1977-78, and 1978-79

Staff Positions and Components of Indicator	School Year			Percent Change	
	1976-77	1977-78	1978-79	1977-78 over 1976-77	1978-79 over 1977-78
1. CENTRAL-OFFICE ADMINISTRATORS					
Superintendent (Contract Salary)	\$32,561	\$34,195	\$36,374	5.0%	6.4%
Deputy/Assoc. Supt.	27,906	28,866	32,548	3.4	12.8
Assistant Supt.	26,914	28,530	30,144	6.0	5.7
Administrators for:					
Finance and Business	22,124	22,933	24,232	3.7	5.7
Instructional Services	22,933	24,515	25,921	6.9	5.7
Public Relations/Info.	17,997	19,332	20,018	7.4	3.5
Staff Personnel Services	22,351	23,180	26,073	3.7	12.5
Subject Area Supervisors	19,145	19,969	22,114	<u>4.3</u>	<u>10.7</u>
COMPONENT INDICATOR--				5.1	7.9
2. SCHOOL BUILDING ADMINISTRATORS					
Principals:					
Elementary	21,169	22,372	23,837	5.7	6.5
Junior High/Middle	22,858	24,250	25,857	6.1	6.6
Senior High	24,881	26,047	27,916	4.7	7.2
Assistant Principals:					
Elementary	17,025	17,881	18,801	5.0	5.1
Junior High/Middle	19,381	20,409	21,760	5.3	6.6
Senior High	20,354	21,327	22,805	<u>4.8</u>	<u>6.9</u>
COMPONENT INDICATOR--				5.3	6.5
3. CLASSROOM TEACHERS					
Classroom Teachers	13,304	14,147	15,014	<u>6.3</u>	<u>6.1</u>
COMPONENT INDICATOR--				6.3	6.1
4. AUXILIARY PROFESSIONAL PERSONNEL					
Counselors	15,951	16,818	17,810	5.4	5.9
Librarians	14,099	14,926	15,816	5.9	6.0
School Nurses	11,623	12,209	12,956	<u>5.0</u>	<u>6.1</u>
COMPONENT INDICATOR--				5.4	6.0
5. SECRETARIAL/CLERICAL PERSONNEL					
Central-Office:					
Secretaries/Stenographers	8,498	9,161	9,619	7.8	5.0
Accounting/Payroll Clerks	8,689	9,175	9,708	5.6	5.8
Clerk-Typists	6,724	7,206	7,699	7.2	6.8
School Building Level:					
Secretaries/Stenographers	6,652	7,168	7,628	7.8	6.4
Library Clerks	5,360	5,780	6,274	<u>7.8</u>	<u>8.5</u>
COMPONENT INDICATOR--				7.2	6.5
6. OTHER SUPPORT PERSONNEL					
Teacher Aides:					
Instructional	\$3.26	\$3.48	\$3.71	6.7	6.6
Noninstructional	3.08	3.34	3.51	8.4	5.1
Custodians	4.01	4.24	4.53	5.7	6.8
Cafeteria Workers	2.99	3.18	3.43	6.4	7.9
Bus Drivers	4.33	4.63	4.90	<u>6.9</u>	<u>5.8</u>
COMPONENT INDICATOR--				<u>6.8</u>	<u>6.4</u>
<u>COMPOSITE INDICATOR OF CHANGES IN AVERAGE SALARIES AND WAGES:</u>				<u>6.0</u>	<u>6.6</u>
<u>CHANGES IN CONSUMER PRICE INDEX, 1977 and 1978</u>				6.5	7.7

TABLE 8.--Staff Positions Comprising Each of the Six Components and Data Used in Reporting the CIC, in School Systems Enrolling 300 to 2,499 Pupils, 1976-77, 1977-78, and 1978-79

Staff Positions and Components of Indicator	School Year			Percent Change	
	1976-77	1977-78	1978-79	1977-78 over 1976-77	1978-79 over 1977-78
1. CENTRAL-OFFICE ADMINISTRATORS					
Superintendent (Contract Salary)	\$24,339	\$26,516	\$28,396	8.9%	7.1%
Deputy/Assoc. Supt.	21,885	26,138	*	*	*
Assistant Supt.	23,364	23,905	26,521	2.3	10.9
Administrators for:					
Finance and Business	15,866	17,518	18,222	10.4	4.0
Instructional Services	18,797	19,974	22,662	6.3	13.5
Public Relations/Info.	15,809	14,499	*	*	*
Staff Personnel Services	16,356	17,387	*	*	*
Subject Area Supervisors	18,322	18,580	20,550	1.4	10.6
COMPONENT INDICATOR--				5.9*	9.2*
2. SCHOOL BUILDING ADMINISTRATORS					
Principals:					
Elementary	17,785	19,442	20,901	9.3	7.5
Junior High/Middle	19,918	20,616	22,683	3.5	10.0
Senior High	19,385	20,857	22,771	7.6	9.2
Assistant Principals:					
Elementary	16,727	17,475	18,248	4.5	4.4
Junior High/Middle	18,462	18,530	20,405	0.4	10.1
Senior High	18,641	18,804	20,655	0.9	9.8
COMPONENT INDICATOR--				4.4	8.5
3. CLASSROOM TEACHERS					
Classroom Teachers	11,799	12,549	13,593	6.4	8.3
COMPONENT INDICATOR--				6.4	8.3
4. AUXILIARY PROFESSIONAL PERSONNEL					
Counselors	14,375	15,008	16,169	4.4	7.7
Librarians	12,265	13,073	14,145	6.6	8.2
School Nurses	10,224	10,750	11,739	5.1	9.2
COMPONENT INDICATOR--				5.4	8.4
5. SECRETARIAL/CLERICAL PERSONNEL					
Central-Office:					
Secretaries/Stenographers	7,695	8,204	8,863	6.6	8.0
Accounting/Payroll Clerks	8,081	8,873	9,500	9.8	7.1
Clerk-Typists	5,977	6,302	6,900	6.9	7.9
School Building Level:					
Secretaries/Stenographers	5,941	6,383	6,868	7.4	7.6
Library Clerks	4,587	5,023	5,500	9.5	9.5
COMPONENT INDICATOR--				8.0	8.0
6. OTHER SUPPORT PERSONNEL					
Teacher Aides:					
Instructional	\$3.00	\$3.37	\$3.72	12.3	10.4
Noninstructional	2.90	3.06	3.34	5.5	9.2
Custodians	3.75	4.04	4.31	7.7	6.7
Cafeteria Workers	2.85	3.12	3.37	9.5	8.0
Bus Drivers	4.29	4.60	4.98	7.2	8.3
COMPONENT INDICATOR--				8.4	8.5
<u>COMPOSITE INDICATOR OF CHANGES IN AVERAGE SALARIES AND WAGES:</u>				<u>6.4</u>	<u>8.5</u>
<u>CHANGES IN CONSUMER PRICE INDEX, 1977 and 1978:</u>				6.5	7.7

* Data for Deputy/Associate Superintendents, Administrators for Public Relations/Information, and Administrators for Staff Personnel are not included for 1978-79 and in the Central-Office Administrators component indicator for the very small enrollment group because too few school systems of this size reported personnel in these categories.

FIGURE 2 CIC and Its Six Component Indicators for School Systems Enrolling 25,000 or More Pupils for School Years 1977-78 and 1978-79 and the CPI for Calendar Years 1977 and 1978

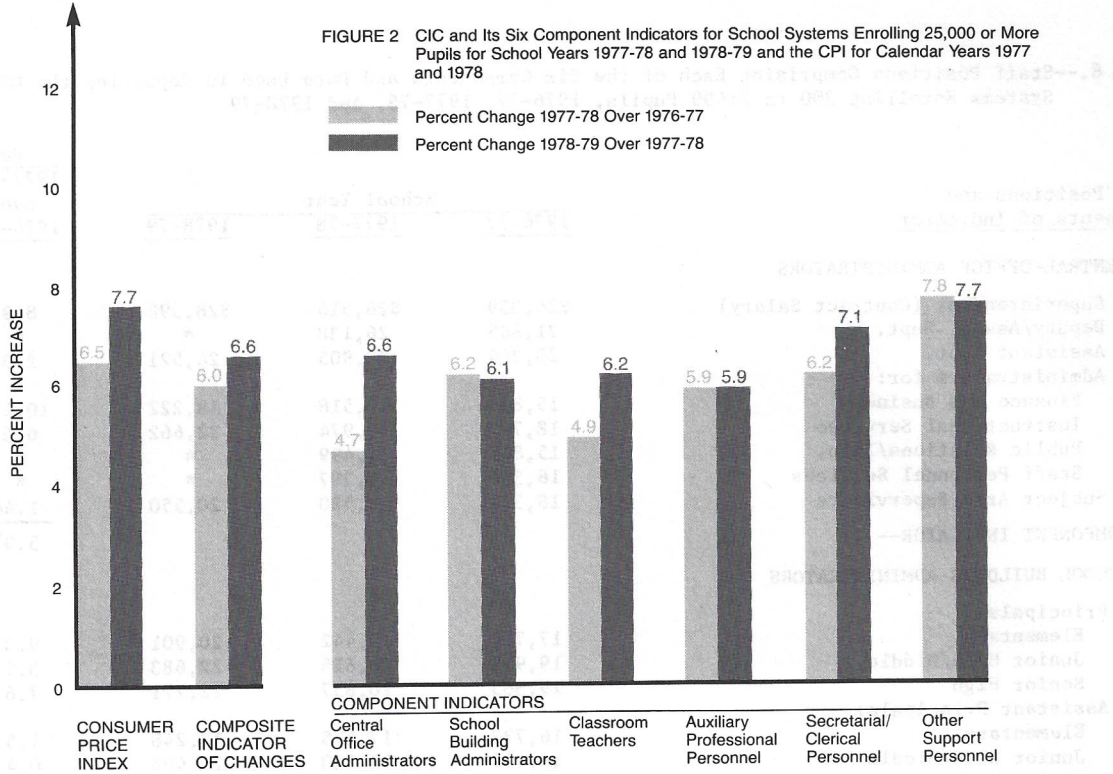


FIGURE 3 CIC and Its Six Component Indicators for School Systems Enrolling 10,000 to 24,999 Pupils for School Years 1977-78 and 1978-79 and the CPI for Calendar Years 1977 and 1978

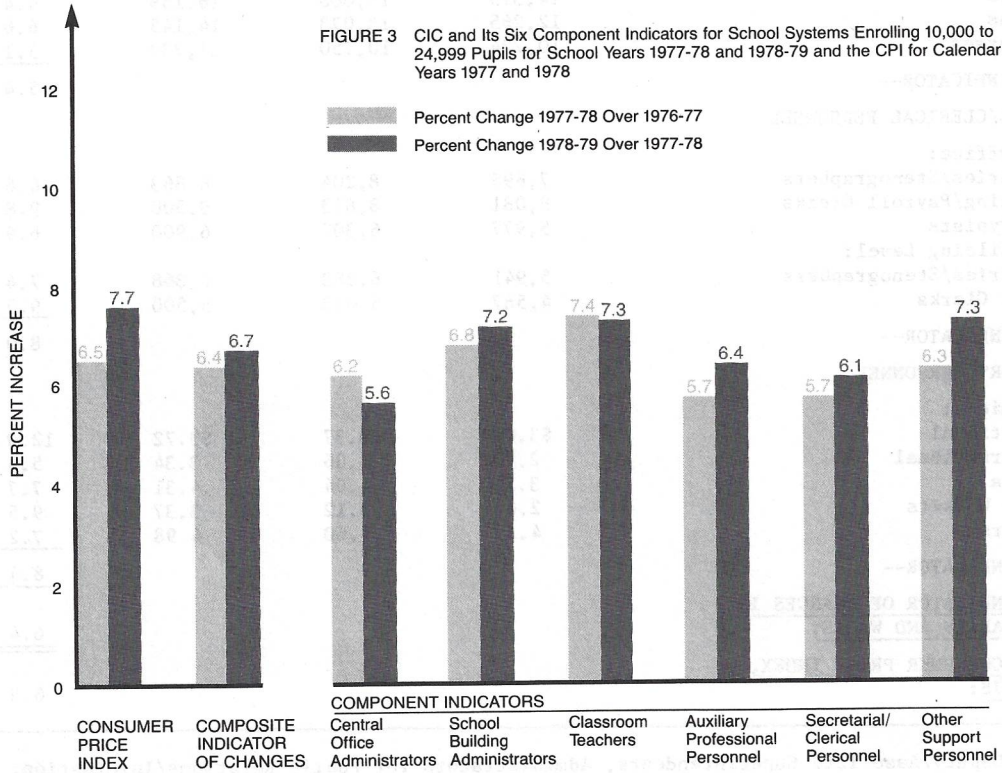


FIGURE 4 CIC and Its Six Component Indicators for School Systems Enrolling 2,500 to 9,999 Pupils for School Years 1977-78 and 1978-79 and the CPI for Calendar Years 1977 and 1978

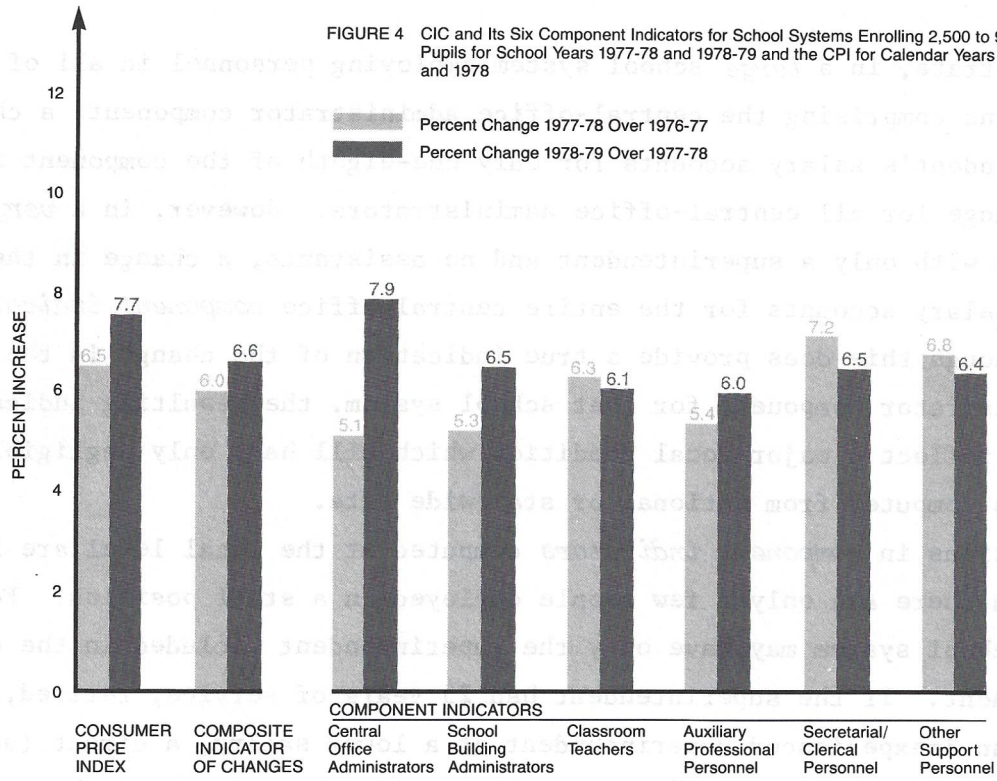
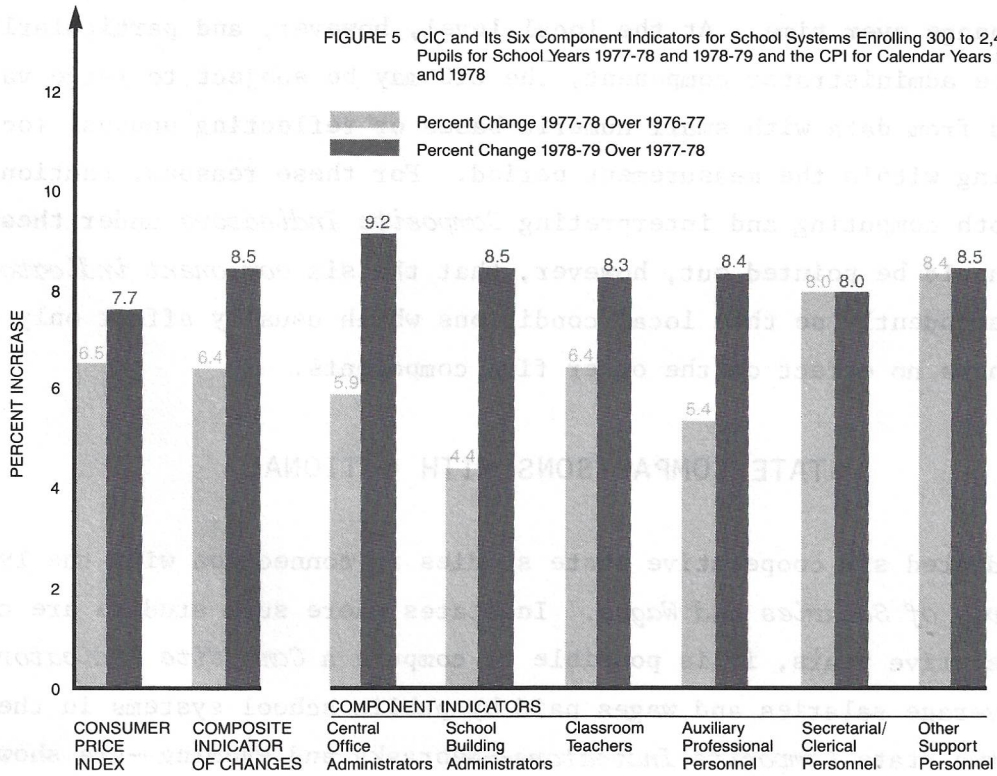


FIGURE 5 CIC and Its Six Component Indicators for School Systems Enrolling 300 to 2,499 Pupils for School Years 1977-78 and 1978-79 and the CPI for Calendar Years 1977 and 1978



To illustrate, in a *large* school system employing personnel in all of the eight positions comprising the central-office administrator component, a change in the superintendent's salary accounts for only one-eighth of the component indicator of salary change for all central-office administrators. However, in a *very small* school system with only a superintendent and no assistants, a change in the superintendent's salary accounts for the entire central-office *component indicator of change*. Although this does provide a true indication of the change in the central-office administrator component for that school system, the resulting indicator may occasionally reflect a major local condition which will have only negligible effect on indicators computed from national or statewide data.

Fluctuations in *component indicators* computed at the local level are likely to occur when there are only a few people employed in a staff position. For example, a school system may have only the superintendent included in the central-office component. If the superintendent had 25 years of service, retired, and was replaced by an inexperienced superintendent at a lower salary, a direct (and possibly large) *drop* in the *component indicator* would result. Even in cases where a position in which only one or two persons are employed does not constitute the entire component, unusual fluctuation in percent change data for the entire component can occur. In computing CIC data collected from a *group* of school systems, such variations from unusual local conditions will tend to balance each other and provide a reliable measure of change over time. At the local level, however, and particularly for the central-office administrator component, the CIC may be subject to large variation when computed from data with small numeric bases or reflecting unusual local conditions occurring within the measurement period. For these reasons, caution should be used in both computing and interpreting *Composite Indicators* under these conditions. It should be pointed out, however, that the six *component indicators* are computed independently so that local conditions which usually affect only one component will have no effect on the other five components.

STATE COMPARISONS WITH NATIONAL

ERS conducted six cooperative state studies in connection with the 1978-79 *National Survey of Salaries and Wages*. In states where such studies are conducted for two consecutive years, it is possible to compute a *Composite Indicator of Changes* in average salaries and wages paid by public school systems in the state. Examples of two state *Composite Indicators*--Nebraska and Wyoming--are shown in

Table 9. The *Nebraska Composite Indicator of Changes* in average salaries and wages paid is 7.1 percent compared with the *Wyoming Composite Indicator of Changes* of 9.2 percent and the *National Composite Indicator* of 6.7 percent. *Composite Indicators* can also be constructed for geographic regions within a state so long as there is reasonable consistency in the groups of school systems reporting data. It should be noted that the CIC does not reflect changes in fringe benefits and other non-salary items which may be important compensation factors at the state and local levels.

CHANGES OVER AN EXTENDED PERIOD

The *Composite Indicator of Changes* in average salaries and wages is not confined to annual comparisons but can be computed for any period of time for which appropriate data are available. The changes indicated by the CIC for that period can also be compared with changes in the Consumer Price Index for a comparable period of time. Table 6 shows the *Composite Indicator* and the six *component indicators* for the period 1978-79 over 1975-76.

The method of calculating the CIC for an extended period is the same as that used in the annual computation. First compute the percent change in average salaries for each *category* in the *component indicator* group that occurred from the beginning to the end of the period. Average the category changes to obtain the six *component indicators*. Then average the *component indicators* to obtain the CIC. Thus as shown in Table 10, the CIC indicates that salaries and wages in public schools in the period 1978-79 over 1975-76 increased by an average of 19.0 percent, while the Consumer Price Index rose 21.2 percent for the calendar year period 1978 over 1975.

It is important to remember when computing the CIC for an extended period of time that the CIC, or a *component indicator*, is the percent change in the mean of average salaries paid at the beginning and end of the period and *not* the average of the changes in mean salaries over parts of the period. For example, the percent change in salaries of classroom teachers for 1978-79 over 1975-76, as shown in Table 9, is 19.8 percent. It is not the average of the annual percent changes that are presented in Table 2, which is 18.7 percent.

HOW TO USE THE CIC

This section is designed to assist those wishing to compute *Composite Indicators of Changes* in salaries and wages paid to personnel in local school systems.

TABLE 9.--ERS Composite Indicator of Changes in Average Salaries and Wages Paid by School Systems Enrolling 300 or More Pupils Reporting Data in Two State Surveys (Nebraska and Wyoming) and Composite Indicator for All School Systems Reporting Data in National Survey, 1978-79 over 1977-78

Components of Indicator	Indicators for		
	National Survey	Nebraska Survey	Wyoming Survey
1. CENTRAL-OFFICE ADMINISTRATORS	6.3%	4.4%	10.5%
2. SCHOOL BUILDING ADMINISTRATORS	6.7	7.4	10.5
3. CLASSROOM TEACHERS	6.9	6.5	9.9
4. AUXILIARY PROFESSIONAL PERSONNEL	6.4	7.0	7.8
5. SECRETARIAL/CLERICAL PERSONNEL	6.5	9.9	7.4
6. OTHER SUPPORT PERSONNEL	7.1	7.4	9.3
Composite Indicator of Changes in Average Salaries and Wages, 1978-79	<u>6.7%</u>	<u>7.1%</u>	<u>9.2%</u>
Change in Consumer Price Index During Calendar Year 1978	7.7%

TABLE 10.--Mean of Average Salaries and Wages Paid by Public School Systems in 1975-76 and 1978-79 and the Composite Indicator of Changes for the Three-Year Period from 1975-76 to 1978-79

Staff Positions and Components of Indicator	Mean of Average Salaries and Wages Paid		Percent Change 1978-79 over 1975-76
	1975-76	1978-79	
1. CENTRAL-OFFICE ADMINISTRATORS			
Superintendent (Contract Salary)	\$32,527	\$36,924	13.5%
Deputy/Assoc. Supt.	30,778	34,898	13.4
Assistant Supt.	27,082	31,513	16.4
Administrators for:			
Finance and Business	21,436	24,507	14.3
Instructional Services	22,830	27,034	18.4
Public Relations/Info.	19,519	22,207	13.8
Staff Personnel Services	22,239	26,857	20.8
Subject Area Supervisors	19,694	23,038	17.0
COMPONENT INDICATOR--			16.0
2. SCHOOL BUILDING ADMINISTRATORS			
Principals:			
Elementary	19,865	23,618	18.9
Junior High/Middle	21,876	25,910	18.4
Senior High	23,306	27,422	17.7
Assistant Principals:			
Elementary	16,875	19,827	17.5
Junior High/Middle	18,690	22,171	18.6
Senior High	19,651	23,222	18.2
COMPONENT INDICATOR--			18.2
3. CLASSROOM TEACHERS			
Classroom Teachers	12,437	14,899	19.8
COMPONENT INDICATOR--			19.8
4. AUXILIARY PROFESSIONAL PERSONNEL			
Counselors	15,017	17,698	17.9
Librarians	13,207	15,727	19.3
School Nurses	11,046	13,113	18.7
COMPONENT INDICATOR--			18.6
5. SECRETARIAL/CLERICAL PERSONNEL			
Central-Office:			
Secretaries/Stenographers	7,929	9,553	20.2
Accounting/Payroll Clerks	8,088	9,744	20.5
Clerk-Typists	6,593	7,863	19.3
School Building Level:			
Secretaries/Stenographers	6,521	7,772	19.2
Library Clerks	5,333	6,449	20.9
COMPONENT INDICATOR--			20.0
6. OTHER SUPPORT PERSONNEL			
Teacher Aides:			
Instructional	\$3.12	\$3.77	20.8
Noninstructional	2.92	3.57	22.3
Custodians	3.78	4.53	19.8
Cafeteria Workers	2.83	3.48	23.0
Bus Drivers	4.04	4.93	22.0
COMPONENT INDICATOR--			21.6
<u>COMPOSITE INDICATOR OF CHANGES IN AVERAGE SALARIES AND WAGES:</u>			<u>19.0</u>
<u>CHANGES IN CONSUMER PRICE INDEX</u> Calendar Year 1978 over Calendar Year 1975:			21.2

Given here are examples of the procedures that should be used along with work sheets for use in compiling the local data. Also included are outline graphs on which local data can be plotted along with comparative CIC data from other local school systems, enrollment groups, or national and state data as the user might deem appropriate. Such outline graphs are designed to be helpful in preparing visual presentations of CIC comparative data for a local school system.

Assume that school management in a medium-sized school system named ABC wish to compute the CIC for their system for school year 1978-79. They also want to compare changes in average salaries and wages in ABC with comparable data at the local, state, and national levels.

First, the local CIC must be calculated. Average salary data for 1977-78 and 1978-79 for the 28 employee positions must be calculated. If the school system responded to the ERS *National Survey of Salaries and Wages in Public Schools* in these two years, the problem is easy, since the data can be found in the "system-by-system listing" at the end of Parts 2 and 3 of the National Survey for 1977-78 and 1978-79. If not, the data must be calculated from information available in the local school system. In assembling such data, care should be taken to include in the personnel categories of the six *component indicators* only those positions used by ERS in computing its national salary and wage data. A guide to these 28 employee position categories is detailed below:

Description of Position Categories

For each position category, compute the average of the salaries paid to *all* employees in the category. This average should be the sum of the salaries of all *full-time* persons in the category divided by the number of persons in the category. Persons with multiple assignments should be counted as whole persons (with the total salary paid) in the category in which the *greatest* amount of time is spent, even if less than 50 percent. Do *not* include the SAME person in more than one category.

1. CENTRAL-OFFICE ADMINISTRATORS

This *component indicator* includes professional and administrative personnel assigned to systemwide programs or functions funded from the school system's operating budget. These positions are specified by name below. It is possible that your school system may have persons whose responsibilities do not match those specified. They should not be included in any category. The information below will help you to determine where to include personnel whose titles may differ from those

specified in CIC sub-categories. Persons with duties and responsibilities similar to those described below for a specific category should be placed in that category, even if they do not operate within a formal department. For example, an "Administrative Assistant" who has primary responsibility for school-community relations should be included in the "Public Relations" category. Clerical and support personnel at the central-office level should *not* be included here. (See *Component Indicator 6.*)

Superintendent: Include contract salary paid to the superintendent.

Deputy/associate superintendents: Include area/regional superintendents in decentralized school systems.

Assistant superintendents: Include all persons with the title "Assistant Superintendent" regardless of their functional area of responsibility.

Other central-office administrators: Include personnel with primary responsibility for directing staff members or managing programs in the specified functional areas. Do not include associate or assistant superintendents reported above.

- *Finance and business* -- Include personnel with primary responsibility for business management and fiscal services (accounting, analysis, auditing, budgeting, controlling, payroll, purchasing, etc.).
- *Instructional services* -- Include personnel with primary responsibility for regular and special instructional programs and services and for curriculum development at the central-office level for grades K-12 (for example, director of curriculum, director of elementary education, director of special education). Do not include personnel responsible for vocational or adult/community education programs. Include subject area supervisors in the separate category provided below.
- *Public relations/information* -- Include personnel responsible for public information and/or school-community relations.
- *Staff personnel services* -- Include persons with primary responsibility for recruiting, placing and transferring school system employees, for maintaining personnel records and reports, and for developing and implementing personnel policies and practices.

Subject area supervisors: Include all central-office personnel with primary responsibility for managing and improving instructional programs and

for supervising instructional staff in a specific field such as art, music, mathematics, physical education, etc.

2. SCHOOL BUILDING ADMINISTRATORS

Principals and assistant principals: Include teaching principals and assistant principals at the elementary, junior high/middle school, and senior high school levels. Do not include administrators for vocational and adult/continuing education school programs.

3. CLASSROOM TEACHERS

Classroom teachers: Include only full-time teachers with regular classroom or subject-matter assignments. Do not include other teachers, such as visiting teachers or special program teachers.

4. AUXILIARY PROFESSIONAL PERSONNEL

Counselors: Include both counselors and head counselors.

Librarians: Include school building librarians (not clerks). If library services are provided from the central-office only, omit this category.

School nurses: Include both licensed and registered nurses with full-time assignments at the school building level. If all (or most) of the student health services are provided by personnel not employed by the school system (for example, the Public Health Service), omit this category.

5. SECRETARIAL/CLERICAL PERSONNEL

Central-office:

Secretaries/stenographers: Include all full-time secretaries and stenographers at the central-office level.

Accounting/payroll clerks: Include all full-time accounting and payroll clerks at the central-office level.

Clerk-typists: Include all full-time clerk-typists at the central-office level.

School Building Level:

Secretaries/stenographers: Include all secretaries and stenographers at the school building level.

Library clerks: Include all library clerks at the school building level. Do not include librarians.

6. OTHER SUPPORT PERSONNEL

Only a few selected support positions are reported here. It is not intended that all support staff employed in your school system be included in this category. Include data for only those position categories specified. These data should be recorded as the average of hourly wage rates paid to personnel employed in each category.

Teacher aides:

Instructional: Aides assigned routine classroom activities directly associated with teaching and involving some pupil contact or minor teaching decisions.

Noninstructional: Aides assigned to assist teachers with routine activities such as clerical or equipment operation assignments that do not involve decisions concerning the teaching process and do not necessarily take place in the classroom.

Custodians: Include all janitorial personnel. Do not report engineers or members of skilled trades. If custodians also serve as bus drivers, include them in the category in which the greatest amount of time is spent.

Cafeteria workers: Include all employees who work in school cafeterias. Do not include supervisors.

Bus drivers: Include bus drivers employed by the school system with full-time assignments. If bus service is provided by an outside agency, omit this category.

Suppose that school system ABC's average salary data for Component 4 of its CIC looked like this:

4. AUXILIARY PROFESSIONAL PERSONNEL

	<u>1977-78</u>	<u>1978-79</u>
Counselors	\$16,000	\$17,000
Librarians	14,000	15,000
School Nurses	12,000	13,000

Once these data are available, they can be recorded on the work sheet at the end of this section and percent changes for each position can be calculated by using the following formula:

$$\text{Percent change, 1978-79 over 1977-78} = \frac{\text{1978-79 mean salary less 1977-78 mean salary}}{\text{1977-78 mean salary}}$$

Percent changes for Component 4 would look like this:

6. AUXILIARY PROFESSIONAL PERSONNEL

	<u>1977-78</u>	<u>1978-79</u>	Percent Change 1978-79 over <u>1977-78</u>
Counselors	\$16,000	\$17,000	6.3%
Librarians	14,000	15,000	7.1
School Nurses	12,000	13,000	8.3

To calculate *component indicators*, add the percent change of the average salaries and wages for each position within the component and divide by the number of positions. The *component indicator* for Component 4 would be 6.3% + 7.1% + 8.3% = 21.7% ÷ 3 = 7.2%. A *small* system, such as School System XYZ, might not have enough data for each of the 28 positions. This is especially apparent in Component 1 for central-office administrators. However, in such cases, the percent changes in the average salaries and wages should be summed and divided by the number of positions for which information is available. For example, ABC and XYZ would calculate the *component indicator* for Component 1 as follows:

	<u>ABC (medium) Percent Change 1978-79 over 1977-78</u>	<u>XYZ (small) Percent Change 1978-79 over 1977-78</u>
1. CENTRAL-OFFICE ADMINISTRATORS		
Superintendent	6.3%	7.2%
Deputy/Assoc. Supt.	5.8	NA
Assistant Supt.	4.3	5.8
Administrators for:		
Finance and Business	8.9	6.2
Instructional Services	7.2	7.1
Public Relations/Info.	6.5	NA
Staff Personnel Services	6.0	7.0
Subject Area Supervisors	+ <u>5.9</u>	+ <u>6.3</u>
COMPONENT INDICATOR	50.9 ÷ 8 = 6.4%	39.6 ÷ 6 = 6.6%

Each of the six *component indicators* are developed in this manner. Calculating the CIC for School System ABC is made exactly as above, that is, the six *component indicators* are added, with the sum divided by six as shown here:

	<u>Component Indicator</u>
1. Central-Office Administrators	7.2%
2. School Building Administrators	6.8
3. Classroom Teachers	6.9
4. Auxiliary Professional Personnel	7.5
5. Secretarial/Clerical Personnel	8.0
6. Other Support Personnel	+ 6.5
COMPOSITE INDICATOR	42.9 ÷ 6 = 7.2%

School System ABC is now able to compare its CIC and six *component indicators* with those of other local systems and with state and national data. Data for many other local school systems can be obtained by simply consulting Parts 2 and 3 of the annual ERS *National Survey of Salaries and Wages in Public Schools* for the appropriate two years. ERS also has compiled data in cooperation with school administrator associations in the following states from which CIC data can be computed. (For additional information about these state salary studies, contact ERS.)

	<u>Years for Which Salary and Wage Data Are Available from ERS</u>
Alabama	1977-78, 1978-79
California	1976-77, 1977-78, 1978-79*
Florida	1977-78, 1978-79
Indiana	1976-77
Maine	1976-77, 1977-78
Nebraska	1976-77, 1977-78, 1978-79
Virginia	1976-77, 1977-78, 1978-79
Wyoming	1977-78, 1978-79

* Data for 1978-79 collected but not processed at time of printing.

The CIC and its component groups for School System ABC can now be compared with another local system (DEF), state data, national data, and data for similar enrollment groups:

<u>Component Indicator</u>	School System ABC (medium)	School System DEF (medium)	ABC's State (medium)	National (medium)	All Reporting ABC's State	All Reporting National
1. Central-Office Admin	7.2%	9.8%	4.6%	6.4%	5.4%	6.3%
2. School Bldg Admin	6.8	10.6	8.3	6.8	4.8	6.7
3. Classroom Teachers	6.9	8.6	6.5	5.4	7.3	6.9
4. Aux Professional Personnel	7.5	7.2	7.2	7.2	6.2	6.4
5. Sec/Clerical Personnel	8.0	6.0	6.1	8.3	7.0	6.5
6. Other Support Personnel	6.5	8.0	5.9	7.1	6.9	7.1
COMPOSITE INDICATOR	7.2	8.4	6.4	6.9	6.3	6.7

Work Sheet for Compiling Local School System CIC Data
For Comparison with State or National CIC Data

Staff Positions and
Components of Indicator

1. CENTRAL-OFFICE ADMINISTRATORS

Superintendent (Contract Salary) _____
Deputy/Assoc. Supt. _____
Assistant Supt. _____
Administrators for:
Finance and Business _____
Instructional Services _____
Public Relations/Info. _____
Staff Personnel Services _____
Subject Area Supervisors _____

COMPONENT INDICATOR-- _____

2. SCHOOL BUILDING ADMINISTRATORS

Principals:
Elementary _____
Junior High/Middle _____
Senior High _____
Assistant Principals:
Elementary _____
Junior High/Middle _____
Senior High _____

COMPONENT INDICATOR-- _____

3. CLASSROOM TEACHERS

Classroom Teachers _____

COMPONENT INDICATOR -- _____

INDEX OF CHANGES IN SALARIES AND WAGES FOR THE YEAR 1968
INDICATOR OF CHANGES IN SALARIES AND WAGES FOR THE YEAR 1968
COMPONENT INDICATOR

4. AUXILIARY PROFESSIONAL PERSONNEL

Counselors _____
Librarians _____
School Nurses _____

COMPONENT INDICATOR-- _____

5. SECRETARIAL/CLERICAL PERSONNEL

Central-Office:
Secretaries/Stenographers _____
Accounting/Payroll Clerks _____
Clerk-Typists _____
School Building Level:
Secretaries/Stenographers _____
Library Clerks _____

COMPONENT INDICATOR-- _____

6. OTHER SUPPORT PERSONNEL

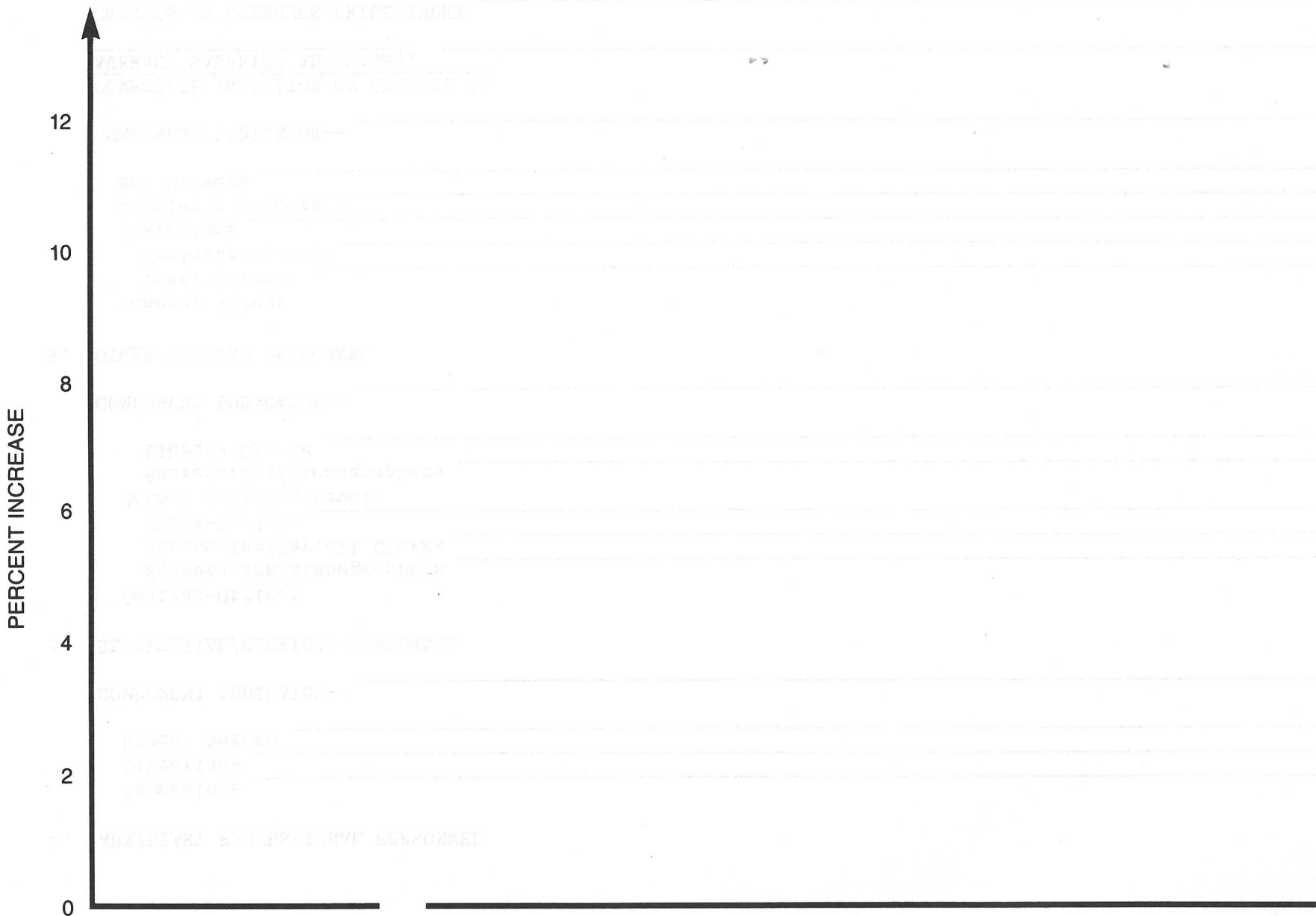
Teacher Aides:
Instructional _____
Noninstructional _____
Custodians _____
Cafeteria Workers _____
Bus Drivers _____

COMPONENT INDICATOR-- _____

COMPOSITE INDICATOR OF CHANGES IN
AVERAGE SALARIES AND WAGES: _____

CHANGES IN CONSUMER PRICE INDEX _____

OUTLINE GRAPH FOR PLOTTING COMPARATIVE CIC DATA



CONSUMER
PRICE
INDEX

COMPOSITE
INDICATOR
OF CHANGES

Central
Office
Administrators

School
Building
Administrators

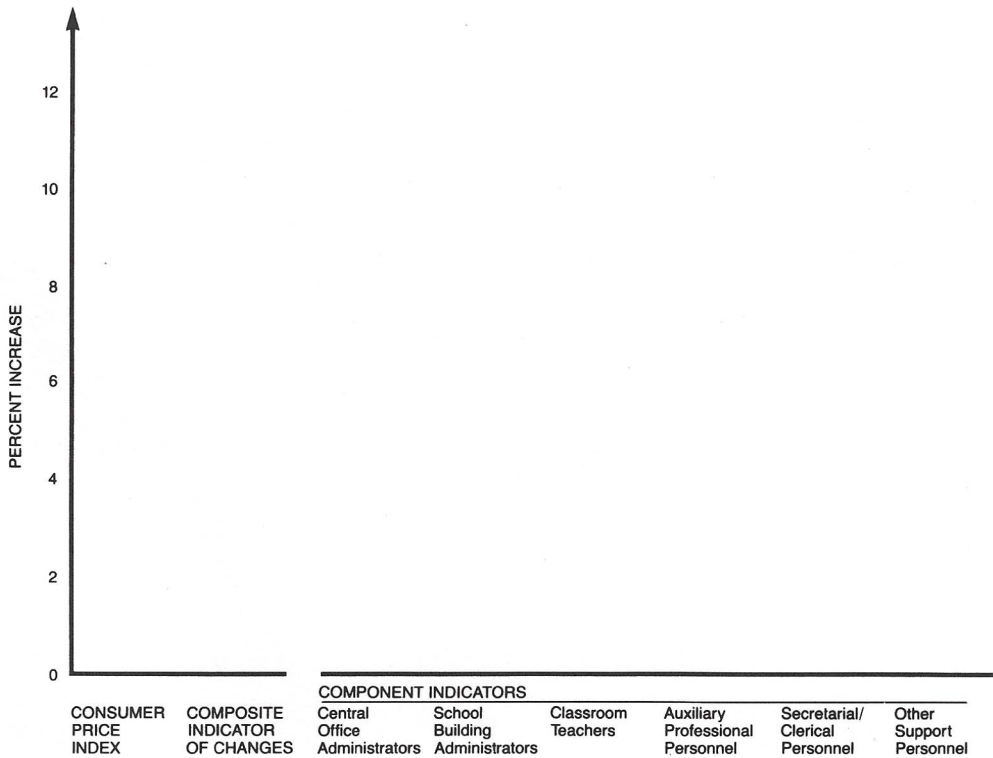
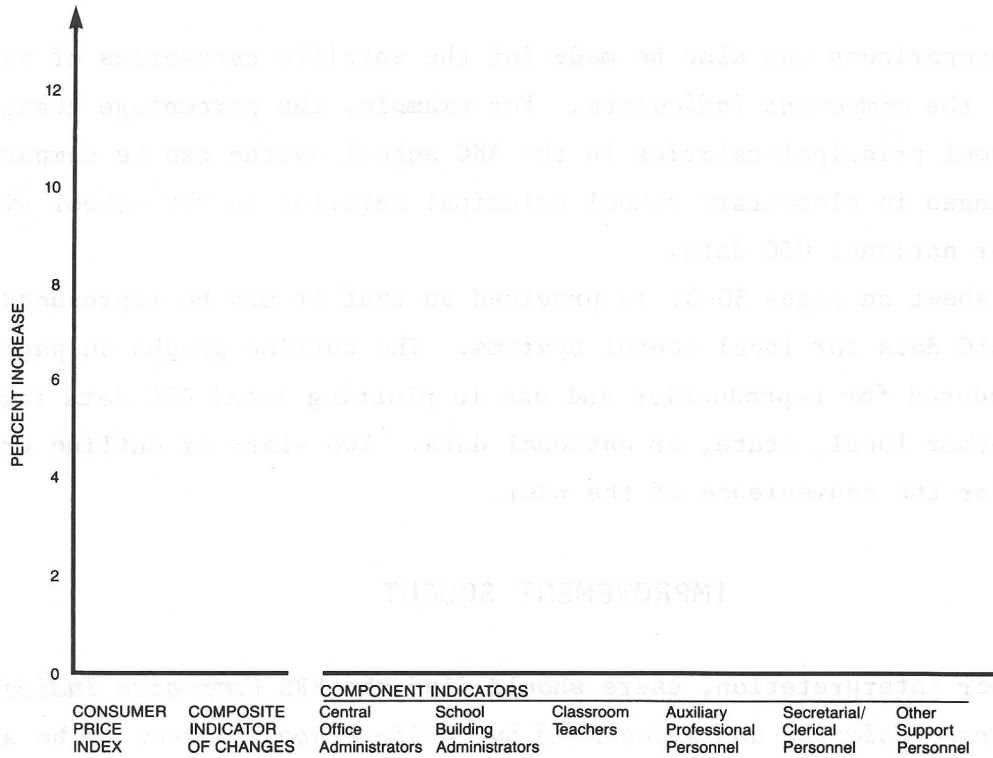
Classroom
Teachers

Auxiliary
Professional
Personnel

Secretarial/
Clerical
Personnel

Other
Support
Personnel

COMPONENT INDICATORS



Similar comparisons can also be made for the specific categories of personnel within each of the *component indicators*. For example, the percentage changes in elementary school principal salaries in the ABC school system can be compared with percentage changes in elementary school principal salaries in DEF school system, or the state or national CIC data.

The work sheet on pages 30-31 is provided so that it may be reproduced for use in compiling CIC data for local school systems. The outline graphs on pages 32 and 33 are produced for reproduction and use in plotting local CIC data for comparison with other local, state, or national data. Two sizes of outline graphs are provided for the convenience of the user.

IMPROVEMENT SOUGHT

With proper interpretation, users should find the ERS *Composite Indicator of Changes in Average Salaries and Wages Paid by Public School Systems* to be a helpful statistical tool in assessing trends in salaries and wages occurring within the public schools. As part of its continuing search to develop better research tools for school management, ERS will seek to improve further the *Composite Indicator of Changes*. Suggestions and comments from users are always welcome. Copies or examples of how CIC data are being used in local school systems would be appreciated.

REFERENCES

Complete data on salaries and wages *paid* professional and support personnel in public schools are contained in Parts 2 and 3 of the annual ERS *National Survey of Salaries and Wages in Public Schools*, published each February and containing data for the current school year. Each of the 1977-78 volumes is \$18.00 and may be ordered from Educational Research Service, 1800 North Kent Street, Arlington, Virginia 22209. Billed orders will include a charge for postage and handling.

- Part 2: *Salaries Paid Professional Personnel in Public Schools, 1978-79.* 1979. 147 pp.
- Part 3: *Wages and Salaries Paid Support Personnel in Public Schools, 1978-79.* 1979. 91 pp.

ERS has also compiled a report on the Consumer Price Indexes. This Information Aid is designed to alert school officials to changes and revisions in the CPI, to familiarize them with differences between the former CPI and the new and revised indexes, to demonstrate how BLS computes changes in the CPI, to indicate its appropriate uses, and to describe available sources of information on the CPI and other economic indicators.

- *The New and Revised Consumer Price Indexes (1978)* is available from ERS at the address above for \$8.00 a copy. 47 pp.

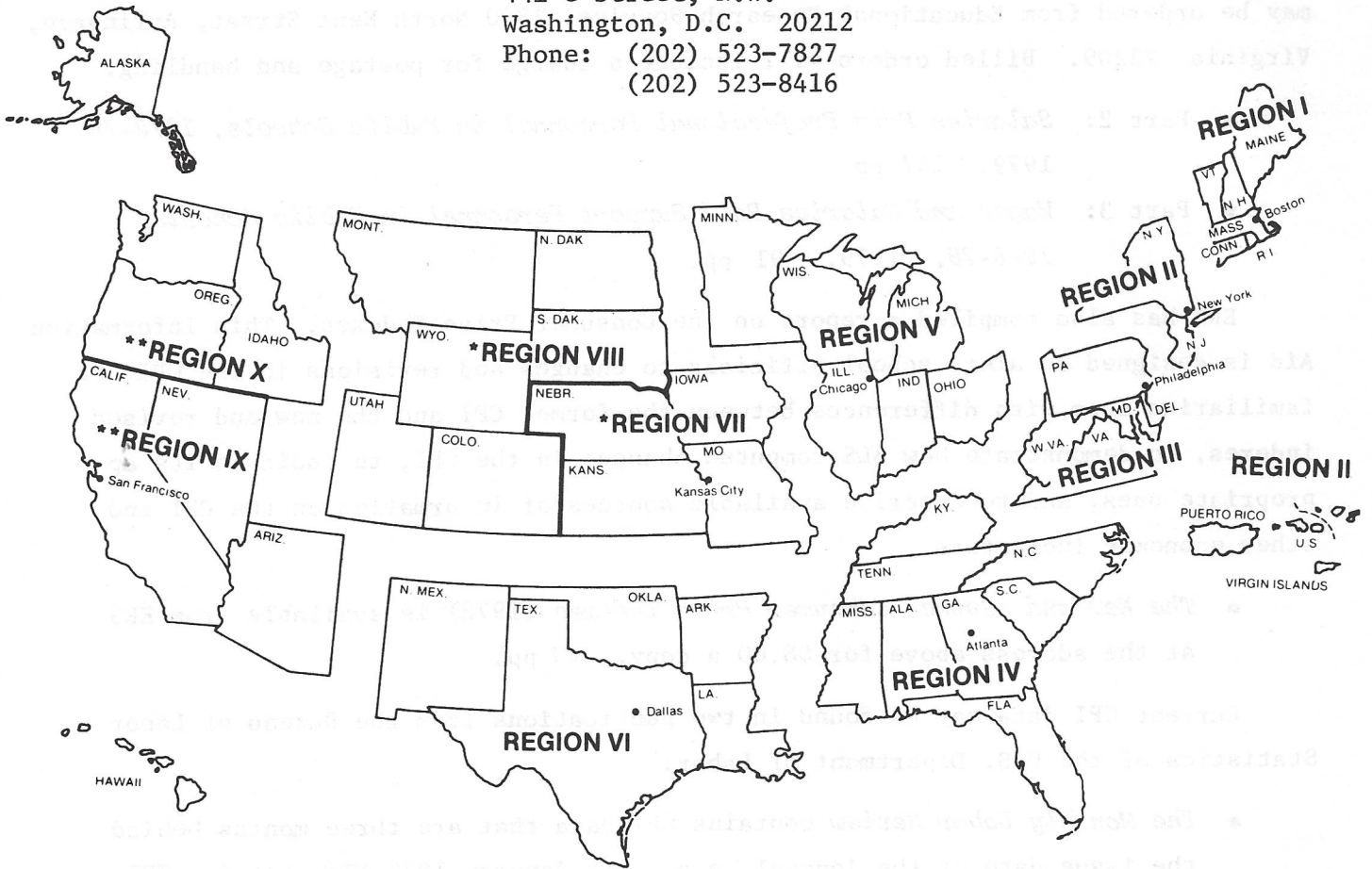
Current CPI data may be found in two publications from the Bureau of Labor Statistics of the U.S. Department of Labor:

- *The Monthly Labor Review* contains CPI data that are three months behind the issue date of the journal, e.g., the January 1979 *MLR* contains CPI data through October 1978. Subscriptions to *MLR* are \$16.00 a year and should be sent to Monthly Labor Review, Box 353, La Plata, Maryland 20646. Checks should be made payable to Superintendent of Documents.
- *Monthly BLS press releases* announce monthly changes in the CPI as soon as data are made available from the Department of Labor, e.g., the January 1979 press release contains CPI data on December 1978. Press releases may be obtained free of charge from the BLS National Office in Washington, D.C. or any of its regional offices. Page 34 includes a map of the 10 regions and addresses and telephone numbers for these offices.

BLS NATIONAL AND REGIONAL OFFICES

NATIONAL OFFICE

U.S. Department of Labor
 Bureau of Labor Statistics
 Room 1539, GAO Building
 441 G Street, N.W.
 Washington, D.C. 20212
 Phone: (202) 523-7827
 (202) 523-8416



REGIONAL OFFICES

Region I
 1603 JFK Federal Building
 Government Center
 Boston, Mass. 02203
 Phone: (617) 223-6761

Region II
 Suite 3400
 1515 Broadway
 New York, N.Y. 10036
 Phone: (212) 399-5405

Region III
 3535 Market Street
 P.O. Box 13309
 Philadelphia, Pa. 19101
 Phone: (215) 596-1154

Region IV
 1371 Peachtree Street, NE.
 Atlanta, Ga. 30309
 Phone: (404) 881-4418

Region V
 9th Floor
 Federal Office Building
 230 S. Dearborn Street
 Chicago, Ill. 60604
 Phone: (312) 353-1880

Region VI
 Second Floor
 555 Griffin Square Building
 Dallas, Tex. 75202
 Phone: (214) 749-3516

Regions VII and VIII*
 911 Walnut Street
 Kansas City, Mo. 64106
 Phone: (816) 374-2481

Regions IX and X**
 450 Golden Gate Avenue
 Box 36017
 San Francisco, Calif. 94102
 Phone: (415) 556-4678

*Regions VII and VIII are serviced by Kansas City

**Regions IX and X are serviced by San Francisco



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