

greater, and ought to be sufficient to bring about a distinct betterment in the teaching of literature. It would be far better not to teach the subject at all than to do so in an ineffective or misleading manner or to treat it as a nuisance tolerated only to avoid the reproach of neglecting the cultural, without any faith either in the necessity for culture or in the study of literature being a means of acquiring it. An intelligent and interested opinion would do away with this situation, and would be sufficient to ensure literature being taught in a sincere and competent manner. Two things would undoubtedly be insisted on that are matters of indifference now: sufficient knowledge and sufficient persuasive power in the teacher. Literature is a subject that involves a knowledge of history and of languages, and no man has a right to teach it unless he can show a certain amount of learning in both fields; and to guarantee that he is not a pedant, he should be able to interest students in his subject and make it appeal to them. There is a very strong feeling now that instruction must not be allowed to degenerate into mere entertainment, and while there is some justification for this apprehension, it should not lead to the conclusion that any teaching that is dull or repellant is successful. Where real knowledge of wide significance is being conveyed there is no danger of the learner finding no resistance to overcome, but, on the other hand, there is no danger of its exposition becoming an insufferable bore or an object of ridicule among earnest and industrious students. There can be no doubt that if scientific opinion were more active and more general in its scope, not science and literature alone, but many other things as well, would become clearer in the public mind as well as more effectively treated educationally.

SIDNEY GUNN

MASSACHUSETTS INSTITUTE
OF TECHNOLOGY

*THE NUMBER OF STUDENTS TO A
TEACHER IN STATE COLLEGES
AND UNIVERSITIES*

The following tabulations are based upon figures found in "Statistics of State Univer-

sities and other Institutions of Higher Education partially supported by the State"¹ and show the number of students to a teacher in eighty-one state-supported schools.

The average number of students to a teacher is 10.5. It is interesting to note that while no doubt, in general, the cost of the unit hour of instruction is smaller in schools having more students to a teacher, the best schools in the list tend to have less than 10.5, the average number of students to a teacher. Thus for Cornell University the universities of Wisconsin, Illinois, Michigan, California and the Massachusetts Institute of Technology the number of students to a teacher is only 9.5+.

Name of Institution	No. of Students to a Teacher
Alabama Polytechnic Institute	11.6
University of Alabama	11.3
University of Arizona	4.7
University of Arkansas	9 +
University of California	12.9 +
University of Colorado	7.8 +
State Agricultural College (Colo.)	3 +
Colorado School of Mines	18.7
Connecticut Agricultural College	8 +
Delaware College	6 +
University of Florida	7 +
Florida State College for Women	10.9 +
University of Georgia	11 +
Georgia School of Technology	12.3 +
North Georgia Agricultural College	14.2 +
University of Idaho	9.8 +
University of Illinois	8.4 +
Indiana University	13 +
Purdue University (Ind.)	11.2 +
Iowa State College of Agriculture and Mechanic Arts	12.4 +
State University of Iowa	13 +
University of Kansas	11.2 +
Kansas State Agricultural College	12.1 +
State University (Ky.)	9.7
Louisiana State University and Agricul- tural and Mechanical College	10.4 +
University of Maine	9.2 +
Maryland Agricultural College	7.7 +
Massachusetts Agricultural College	8.5 +
Massachusetts Institute of Technology ...	6.6 +
University of Michigan	15

¹ For the year ended June 30, 1910. Washington, Government Printing Office, 1911.

Michigan State Agricultural College . . .	11.6 +
Michigan College of Mines	8.8 +
University of Minnesota	26.1 +
Mississippi Agricultural and Mechanical College	16.6 +
University of Mississippi ²	12.6 +
University of Missouri	8.4 +
Montana College of Agriculture and Mechanic Arts	8.3 +
Montana State School of Mines	6.7 +
University of Montana	6.4 +
University of Nebraska	11.3 +
University of Nevada	8.3 +
New Hampshire College of Agriculture and Mechanic Arts	6.8 +
Rutgers College (N. J.)	9.3 +
New Mexico College of Agriculture and Mechanic Arts	8.2 +
University of New Mexico	8.1 +
New Mexico School of Mines	6.5
Cornell University (N. Y.)	6.6 +
University of North Carolina	8.2 +
North Carolina College of Agriculture and Mechanic Arts	10.4 +
North Dakota Agricultural College	11.5 +
State University and School of Mines (N. Dak.)	9.2 +
Ohio University	19
Ohio State University	12.8 +
Miami University (Ohio)	10 +
University of Oklahoma	10.9 +
Oklahoma Agricultural and Mechanical College	11.8 +
Oregon State Agricultural College	11.9 +
University of Oregon	8.6 +
Pennsylvania State College	9.5 +
Rhode Island State College	6.6 +
South Carolina Military Academy	17.9 +
Clemson Agricultural College (S. C.) . . .	13.5 +
University of South Carolina	10.5 +
South Dakota Agricultural College	8.6 +
South Dakota State School of Mines . . .	3 +
University of South Dakota	9.6 +
University of Tennessee	6.5 +
University of Texas	18 +
Agricultural and Mechanical College of Texas	16.1 +
Agricultural College of Utah	12.1 +
University of Utah	12.1 +
University of Vermont and Agricultural College	5.5 +
Virginia Polytechnic Institute	7.9 +
University of Virginia	10.5 +

² From 1909 report.

Virginia Military Institute	16.3 +
College of William and Mary (Va.) . . .	12 +
State College of Washington	13.9 +
University of Washington	18.5 +
West Virginia University	6.5 +
University of Wisconsin	7.9 +
University of Wyoming	5.6 +

C. H. HANDSCHIN

SCIENTIFIC NOTES AND NEWS

It is reported from Stockholm, we hope correctly, that the Nobel prize for physics will be awarded this year to Mr. Thomas A. Edison.

PROFESSOR R. W. WOOD, of the Johns Hopkins University, has been elected a corresponding member of the Göttingen Academy of Sciences.

PROFESSOR R. DE C. WARD, of Harvard University, and Mr. C. G. Abbot, of the Smithsonian Institution, have been elected corresponding members of the German Meteorological Society.

DR. EMIL FISCHER, of Berlin, has been awarded the Berzelius medal of the Swedish Medical Society.

PROFESSOR MARTIN KIRCHNER, the bacteriologist, has been appointed head of the medical department in the Prussian ministry, a position that has hitherto been held by a jurist.

SIR ALMROTH WRIGHT has been commissioned by the mining groups of the Rand to investigate and report on the question of immunization against pneumonia, a disease which is said to be the cause of the largest mortality among the native laborers on the goldfields.

DR. WILLIAM H. BROWN, research assistant in plant physiology at the Michigan Experiment Station, and instructor in plant physiology at the college, has been appointed plant physiologist in the Philippine Bureau of Science, Manila.

DR. YABE, formerly of Yokohama, is spending several months in the paleontological laboratory of Columbia University studying American Paleozoic faunas and also continuing his research on Scaphites.