lowered, we may say, first, that there should be prescribed studies in every year of the college course. These must embrace what experience has proven the fundamental and disciplinary studies, both for the purpose of training an accurate and scholarly mind and for bearing practical fruit. The principal of these is language. Our own language should have the first and the last place in every scheme of instruction, but every educated man should know at least two languages in addition to his own. The Greek language should by all means be maintained as a requisite for the degree of B.A., as being the most perfect and subtle of languages, and as being the medium of the grandest literature of the ancient world. In the second place, no man is a scholar who has not studied mathematics: therefore they should be prescribed in a certain degree. And, thirdly, no man is educated who has not some knowledge of philosophy, including under this head the social and political sciences. With a well-arranged plan of obligatory studies, embracing language, science, and philosophy, should be combined an indefinite number of elective studies. No electives should be permitted in the freshman year. This year should be spent in the thorough mastery of the elementary branches and in becoming acquainted with the general system of the college, so that the pupil may be prepared to make his choice of studies later an intelligent one. Only a few electives may safely be allowed in the sophomore year, but in the last two years of the college course they may be freely introduced. In this elective system, however, the student should not be allowed to dissipate his energies in too many directions. Four electives at most should be allowed him.

While this should be firmly adhered to in the course leading to the B.A. degree, other courses should be encouraged, and corresponding degrees awarded on their successful completion. Each of these degrees should be plainly designated by its title, so as not to be mistaken for the B.A. degree.

Our students in colleges are not increasing in proportion to the population. One reason is that they enter college too late, and it is only at the age of twenty-six or twenty-eight that they are able to support themselves by their profession. This is longer than most boys can wait, and longer than most parents can afford to have them wait: so they are dispensing with the college course. The remedy for this is to improve the work of the schools so that a boy can enter college at sixteen, and enter on his profession at twenty-two or twenty-three years of age. A healthy boy of fair ability ought to be able to accomplish this without difficulty.

Dr. McCosh's argument and practical suggestions were most favorably received by the members of the convocation.

On Thursday morning, July 8, the convocation held its closing session. Professor Hewett of Cornell read a paper on the relations of the colleges and academies, in which he pointed out the fact that the systems of Germany, Massachusetts, and Michigan, were superior to those of New York as far as the relations between preparatory schools and colleges are concerned. He urged that the colleges should unite in setting a standard which the high schools and academies would have to observe or else give way to private schools. Inspection of preparatory schools by competent officers was also recommended.

On the conclusion of the discussion of Professor Hewett's paper, Chancellor Sims of Syracuse university took the chair, and opened the conference of college presidents in the state of New York on the question of classical requirements for the degree of B.A. He was followed by President Dodge of Madison university, Warden Fairbairn of St. Stephen's college, and Brother Conway of Canisius college. Every speaker took the ground that the reputation of the B.A. degree must be preserved, and that Greek and Latin must be rigidly insisted on as requisite for its attainment.

The last business of the convocation was to discuss briefly medical education, the sentiment being that a physician should be examined for his license to practise by a board not composed of his instructors. At one P.M. Chancellor Pierson declared the convocation adjourned *sine die*.

Among the other papers of interest were the following: Rev. Brother Noah, Tact in teaching; J. A. Lintner, The present state of entomological science in the United States; President Hyde of Bowdoin, The relation of higher education to religion; Professor Wilson of Cornell, The elements of knowledge; Principal E. H. Cook of Potsdam, Systematic habit in education.

THE INDIAN SURVEY REPORT.

THE general report on the operations of the survey of India for the year 1884–85, which has been received from India a month earlier than usual, contains the record of work done by one of the busiest departments of the government of that country, the following abstract of which we find in *The Athenaeum*. The officers of the department are constantly engaged in surveys in all parts of the peninsula, and every year a greater area is added to the map as either triangulated or topographically surveyed. Our attention may be most profitably directed to the geographical discoveries chronicled in the present report, although they do not include any thing so remarkable as

the journey of A. K. in the report of two years ago.

Prominent among the additions to our geographical knowledge is the survey made by the officers of the Afghan commission of the country between Quetta and Kuhsan on the Perso-Afghan frontier. This independent traverse was for a distance of 767 linear miles without a break. The Helmund valley was mapped up to the Hamun; and Major Holdich, with his assistants Captains Gore and Talbot, has plane-tabled an extent of 15,000 square miles in this part of Afghanistan. But the most distinct achievements of the year were attained on the northern and eastern frontiers of India. Colonel Woodthorpe's trip across the Patkai range to the villages of the friendly Bor Kamptis, in the valley of the western branch of the Irrawaddy, was a perilous but successful attempt to carry one stage further the examination of the country beyond the north-east frontier. The history of this tour is given by Major C. R. Macgregor in the appendix, which consists of the narratives on which Colonel De Prée has based his general report. The country through which the expedition had to pass *en route* to the Kampti villages was the scene of many Singpho depredations; and more than one place was indicated by the guide as having witnessed the massacre of helpless Kampti traders, and fear of the Singphos was generally assigned as the cause of the absence of trade between the Brahmaputra and Irrawaddy. At Langnu, the first Kampti village, the party, after some not unnatural hesitation considering it was a surprise visit, was favorably received, and made the acquaintance of representatives of several new tribes, such as the Marus, who are extremely poor and live on roots in some hills south of the Namkiu valley, and the Kunnungs, described as a gentle and pleasant-looking people with melodious voices. In the country of the latter, silver-mines exist, which supply the whole of this region with coin and ornaments. Just as the Singphos raid on the Kamptis, a people called the Singlengs plunder the Kunnungs, and sell those they capture as slaves to the Tibetans. At Langdao the party was obstructed; but the people were pacified by fair words and the present of some rupees to propitiate their 'Nats.' Near this village Colonel Woodthorpe crossed the Irrawaddy or Namkiu, which at this point is only eighty-five yards broad and not deep. China is known as Khé Moung, and the tribes only resort there — a journey of a month and eight days — for the purpose of buying opium; and that not so often as formerly, because Assam opium is found to be better and more easily procurable. The explorers received a polite message from Lukun, the head chief of the Kamptis, to visit him in his capital of Padao. The chief is described as 'a fine-looking shrewd old fellow,' who originally came from Bhamo, and whose assistance will prove of great utility in exploring the country beyond his territory in the direction of the silver-mines. The return journey across the Patkai range was attended with great difficulty and peril, as the rivers were flooded, and supplies were almost exhausted. In fact, when the expedition joined a party sent out to relieve them, they were on the verge of starvation. Major Macgregor expresses the opinion that the idea of a trade-route to China from Assam is any thing but a visionary one; and the more knowledge we acquire about the tribes of this region, the more reasonable does it appear that there may, after all, be a short route between Assam and the province of Szchuen.

Captain Wahab's narrative of the Baluchistan operations is chiefly interesting for its reference to the passes in that country between the fertile planes of Kachhi and Khelat proper. The Gazak pass, which leads direct to the Khan's capital, will be surveyed later on; but farther north the Vehova pass has been examined, with the result that it has been found a good road, passable for laden camels, and with good water, grass, and fuel. The writer calls attention to the great change that has taken place in the security of the district through which the Pishin railway is now being constructed. A few years ago this was one of the most lawless tracts on the frontier: now camps of coolies are scattered along the whole line quite unguarded, and apparently as secure as if they were in India.

Colonel Tanner's account of the Himalayan survey is very interesting reading; and his forced march across the Lipu Lek pass brought him into direct contact with a Tibetan Jongpen or governor, who used plain language regarding the attempts of the English to enter his country. He said, "We are not angry at your coming this once, but we never wish to see you again. Our government don't allow the English in Tibet, but you one and all try to push your way past our frontier posts." If this expresses the Tibetan view of the subject, it is to be feared that Mr. Colman Macaulay has not much chance of succeeding in his mission. Colonel Tanner gives a graphic description of the village of Budi — the most delightful place he had seen in the Himalayas — and of the terrors of the Nirpania-kidanda, or waterless spur, which occurs between the Lipu Lek pass and Kumaon. The most important piece of work in this direction was accomplished by a surveyor named R. N., under Colonel Tan-

ner's direction. This explorer made a circuit of the great mountain Kinchinjinga, delineated the boundary between north-east Nepaul and Tibet, fixed the peak of Nuijin Sangra, and completed the sketch of the Zemu River. Colonel Tanner's surveys are particularly interesting as establishing the accuracy of those made by A. K. Our brief account will serve to indicate how much interesting matter is contained in this report.

A SALT-MINE IN WESTERN NEW YORK.

MR. WILLIAM FOSTER, jun., of New York has at last succeeded in sinking a shaft to the salt deposits of central New York. As I was permitted a few weeks ago to descend to the mine, I will, by the owner's permission, give the facts to the public so far as they are of scientific and general interest.

This is, I believe, the first successful attempt to mine the salt deposits of this region. In the neighborhood of Syracuse no salt deposits have been found; but the dependence is wholly upon salt springs which derive their salt from unknown sources. In the valley of the Genesee, in Livingston county, about thirty miles south of Rochester, deposits of salt were penetrated some years ago, in boring for oil, at a depth of about a thousand feet; and numerous wells have been bored from which brine is pumped, both there and in Wyoming county to the west. Previous attempts to sink shafts to these deposits in Canada have encountered so much water, that the projects have proved impracticable; but the present attempt seems to be entirely successful. The shaft was sunk 1,013 feet; and the mine is perfectly dry, with the exception of a little water which drips down the shaft. An inch-and-a-half pipe removes all the water. When I visited the mine in April last, they had drifted about 300 feet in each direction. The stratum of salt in which they are working is twenty-two feet thick, and fourteen feet of it is pure salt. The miners remove it by blasting (boring holes with augers specially adapted to the purpose, and inserting small charges of dynamite). I collected some of the dust which was coming from one of these holes, which had penetrated about four feet horizontally and about midway between the top and the bottom. This has been analyzed for me by Professor Jewett of Oberlin, with the following result: —

	PER CENT.
Sodium chloride	97.84
Calcium sulphate	1.04
Moisture	.08
Residue insoluble in water	.43
Magnesic sulphate	trace
Total	99.39

This is remarkably free from impurities, even for refined salt. Doubtless, by selecting specimens, a still greater purity might have been obtained. The above specimen fairly represents the purity of a stratum fourteen feet thick, which is now being mined without hinderance from any causes.

Other strata of salt were found both above and below this one. The upper stratum was reached at a depth of 991 feet, and was so mixed with shale as to be unprofitable. The lower stratum was reached at 1,047 feet, and is fifty feet in thickness, being practically clear salt. Between these two there was also a four-foot stratum of clear salt. Thus, in all, there is, within a distance of two hundred feet, not far from eighty feet of solid salt at a depth of a little over a thousand feet below the surface. The shaft begins in Hamilton shale. The following is the record: —

	Thickness in feet.	Depth in feet.
Shale	407	407
Corniferous lime rock	148	555
Shale	223	778
Limestone and shale	70	848
Shale	102	950
Lime rock	11	961
Shale and salt	30	991
First bed clear salt	22	1,013
Lime-rock and shale	28	1,041
Second bed clear salt	4	1,045
Rock	2	1,047
Third bed clear salt	58	1,105

This mine is at Piffard Station, Livingston county, on the Buffalo, New York, and Philadelphia railroad. G. F. WRIGHT.

LONDON LETTER.

THE movement previously referred to in this correspondence, for promoting such changes in the University of London as will bring the teachers of the various colleges into closer relations than at present with the examiners, has just made a great step in advance. At a meeting of convocation (i.e., of the general body of graduates) on June 29, a scheme was adopted, and sent on to the senate (the executive body) for consideration. It proposes, 1°, that the constitution of the senate be enlarged by the direct representation thereon of certain educational bodies in and near London, such as University college and Kings college, London, the Royal college of physicians and of surgeons, the Royal society, the council of legal education, etc; 2°, that certain colleges shall, under the title 'constituent colleges,' form a part of the university; 3°, that a council of education shall be established, consisting of repre-