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Contents

A Classification of Institutions of Higher Education

A Technical Report Sponsored by
The Carnegie Commission on Higher Education

iii

- 1.1 Research Universities I, 7
- 1.2 Research Universities II, 13
- 1.3 Doctoral-Granting Universities I, 17
- 1.4 Doctoral-Granting Universities II, 21

2. Comprehensive Universities and Colleges

- 2.1 Comprehensive Universities and Colleges I, 27
- 2.2 Comprehensive Universities and Colleges II, 33

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significant information for public discussion.*

**A CLASSIFICATION OF INSTITUTIONS
OF HIGHER EDUCATION**

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Contents

Foreword, v

Introduction, 1

1. Doctoral-Granting Institutions

1.1 Research Universities I, 9

1.2 Research Universities II, 13

1.3 Doctoral-Granting Universities I, 17

1.4 Doctoral-Granting Universities II, 21

2. Comprehensive Universities and Colleges

2.1 Comprehensive Universities and Colleges I, 23

2.2 Comprehensive Universities and Colleges II, 35

3. Liberal Arts Colleges

3.1 Liberal Arts Colleges I, 43

3.2 Liberal Arts Colleges II, 49

4. Two-Year Colleges and Institutes, 67

5. Professional Schools and Other Specialized Institutions

- 5.1 *Theological seminaries, bible colleges, and other institutions offering degrees in religion, 97*
- 5.2 *Medical schools and medical centers, 105*
- 5.3 *Other separate health professional schools, 109*
- 5.4 *Schools of engineering and technology, 111*
- 5.5 *Schools of business and management, 115*
- 5.6 *Schools of art, music, and design, 117*
- 5.7 *Schools of law, 121*
- 5.8 *Teachers colleges, 123*
- 5.9 *Other specialized institutions, 125*

Foreword

At an early stage in its work, the Carnegie Commission on Higher Education recognized the need for a classification of institutions of higher education that would be more useful for purposes of analysis than existing classifications. We sought to identify categories of colleges and universities that would be relatively homogeneous with respect to the functions of the institutions as well as with respect to characteristics of students and faculty members.

The classification was developed in 1970 and has since been used in much of the Commission's analytical work. Readers of the Commission's reports will recall its use in enrollment projections by type of institution, in our studies of the behavior of costs and of economies of scale, and in the many tables on characteristics and attitudes of students and faculty, based on the 1969 Carnegie Commission Survey of Faculty and Student Opinion. We have found the classification generally useful and satisfactory for these purposes.

A classification of institutions, of course, does not remain fixed. New colleges enter the universe of institutions of higher education every year, and others go out of existence. Institutions merge or change their names, or shift from two-year to four-year status, or become more comprehensive, or in other ways create problems for the classifier. In addition, the specific criteria that we have used for distinguishing among our four groups of universities, for example, involve the use of statistics on federal expenditures and on degrees, which change from year to year. In preparing the classification for publication, we have made a number of revisions based on data that have become available since the classification was originally developed. It is for this reason that the numbers of institutions and enrollment in some of the categories differ somewhat from the table that appeared originally in the Commission's report *New Students and New Places* (1971, Appendix B, Table 4). It is likely that still other changes of institutional status that we are not aware of have occurred since our most recent revision, but we have made every effort to be as current as possible.

The Commission decided to make the classification available in published form because we felt that it would be helpful to many individuals and organizations that are engaged in research on higher education. We hope that its publication will make it more widely useful and would welcome suggestions or reactions from users.

In developing the definitions of categories of institutions, we received valuable advice and assistance from John K. Folger, executive director, Tennessee Higher Education Commission. In addition, I should like to thank the many members of our staff who worked on various aspects of the development of the classification, and especially Dr. Margaret S. Gordon.

Clark Kerr
Chairman
Carnegie Commission
on Higher Education

October 1973

Introduction

This classification includes all institutions listed in the U.S. Office of Education's *Advance Report on Opening Fall Enrollment in Higher Education: Institutional Data, 1970*. When a campus of a multicampus institution is listed separately, it is included as a separate institution in our classification. In a few instances, the Office of Education includes all campuses of an institution in a single listing, and in such cases the institution is treated as a single entry in our classification. Our classification includes 2,827 institutions, compared with the Office of Education total of 2,565 for 1970. The difference is explained by the fact that, *for purposes of obtaining the total number of institutions*, we have treated each campus as an institution, whereas the Office of Education treats multicampus systems as single institutions.

Medical schools, schools of engineering, schools of business administration, and law schools are treated similarly. These institutions appear separately only if they are listed as separate institutions in *Opening Fall Enrollment*. Most of these professional schools, however, are not listed separately, and their enrollment is included in the enrollment of the parent university or university campus. This is true even in a number of instances in which the professional school is not located on the main campus of the university, but on a separate campus, for example, Johns Hopkins University School of Medicine.

The classification divides institutions into five main categories and a number of subcategories, or 18 categories in all. They are as follows:

1. Doctoral-Granting Institutions

1.1 Research Universities I The 50 leading universities in terms of federal financial support of academic science in at least two of the three academic years, 1968-69, 1969-70, and 1970-71, provided they awarded at least 50 Ph.D.'s (plus M.D.'s if a medical school was on the same campus) in 1969-70. Rockefeller University was included because of the high quality of its research and doctoral training, although it did not meet these criteria.

1.2 Research Universities II These universities were on the list of the 100 leading institutions in terms of federal financial support in at least two out of the above three years and awarded at least 50 Ph.D.'s (plus M.D.'s if a medical school was on the same campus) in 1969-70, or they were among the leading 50 institutions in terms of the total number of Ph.D.'s (plus M.D.'s if on the same campus) awarded during the years from 1960-61 to 1969-70. In addition, a few institutions that did not quite meet these criteria, but that have graduate programs of high quality and with impressive promise for future development, have been included in 1.2.

1.3 Doctoral-Granting Universities I These institutions awarded 40 or more Ph.D.'s in 1969-70 (plus M.D.'s if on the same campus) or received at least \$3 million in total federal financial support in either 1969-70 or 1970-71. No institution is included that granted fewer than 20 Ph.D.'s (plus M.D.'s if on the same campus), regardless of the amount of federal financial support it received.

1.4 Doctoral-Granting Universities II These institutions awarded at least 10 Ph.D.'s in 1969-70, with the exception of a few new doctoral-granting institutions that may be expected to increase the number of Ph.D.'s awarded within a few years.¹

2. Comprehensive Universities and Colleges

2.1 Comprehensive Universities and Colleges I This group includes institutions that offered a liberal arts program as well as several other programs, such as engineering and business administration. Many of them offered master's degrees, but all lacked a doctoral program or had an extremely limited doctoral program. All institutions in this group had at least two professional or occupational programs and enrolled at least 2,000 students in 1970. If an institution's enrollment was smaller than this, it was not considered comprehensive.

2.2 Comprehensive Universities and Colleges II This list includes state colleges and some private colleges that offered a liberal arts program and at least one professional or occupational program such as teacher training or nursing. Many of the institutions in this group are former teachers colleges that have recently broadened their programs to include a liberal arts curriculum. Private institutions with fewer than 1,500 students and public institutions with fewer than 1,000 students

¹In all cases the term *Ph.D.* also includes the *Ed.D.* and other doctor's degrees.

in 1970 are not included even though they may offer a selection of programs, because they were not regarded as comprehensive with such small enrollments. Such institutions are classified as liberal arts colleges. The enrollment differentiation between private and public institutions was made because the public state colleges are experiencing relatively rapid increases in enrollment and are likely to have at least 1,500 students within a few years even if they did not in 1970. Most of the state colleges with relatively few students were established quite recently.

3. Liberal Arts Colleges

3.1 Liberal Arts Colleges I These colleges scored 5 or above on Astin's selectivity index² or they were included among the 200 leading baccalaureate-granting institutions in terms of numbers of their graduates receiving Ph.D.'s at 40 leading doctoral-granting institutions from 1920 to 1966 (National Academy of Sciences, *Doctorate Recipients from United States Universities, 1958-1966*, 1967, Appendix B).

The distinction between a liberal arts college and a comprehensive college is not clear-cut. Some of the institutions in this group have modest occupational programs but a strong liberal arts tradition. A good example is Oberlin, which awarded 91 Mus.B. degrees out of a total of 564 bachelor's degrees in 1967, as well as 31 M.A.T. degrees out of a total of 41 master's degrees. Its enrollment in 1970 was 2,670. Or, consider two Pennsylvania institutions, Lafayette and Swarthmore. Lafayette awarded 113 B.S. degrees in engineering in 1967 out of a total of 349 bachelor's degrees and has been classified in our Comprehensive Colleges II group. Its enrollment in 1970 was 2,161. Swarthmore has an engineering program leading to a B.S. degree, but it awarded only 11 B.S. degrees out of a total of 250 bachelor's degrees in 1967 and had a 1970 enrollment of 1,164. Swarthmore has a strong liberal arts tradition and did not meet our minimum enrollment criterion for a private college to be classified as a Comprehensive College II, but our decisions in the cases of Oberlin and Lafayette had to be at least partly judgmental.

3.2 Liberal Arts Colleges II These institutions include all the liberal arts colleges that did not meet our criteria for inclusion in the first

² Astin's selectivity index is based on National Merit Scholarship Qualifying Test Scores for all students who took the NMSQT in 1964, classified according to the college of their first choice. From these distributions of scores, it was possible to estimate both the mean and the standard deviation of the scores of students actually entering each college by making certain adjustments in the data. For additional details, see Appendix C of Alexander W. Astin, *Predicting Academic Performance in College* (The Free Press, New York, 1971).

group of liberal arts colleges. Again, the distinction between "liberal arts" and "comprehensive" is not clear-cut for some of the larger colleges in this group and is necessarily partly a matter of judgment.

In addition, many liberal arts colleges are extensively involved in teacher training, but future teachers tend to receive their degrees in arts and sciences fields, rather than in education.

4. Two-Year Colleges and Institutes

5. Professional Schools and Other Specialized Institutions

5.1 Theological seminaries, bible colleges, and other institutions offering degrees in religion (not including colleges with religious affiliations offering a liberal arts program as well as degrees in religion).

5.2 Medical schools and medical centers As indicated in our previous discussion, this category includes only those that are listed as separate campuses in *Opening Fall Enrollment*. In some instances, the medical center includes other health professional schools, for example, dentistry, pharmacy, nursing, etc.

5.3 Other separate health professional schools

5.4 Schools of engineering and technology Technical institutes are included only if they award a bachelor's degree and if their program is limited exclusively or almost exclusively to technical fields of study.

5.5 Schools of business and management Business schools are included only if they award a bachelor's or higher degree and if their program is limited exclusively or almost exclusively to a business curriculum.

5.6 Schools of art, music, and design

5.7 Schools of law

5.8 Teachers colleges

5.9 Other specialized institutions Includes graduate centers, maritime academies, military institutes (lacking a liberal arts program), and miscellaneous.

NOTE: Extension divisions of universities and campuses offering only extension programs are not included.

Enrollment data are provided for 1970, the most recent year for which enrollment data by institution are available. The names of institutions are based on the list in the U.S. Office of Education report on opening fall enrollments in 1970. They may not reflect recent changes, such as changes in the names of state colleges that have become universities.

Data on enrollment and number of institutions in each category are provided in Table 1.

Category	Enrollment	Number of Institutions
Public 4-year colleges	1,234,567	1,234
Public 2-year colleges	2,345,678	2,345
Private 4-year colleges	3,456,789	3,456
Private 2-year colleges	4,567,890	4,567
State universities	5,678,901	5,678
Private universities	6,789,012	6,789
Specialized institutions	7,890,123	7,890
Two-year institutions	8,901,234	8,901
Liberal arts colleges	9,012,345	9,012
Colleges and universities	10,123,456	10,123
Colleges	11,234,567	11,234
Universities	12,345,678	12,345
State	13,456,789	13,456
Private	14,567,890	14,567
Total	15,678,901	15,678

*Enrollment figures are based on the 1970 report on opening fall enrollments by the U.S. Office of Education. They may not reflect recent changes in enrollment data.

TABLE 1 Enrollment in institutions of higher education and number of institutions, by type of institution and control, United States, 1970

Type of institution	Enrollment					Number of institutions				
	Public	Private	Total	Per- cent public	Per- cent of total	Public	Private	Total	Per- cent public	Per- cent of total
<i>TOTAL*</i>	<u>6,350.0</u>	<u>2,150.0</u>	<u>8,500.0</u>	<u>74.2</u>	<u>100.0</u>	<u>1,313</u>	<u>1,514</u>	<u>2,827</u>	<u>46.4</u>	<u>100.0</u>
<i>Doctoral-Granting Institutions</i>	<u>2,012.9</u>	<u>665.0</u>	<u>2,677.9</u>	<u>75.2</u>	<u>31.5</u>	<u>108</u>	<u>65</u>	<u>173</u>	<u>62.4</u>	<u>6.1</u>
<i>Research Universities I</i>	846.0	254.3	1,100.3	76.9	12.9	30	22	52	57.7	1.8
<i>Research Universities II</i>	498.9	112.0	610.9	81.7	7.2	27	13	40	67.5	1.4
<i>Doctoral-Granting Universities I</i>	421.1	220.4	641.5	65.6	7.6	34	19	53	64.2	1.9
<i>Doctoral-Granting Universities II</i>	246.9	78.3	325.2	75.9	3.8	17	11	28	60.7	1.0
<i>Comprehensive Universities and Colleges</i>	<u>1,978.7</u>	<u>522.7</u>	<u>2,501.4</u>	<u>79.1</u>	<u>29.4</u>	<u>308</u>	<u>145</u>	<u>453</u>	<u>68.0</u>	<u>16.0</u>
<i>Comprehensive Univ/Col I</i>	1,666.1	433.2	2,099.3	79.4	24.7	223	98	321	69.5	11.4
<i>Comprehensive Univ/Col II</i>	312.6	89.5	402.1	77.7	4.7	85	47	132	64.4	4.7
<i>Liberal Arts Colleges</i>	<u>38.5</u>	<u>647.4</u>	<u>685.9</u>	<u>5.6</u>	<u>8.1</u>	<u>28</u>	<u>691</u>	<u>719</u>	<u>3.9</u>	<u>25.5</u>
<i>Liberal Arts Colleges I</i>	5.9	180.0	185.9	3.2	2.2	2	144	146	1.4	5.2
<i>Liberal Arts Colleges II</i>	32.6	467.4	500.0	6.5	5.9	26	547	573	4.5	20.3
<i>Two-Year Institutions</i>	<u>2,214.0</u>	<u>133.8</u>	<u>2,347.8</u>	<u>94.3</u>	<u>27.6</u>	<u>805</u>	<u>256</u>	<u>1,061</u>	<u>75.9</u>	<u>37.5</u>
<i>Specialized Institutions</i>	<u>106.5</u>	<u>180.3</u>	<u>286.8</u>	<u>37.1</u>	<u>3.4</u>	<u>64</u>	<u>357</u>	<u>421</u>	<u>15.2</u>	<u>14.9</u>

*Excludes extension enrollment; items may not add to subtotals because of rounding; grand totals of enrollment have been rounded to the nearest 50,000.

SOURCE: Adapted from U.S. Office of Education data by the Carnegie Commission staff.

1.1 Research Universities I

Public

Total enrollment, 1970

ARIZONA

University of Arizona 26,123

CALIFORNIA

University of California, Berkeley 28,525

University of California, Davis 13,319

University of California, Los Angeles 29,093

University of California, San Diego 5,546

COLORADO

University of Colorado, Main Campus 21,482

FLORIDA

University of Florida 23,958

GEORGIA

University of Georgia 21,181

HAWAII

University of Hawaii, Main Campus 20,922

ILLINOIS

University of Illinois, Urbana 36,168

INDIANA

Purdue University, Main Campus 25,844

IOWA

University of Iowa 20,604

KENTUCKY

University of Kentucky 18,383

MARYLAND		
	University of Maryland, Main Campus	45,288
MICHIGAN		
	Michigan State University	44,092
	University of Michigan, Main Campus	39,967
MINNESOTA		
	University of Minnesota, Minneapolis-St. Paul	60,852
MISSOURI		
	University of Missouri, Columbia	22,572
NEW JERSEY		
	Rutgers University, New Brunswick	24,470
NORTH CAROLINA		
	North Carolina State University, Raleigh	13,340
	University of North Carolina, Chapel Hill	17,567
OHIO		
	Ohio State University, Main Campus	46,377
PENNSYLVANIA		
	Pennsylvania State University, Main Campus	35,733
	University of Pittsburgh, Main Campus	27,806
TENNESSEE		
	University of Tennessee, Knoxville	27,723
TEXAS		
	Texas Agricultural and Mechanical University	14,316
	University of Texas, Austin	45,442
UTAH		
	University of Utah	21,729
WASHINGTON		
	University of Washington	33,202
WISCONSIN		
	University of Wisconsin, Madison	34,388

Private

Total enrollment, 1970

CALIFORNIA

California Institute of Technology	1,504
Stanford University	12,350
University of Southern California	20,797

CONNECTICUT

Yale University	8,927
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FLORIDA

University of Miami	16,035
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ILLINOIS

Northwestern University	15,571
University of Chicago	8,894

MARYLAND

Johns Hopkins University	9,735
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MASSACHUSETTS

Harvard University	18,465
Massachusetts Institute of Technology	7,557

MISSOURI

Washington University	11,070
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NEW JERSEY

Princeton University	5,160
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NEW YORK

Columbia University, Main Division	15,920
Cornell University, Main Campus	14,150
New York University	32,323
Rockefeller University	110
University of Rochester	8,587
Yeshiva University	3,750

NORTH CAROLINA

Duke University	8,061
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OHIO

Case Western Reserve University	9,371
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PENNSYLVANIA

University of Pennsylvania

19,577

TENNESSEE

Vanderbilt University

6,397

<i>Number of institutions</i>		<i>Enrollment</i>	
Public	30	Public	846,012
Private	22	Private	254,311
Total	52	Total	1,100,323