DOCUMENT RESUME

ED 287 392 HE 020 808

AUTHOR Howe, Richard D.; Tuttle, Lynette

TITLE Salary-Trend Study of Faculty in Physical Sciences

for the Years 1983-84 and 1986-87.

INSTITUTION Appalachian State Univ., Boone, N.C.; College and

Univ. Personnel Association, Washington, D.C.

PUB DATE 87

16p.; For related documents, see HE 020 777-818.

Reports - Research/Technical (143)

EDRS PRICE DESCRIPTORS

PUB TYPE

NOTE

MF01 Plus Postage. PC Not Available from EDRS.
Academic Rank (Professional); *College Faculty;
College Programs; College Science; Comparative
Analysis; Departments; *Full Time Faculty; Higher
Education; Intellectual Disciplines; *Physical
Sciences; Private Colleges; Public Colleges; *Science

Teachers; *Teacher Salaries; Trend Analysis

ABSTRACT

Average salary increases for 912 faculty in the field of physical sciences are reported for 1983-1984 and 1986-1987, as part of the College and University Personnel Association's annual faculty salary studies. Included are comparative data for 120,580 faculty at 167 public colleges and 235 private colleges, representing 44 academic disciplines. In 1983, 50 public colleges and 34 private colleges reported on salaries of faculty in the physical sciences, while 43 public and 31 private colleges reported in 1986. Between 1983 and 1986, average salaries of faculty in this field increased 18.9% at public colleges and 16.4% at private colleges. For 1986-1987, the average salary for physical sciences faculty was about 2% above the average faculty salary in the other 43 disciplines for public colleges, while it was 9% below the average salary for other disciplines at private colleges. Included is information on: the number of faculty by academic rank, including new assistant professors; salaries by academic rank; the ratio of average salaries to total salaries of all institutions in both years; comparisons with the Consumer Price Index of changes in cost-of-living for both years; and comparisons with 43 other disciplines. The disciplines and participating institutions are listed. (SW)

* Reproductions supplied by EDRS are the best that can be made from the original document.

.

E 0287392

F 020 808

SALARY-TREND STUDY OF FACULTY IN PHYSICAL SCIENCES

FOR THE YEARS

1983-84 AND 1986-87

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Richard D. Howe Appalachian State Univ.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Since 1982-83 the College and University Personnel Association (CUPA) in Washington, D.C., in cooperation with Appalachian State University in Boone, North Carolina, has conducted annual national faculty salary studies by discipline and rank each year through 1986-87. Each year two separate studies are conducted, one for public senior colleges and universities which are members of the American Association of State Colleges and Universities (AASCU) in Washington, D.C., and the other for private senior colleges and universities. The list of private institutions is provided by the American Council on Education in Washington, D.C.

Salary data for each study were collected and tabulated for full-time teaching faculty in 44 selected academic disciplines including physical sciences. The disciplines were chosen from among those defined by the Higher. Education General Information Study (HEGIS) Taxonomy and by A Classification of Instructional Programs (CIP), 1981. The definition of the discipline/major field of physical sciences in the CIP is as follows:

A summary of instructional programs that describes inanimate objects, processes of matter, energy, and associated phenomena.

This article presents a summary of the overall average salary increases in the discipline/major field of physical sciences from the "baseline year" of 1983-84 to and including the "trend year" of 1986-87 for both public and private institutions. Of the 215 institutions which participated in CUPA's

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

Minor changes have been made to improve reproduction quality.

This document has been reproduced as received from the person or organization organization

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PUBLIC (AASCU) study of 1983-84, 167 also participated in 1986-87. Data from those same 167 institutions were used in both the baseline year and the trend year. Of the 355 institutions which participated in CUPA'S PRIVATE study of 1983-84, 235 also participated in 1986-87. Data from those same 235 institutions were used in both the baseline year and the trend year.

This study lists the average salaries of physical sciences faculty for both public and private participating institutions by rank, including "new assistant professor," the FAC MIX PCT (faculty mix percentage) and the salary factor. In addition, comparisons are made with the CPI (Consumer Price Index) of changes in cost-of-living between the two studies for each of the two study years (1983-84 and 1986-87).

The CPI is based on prices of food, clothing, shelter and fuels, transportation, medical care, entertainment, and other goods and services that people buy for day-to-day living. In examining trends in faculty salary it is important to consider any changes in the economy. Therefore, the CPI was used to yield a more precise representation of "real" salary increases over time.

The salary is based on a nine- or ten-month academic year salary of full-time faculty only. It does not include any faculty members teaching less than 51 percent. Salary for summer academic work, fringe benefits, and perquisites are not included in the salary data. The average salary is based on the study information with the assumption that all employees were full-time. The average salary displayed is an average of all faculty salaries reported for a given rank and discipline.

The, "NUM" means the number of faculty members whose salaries were included to compute the average salary.

The "N/IN" means the number of institutions that reported salary data for a given academic rank and discipline/major field.

The FAC MIX PCT is the percentage of faculty in a given discipline/major field who hold a given academic rank. For example, a FAC MIX PCT factor of .35 for associate professor of physical sciences in the 1983-84 public study means that 35 percent of the faculty in that discipline/major field hold the rank of associate professor.

The SALARY FACTOR for a given rank of a given discipline/major field is the ratio of the average salary to the total average salary of all institutions in each of the four studies: PUBLIC 1983-84, PUBLIC 1986-87, PRIVATE 1983-84 and PRIVATE 1986-87. For example, a SALARY FACTOR of 1.04 for assistant professors in the discipline/major field of physical sciences in the 1983-84 public study means that their salaries are 4 percent higher than the average of all assistant professors in all institutions in that study.

NEW ASST PROF is the grouping of assistant professors who were hired for the first time in the fall of the study year (1983-84 or 1986-87). All information for this group was included in the ASST PROF group for reporting purposes. This group is used mainly for new hiring information.

ALL MAJOR FIELDS is the entire data base for all 44 disciplines/major fields in each of the four studies. It is used to compare, among other things, the discipline/major field of physical sciences with the entire data base for each study.

Of particular import to the reader is noting the size of the sample on which each percentage or dollar value is based. The smaller the number in the group, the greater the effect of extreme scores on a descriptive statistic such as the average. It should be noted also that any large disparity in the sample sizes between the "baseline year" of 1983-84 and the "trend year" of 1986-87 will lessen the reliability and validity of any conclusions that one might make based on a simple comparison of averages.

PROF SALARY NUM N/IN PUBLIC, 1983-84:			/IN	ASSO PROF SALARY NUM N/IN			ASST PROF SALARY NUM N/IN			NEW ASST PROF SALARY NUM N/IN			INSTRUCTOR SALARY NUM N/IN				RANKS NUM N/IN	
	1983-8	34:					P	HYSIC	AL S	CIENCES								
AVERAGE SALARY:	32631	127	42	27711	124	36	23510	77	29	21898	10	7	18491	24	13	27938	352	50
FAC MIX PCT:	0.36			0.35			0.22			0.03			0.07			1.00		
SALARY FACTOR:	0.99			1.02			1.04			0.99			1.02			1.04		
							A	LL MA	JOR	FIELDS								
AVERAGE																		
SALARY: FAC MIX	33110	11461	L	27177	11328		22634	10381		22154	1290		18126	34,4	2	26895	36612	167
PCT:	0.31			0.31			0.28			0.04			0.09			1.00		
PUBLIC.	1986-	R7 :						HYSTO	AT. S	CIENCES								
AVERAGE SALARY:			37	32320	94	32	26907	78	33	24807	15	12	21967	20	15	33230	327	43
FAC MIX PCT:	0.41		-	0 29	,4	32	0.24	,,	33	0.05	13	1.	0.06	20		1.00		
SALARY FACTOR:	2.12.2																	
PACTOK:	0.98			0.99			0.99		100	0.95			1.02			1.02		
								TT W	JOR	FIELDS								
AVERAGE SALARY:	40113	1303	5	32782	11510		27174	10781		26216	1487		21478	348	39	32670	38815	167
FAC MIX PCT:				0.30			0.28			0.04			0.09			1.00		
PRIVATE AVERAGE		-84:					- 1	PHYSIC	AL S	SCIENCES								
SALARY: FAC MIX	29548	36	16	25351	51	21	20461	34	20	17230	5	5	17097	9	6	24663	130	34
PCT:	0.28	6.		0.39			0.26			0.04			0.07			1.00	i	
SALARY FACTOR:	J.86			0.96			0.94			0.81			0.97			0.93		
								ALL M	JOR	FIELDS								
AVERAGE														100		2.022		
SALARY: FAC MIX		645	0	26502	6767		21689	6900)	21369	856		17673	17	44	26553	21861	235
PCT:	0.30			0.31			0.32			0.04			0.08			1.00		
PRIVATE	. 1986	-87:					10	PHYSI	CAL	SCIENCES								
AVERAGE SALARY:		36	19	28210	32	15	25094	28	17		ONE		18726		7 6	28703	103	31
FAC MIX	0.35		.,	0.31		13	0.27		.,		ONE		0.07			1.00		-
SALARY FACTOR:				0.90			0.98						0.89			0.91		
· notok:	0.04			0.90					A IOP	FIELDS			0.09			0.91		
								run ri	W UK	LIPPOS								
AVERAGE SALARY:	40330	718	7	31212	7199	9	25583	726	9	25205	1173		20959	16	37	31548	3 23292	2 235
FAC MIX	0.3	ı		0.31	ı		0.31			0.05			0.07			1.00)	

RESULTS OF THE TWO PUBLIC (AASCU) STUDIES, 1983-84 AND 1986-87

In the PUBLIC 1983-84 salary study in the above table, the reader may note that the discipline/major field of physical sciences was reported in 50 of the 167 public (AASCU) institutions. The average salary of the 352 faculty was \$27,938. This average salary was approximately 4 percent (1.04) higher than the average salary of \$26,895 for all 36,612 faculty in ALL MAJOR FIELDS in the 1983-84 public study.

In the PUBLIC 1986-87 salary study in the above table, the discipline/major field of physical sciences was reported in 43 of the same 167 public (AASCU) institutions. The average salary of the 327 faculty was \$33,230. This average salary was approximately 2 percent (1.02) higher than the average salary of \$32,670 for all 38,815 faculty in ALL MAJOR FIELDS in the 1986-87 public study.

The increase in average salaries for all faculty in the physical sciences after three years in the public institutions studied was 18.9 percent (\$33,230 minus \$27,938 equals \$5,292). The CPI of increased cost-of-living between October 1983 and October 1986 was 9.2 percent. A more realistic increase, therefore, in average faculty salaries over the three-year time period is 9.7 percent or an average of 3.2 percent each year above the cost-of-living.

The increase in average salaries for all faculty in ALL MAJOR FIELDS after three years in the public institutions studied was 21.5 percent (\$32,670 minus \$26,895 equals \$5,775). In comparison to the discipline/major field of physical sciences (18.9%), therefore, the faculty in ALL MAJOR FIELDS increased their salaries by 2.6 percent (21.5% minus 18.9% equals 2.6%) more than faculty in the discipline/major field of physical sciences.

The reader may note that the faculty mix percentage in the physical sciences was higher at the professor rank than at the assistant professor rank in both of the public studies: 0.36 vs. 0.22 (1983-84), respectively; and 0.41

vs. 0.24 (1986-87), respectively. The differences in faculty mix percentage at the ranks of professor and assistant professor in ALL MAJOR FIELDS for both public studies are as follows: 0.31 vs. 0.28 (1983-84) and 0.34 vs. 0.28 (1986-87), respectively. In other words ALL MAJOR FIELDS has a lower percentage of professors and a higher percentage of assistant professors compared to the physical sciences in both of the public studies.

Finally, the hiring rate of new assistant professors in physical sciences was lower than the hiring rate of new assistant professors in ALL MAJOR FIELDS in the 1983-84 public study: 2.8 percent (10/352) vs. 3.5 percent (1,290/36,612), respectively. However, the hiring rate of new assistant professors in physical sciences in the 1986-87 public study was greater than the hiring rate of new assistant professors in ALL MAJOR FIELDS: 4.6 percent (15/327) vs. 3.8 percent (1,487/38,815), respectively. In other words the hiring rate in the discipline/major field of physical sciences was less than ALL MAJOR FIELDS in 1983-84, but exceeded ALL MAJOR FIELDS in 1986-87.

RESULTS OF THE TWO PRIVATE STUDIES, 1983-84 AND 1986-87

In the PRIVATE 1983-84 salary study in the above table, the reader may note that the discipline/major field of physical sciences was reported in 34 of the 235 private institutions. The average salary of the 130 faculty was \$24,663. This average salary was approximately 7 percent (0.93) lower than the average salary of \$26,553 for all 21,861 faculty in ALL MAJOR FIELDS in the 1983-84 private study.

In the PRIVATE 1986-87 salary study in the above table, the discipline/major field of physical sciences was reported in 31 of the same 235 private institutions. The average salary of the 103 faculty was \$28,703. This average salary was approximately 9 percent (0.91) lower than the average salary of

\$31,548 for all 23,292 faculty in ALL MAJOR FIELDS in the 1986-87 private study.

The increase in average salaries for all faculty in the physical sciences after three years in the private institutions studied was 16.4 percent (\$28,703 minus \$24,663 equals \$4,040). The CPI of increased cost-of-living between October 1983 and October 1986 was 9.2 percent. A more realistic increase, therefore, in average faculty salaries over the three-year time period is 7.2 percent or 2.4 percent each year above the cost-of-living.

The increase in average salaries for all faculty in ALL MAJOR FIELDS after three years in the private institutions studied was 18.8 percent (\$31,548 minus \$26,553 equals \$4,995). In comparison to the discipline/major field of physical sciences (16.4%), therefore, the faculty in ALL MAJOR FIELDS increased their salaries by 2.4 percent (18.8% minus 16.4% equals 2.4%) more than faculty in the discipline/major field of physical sciences.

In the discipline/major field of physical sciences, the reader may note that the faculty mix percentage at the professor rank is more than at the assistant professor rank in the private studies: 0.28 vs 0.26 (1983-84), respectively; and 0.35 vs. 0.27 (1986-87), respectively. This is different from ALL MAJOR FIELDS for both private studies: 0.30 vs. 0.32 (1983-84), respectively; and 0.31 vs. 0.31 (1986-87), respectively.

Finally, the reader may note that the hiring rate of new assistant professors in physical sciences in the private studies was less than the hiring rate in ALL MAJOR FIELDS both in 1983-84, 3.8 percent (5/130) vs. 3.9 percent (856/21,861), respectively; and in 1986-87, 0.0 percent (0/103) vs. 5.0 percent (1,173/23,292), respectively. In other words the hiring rate in the discipline/major field of physical sciences was less than ALL MAJOR FIELDS in both the private studies of 1983-84 and 1986-87.

CONCLUDING REMARKS

This article presented salary-trend information on the academic discipline/major field of physical sciences and compared that information with 43 other academic disciplines/major fields over a period of three years: the "baseline year" of 1983-84 through the "trend year" of 1986-87. Two studies, one for public (AASCU) institutions, and the other for private institutions were conducted for the baseline year and for the trend year--a total of four studies. A total of 912 faculty in the discipline/major field of physical sciences participated and were included in the overall total of 120,580 faculty in all 44 disciplines/major fields in all four studies. The same 167 public (AASCU) institutions and the same 235 private institutions in the United States participated in the baseline year and the trend year.

Although many interpolations and extrapolations of the data may be made, a few of the more important ones are as follows. First, the average faculty salary in the discipline/major field of physical sciences is currently (1986-87) 2 percent above and 9 percent below the overall average faculty salary of the other 43 disciplines/major fields in the public and private studies, respectively. The average faculty salary for physical sciences in the private institutions was 11 percent less in comparison to that in the public institutions in 1983-84. The overall salary factor in the private institutions is now (1986-87) still 11 percent less in comparison to that for the public institutions: 0.91 vs 1.02, respectively.

Second, the CPI of October 1986, in comparison to the CPI of October 1983, indicates that the faculty in the physical sciences, in both the public and private institutions, received overall salary increases for three years above the cost-of-living. The salary increases of the physical sciences faculty in the both the public and private institutions lagged behind faculty in ALL MAJOR

FIELDS during this same period by 2.6 percent and 2.4 percent, respectively. Physical sciences faculty in the private institutions have some catching up to do in salary in comparison with ALL MAJOR FIELDS and their colleagues in the public institutions.

Third, in the discipline/major field of physical sciences the full professor rank exceeded the assistant professor rank in both the public and private studies. The full professor rank appears to be increasing at a greater rate in the private institutions compared to the public institutions. It seems a smaller percentage of new assistant professors are being hired in the private institutions in comparison to the public institutions.

Now that a rather significant data base on individual faculty member salaries has been developed, it is anticipated that additional salary-trend studies will be effected in physical sciences, and in other disciplines/major fields, on an annual basis.

Richard D. Howe is the originator and director of the annual CUPA faculty salary studies. He is a professor of leadership and higher education, and history at Appalachian State University, Boone, North Carolina. Co-author Lynette Tuttle is a research analyst in the Office of Equal Opportunity Programs at Appalachian State University, Boone, North Carolina.

APPENDICES:

¹⁾ OVERALL LIST OF SELECTED DISCIPLINES, page 10

²⁾ LIST OF PUBLIC Participating Institutions, page 11

³⁾ LIST OF PRIVATE Participating Institutions, page 13

APPENDIX A.

OVERALL LIST OF SELECTED DISCIPLINES

AGRIBUSINESS AND AGRICULTURAL PRODUCTION

LETTERS

ACCOUNTING

LIBRARY AND ARCHIVAL SCIENCES

ANTHROPOLOGY

LIFE SCIENCES

AREA AND ETHNIC STUDIES

MATHEMATICS

AUDIOLOGY AND SPEECH PATHOLOGY

MUSIC

BUSINESS & MANAGEMENT

MULTI-INTERDISCIPLINARY STUDIES

BUSINESS ADMINISTRATION AND MANAGEMENT

NURSING

BUSINESS ECONOMICS

PHILOSOPHY & RELIGION

CHEMISTRY

PHYSICAL EDUCATION

COMMUNICATION TECHNOLOGIES

PHYSICAL SCIENCES

COMMUNICATIONS

PHYSICS

COMPUTER & INFORMATION SCIENCES

POLITICAL SCIENCE

CURRICULUM AND INSTRUCTION

PSYCHOLOGY

DRAMATIC ARTS

EDUCATION

READING EDUCATION

SECRETARIAL AND RELATED PROGRAMS

EDUCATION ADMINISTRATION

SOCIAL SCIENCES

ENGINEERING

SOCIOLOGY

FINE ARTS

SPECIAL EDUCATION

FOREIGN LANGUAGES

STUDENT COUNSELING AND PERSONNEL

SERVICES

GEOGRAPHY

TEACHER EDUCATION, GENERAL

PROGRAMS

GEOLOGICAL SCIENCES

VISUAL AND PERFORMING ARTS

HISTORY

TOTAL: 44

HOME ECONOMICS

APPENDIX B.

CUPA Public (AASCU) Faculty Salary-Trend Studies: 1983-84 and 1986-87

Institutions Participating in Both Studies:

Alabama State University (AL) Angelo State University (TX) Appalachian State University (NC) Arkansas State University (AR) Arkansas Tech University (AR) Auburn University at Montgomery (AL) Augusta College (GA) Austin Peay State University (TN) Ball State University (IN) Black Hills State College (SD) Bluefield State College (WV) California State University, Hayward (CA) California State University, Long Beach (CA) California University of Pennsylvania (PA) Castleton State College (VI) Cayey University College (PR' Central Connecticut State University (CT) Chadron State College (NE) Christopher Newport College (VA) Clarion University of Pennsylvania (PA) College of Staten Island, The (NY) College of the Virgin Islands at St. Croix (VI) College of the Virgin Islands at St. Thomas (VI) Columbus College (GA) Concord College (WV) Coppin State College (MD) Delta State University (MS) Dickinson State College (ND) East Central University (OK) East Tennessee State University (TN) East Texas State University at Texarkana (TX) Eastern Connecticut State University (CT) Eastern Montana College (MI) Edinboro University of Pennsylvania (PA) Fitchburg State College (MA) Florida Atlantic University (FL) Fort Hays State University (KS) Francis Marion College (SC) Frostburg State College (MD) George Mason University (VA) Georgia College (GA) Georgia Southern College (GA) Glenville State College (WV) Grambling State University (LA) Grand Valley State College (MI) Harris-Stove State College (MO)

Henderson State University (AR)

Idaho State University (ID) Illinois State University (IL) Indiana State University (IN) Jacksonville State University (AL) James Madison University (VA) John Jay College of C-iminal Justice (NY) Keene State College (NH) Kennesaw College (GA) Lake Superior State College (MI) Lewis Clark State College (ID) Mansfield University (PA) Marshall University (WV) Mary Washington College (VA) Mayville State College (ND) Memphis State University (TN) Metropolitan State College (CO) Middle Tennessee State University (TN) Midwestern State University (TX) Millersville University (PA) Minot State College (ND) Mississippi University for Women (MS) Missouri Southern State College (MO) Missouri Western State College (MO) Montana College of Mineral Science and Technology (MT) Murray State University (KY) North Carolina Agricultural and Technical State University (NC) Northeast Louisiana University (LA) Northeast Missouri State University (MO) Northern Arizona University (AZ) Northern Illinois University (IL) Northern Kentucky University (KY) Northern State College (SD) Northwest Missouri State University (MO) Oakland University (MI) Old Dominion University (VA) Pan American University (TX) Peru State College (NE) Pittsburg State University (KS) Plymouth State College (NH) Radford University (VA) Saginaw Valley State College (MI) Salem State College (MA) Sangamon State University (IL) Shepherd College (WV) Shippensburg University (PA)

Participating Institutions (continued):

Slippery Rock University (PA) South Dakota School of Mines & Technology (SD) Southeast Missouri State University (MO) Southeastern Louisiana University (LA) Southeastern Massachusetts University (MA) Southern Arkensas University (AR) Southern Oregon State Cullege (OR) Southern Utah State College (UI) Southwest Missouri State University (MO) Southwest State University (181) Southwestern Oklahoma State University (OK) St. Cloud University (NM) State University of New York College at Brockport (NY) State University of New York College at Buffalo (NY) State University of New York College at Cortland (NY) State University of New York College at Fredonia (NY) State University of New York College at Geneseo (NY) Stephen F. Austin State University (TX) Tennessee Technological University (TN) Texas A&I University (TX) Texas A&M University at Galveston (TX) Texas Woman's University (IX) Iovson State University (ND) Troy State University (AL) University of Akron, The (OH) University of Central Arkansas (AR) University of Colorado at Colorado Springs (CO) University of Colorado at Denver (CO) University of Maine at Farmington (ME) University of Maine at Port Kent (ME) University of Montevallo (AL) University of Nebraska at Omeha (NE) University of Nevada, Las Vegas (NV) University of North Carolina at Asheville (NC) University of North Carolina at Charlotte (NC) University of North Florida (FL) University of Northern Iowa (IA) University of Science and Arts of Oklahoma (OK) University of South Alabama, The (AL) University of South Carolina - Aiken (SC) University of South Carolina at Spartanburg (SC) University of Southern Colorado (CO) University of Southern Mississippi (MS) University of Southwestern Louisiana (LA) University of Tennessee at Chattanooga (TN) University of Tennessee at Martin, The (IN) University of Texas at Dallas, The (TX) University of Texas at Son Antonio (DX) University of Texas at Tyler, The (TX) University of Texas of the Permian Basin (TX) University of Wisconsin--Eau Claire (WI) University of Wisconsin--Green Bay (WI)

University of Wisconsin--La Crosse (WI) University of Wisconsin--Platteville (WI) University of Wisconsin--Stevens Point (WI) University of Wisconsin--Superior (VI) University of Wisconsin--Oshkosh (WI) Valdosta State College (GA) Wayne State College (NE) Weber State College (UT) West Georgia College (GA) West Texas State University (TX) West Virginia College of Graduate Studies (WV) West Virginia Institute of Technology (WV) Western Connecticut State University (CT) Western Illinois University (IL) Western Kentucky University (KY) Western Michigan University (MI) Western New Mexico University (194) Western Oregon State College (OR) Western State College of Colorado (CO) Wichita State University, The (KS) William Paterson College of New Jersey (NJ) Winston-Salem State University (NC) Youngstown State University (OH)

TOTAL: 167

APPENDIX C.

CUPA Private (AASCU) Faculty Salary-Trend Studies: 1983-84 and 1986-87

Institutions Participating in Both Studies:

Abilene Christian University (TK) Albertus Megnus College (CT) Albion College (MI) Alfred University (NY) Alma College (MI) American College, The (PA) American University, The (DC) Anna Maria College (MA) Aquinas College (MI) Arkansas College (AR) Asbury College (KY) Augsburg College (MM) Aurora University (IL) Averett College (VA) Avila College (NO) Azusa Pacific University (CA) Babson College (MA) Bard College (NY) Barnard College (NY) Barry University (FL) Beaver College (PA) Bellarmine College (KY) Benedictine College (KS) Bethune-Cookman College (FL) Biola University (CA) Birmingham-Southern College (AL) Bishop College (TX) Boston College (MA) Boston University (MA) Bradley University (IL) Briar Cliff College (IA) Bridgewater College (VA) Bryant College (RI) Bryn Hawr College (PA) Bucknell University (PA) Butler University (IN) Canisius College (NY) Capital University (OH) Carroll College (MT) Catavba College (NC) Cedar Crest Colloge (PA) Cedarville College (OH) Centenary College (NJ) Central College (IA) Central Wesleyan College (SC) Christian Brothers College (TN)

Clark University (MA)

a from the contract of the state of the

Cogswell Polytechnical College (CA) College of Idaho, The (ID) College of Mount Saint Vincent (NY) College of New Rochelle (NY) College of Notre Dame (CA) College of Saint Elizabeth (NJ) College of St. Scholastica (MN) College of the Holy Cross (MA) College of Wooster, The (OH) Columbia College (MO) Concordia College (MI) Cooper Union for the Advancement of Science and Art, The (NY) D'Youville College (NY) Defiance College, The (OH) Depaul University (IL) DePauw University (IN) Dickinson College (PA) Doane College (NE) Dordt College, Inc. (IA) Drake University (IA) Drew University (NJ) Eastern College (PA) Eckerd College (FL) Elmhurst College (IL) Emory & Henry College (VA) Erskine College (SC) Ferrum College (VA) Findley College (OH) Fontbonne College (MO) Fordham University (NY) Franklin and Marshall College (PA) Furnan University (SC) Gennon University (PA) George Washington University, The (DC) Georgetown University (DC) Gonzaga University (WA) Graceland College (IA) Greensboro College (NC) Guilford College (NC) Hamline University (MM) Hartwick College (NY) Havaii Loa College (HI) Heidelberg College (OH) Hood College (ND) Hope College (MI) Huntington College (IN)

Participating Institutions, continued:

Russon College (ME) Huston-Tillotson College (TX) Illinois Benedictine College (IL) Illinois College (IL) Immaculata College (PA) Iona College (NY) Ithaca College (NY) John Brown University (AR) John Carroll University (OH) Johns Hopkins University (MD) Johnson C. Smith University (NC) Kansas Wesleyan (KS) Kenyon College (OH) King's College (PA) La Roche College (PA) Le Tourneau College (TX) Lincoln Memorial University (TN) Loyola College in Maryland (MD) Lubbock Christian College (TX) Luther College (IA) Lycoming College (PA) Lynchburg College (VA) Malone College (OH) Manhattanville College (NY) Marist College (NY) Mary Baldwin College (VA) Marymount College (NY) Marymount Manhattan College (NY) Maryville College (TN) Marywood College (PA) Mercy College (NY) Mercy College of Detroit (MI) Meredith College (NC) Merrimack College (NA) Millikin University (IL) Molloy College (NY) Monmouth College (NJ) Moravian College (PA) Morningside College (IA) Morris Brown College (GA) Mount Mary College (WI) Mount Marty College (SD) Mount Saint Clare College (IA) Hount Saint Mary's College (MD) Mount Vernon College (DC) Muskingum College (OH) Mazareth College (MI) Nazareth College of Rochester (NY) Neumann College (PA) North Central College (IL) Northwestern College (IA) Northwestern College (MI)

Morwich University (VI) Ohio Northern University (OH) Oklahoma Baptist University (OK) Ottawa University (KS) Otterbein College (OH) Our Lady of the Holy Cross College (LA) Palm Beach Atlantic College (FL) Parks College (MO) Pikeville College (KY) Presbyterian College (SC) Queens College (NC) Quincy College (IL) Reed College (OR) Regis College (MA) Rider College (NJ) Ripon College (WI) Rockford College (IL) Rockhurst College (MO) Sacred Heart College (NC) Saint John's University (MN) Saint Joseph College (CT) Saint Joseph's College (IN) Saint Mary College (KS) Saint Paul's College (VA) Saint Vincent College (PA) Saint Xavier College (IL) Salem College (NC) Salve Regina -- The Newport College (RI) Scarritt Graduate School (TN) School of the Ozarks, The (MO) Seattle University (WA) Seton Hill College (PA) Siena College (NY) Siena Heights College (MI) Simpson College (IA) Sioux Falls College (SD) Southern California College (CA) Southern Methodist University (TX) Southwestern College (KS) Spalding University (KY) Springfield College (MA) St. Bonaventure University (NY) St. Francis College (NY) St. Mary's University (TX) St. Norbert College (WI) Suffolk University (MA) Sweet Briar College (VA) Syracuse University (NY) Taylor University (IN) Texas Christian University (TX) Texas Lutheran College (TX)

Participating Institutions, continued:

```
Transylvania University (KY)
Tri-State University (IN)
Trinity College (DC)
Trinity College (VI)
Trinity University (TX)
University of Dayton (OH)
University of Dubuque, The (IA)
University of La Verne (CA)
University of Hismi (FL)
University of Portland (OR)
University of San Diego (CA)
University of Scrant n (PA)
University of the South, The (TN)
University of Tulsa (OK)
Ursuline College (OH)
Valparaiso University (IN)
Villa Maria College (PA)
Virginia Union University (VA)
Viterbo College (WI)
Wabash College (IN)
Wagner College (NY)
Walsh College (OH)
Warner Pacific College (OR)
Washington and Jefferson College (PA)
Washington and Lee University (VA)
West Virginia Wesleyan College (WV)
Western Maryland College (MD)
Westmar College (IA)
Westminster College of Salt Lake City (UT)
Whitman College (WA)
Whittier College (CA)
Widener University (PA)
William Jewell College (MO)
William Marsh Rice University (TX)
William Penn College (IA)
 Wilmington College (OH)
 Wilson College (PA)
 Wittenburg University (OH)
 York College of Pennsylvania (PA)
```

TOTAL: 235