psychology of sharing among preschool children was presented, together with experimental data by Richard C. Currier. Mr. Currier presented the scores made by young children when they face situations in which desired objects may or may not be shared according to the inclinations of the children. Frank K. Foster presented evidence which indicated that differences in methods may produce greater differences in the effectiveness of learning than differences in subject-matter. The data dealt with a controlled experiment in which pupils memorized English-nonsense combinations both with and without pictures. Learning without pictures was slightly more effective than with pictures. C. C. Crawford set up criteria for the evaluation of training students for research work. Ernest W. Tiegs presented the results of his investigation of teachers' attitudes toward scientific method. In spite of the fact that many of the teachers had been trained in courses dealing with scientific method, nearly half of them assumed traditional attitudes toward the educational problems with which they were confronted. The relation between problems of cerebral dominance and speaking and reading defects was presented with experimental data by Milton Metfessel. The application of nomograms to problems in educational statistics was described by Raymond C. Perry, who presented numerous slides which showed the use of the nomograms that he has developed. M. E. Broom presented a paper on the relation of general information and mental ability to silent reading at the college level. His data indicate that although information is very important in case of the upper half of the readers, still greater differences among the entire group of readers were found to be due to differences in intelligence. Three papers were presented upon the general problem of scholastic marks in secondary schools and the reliability of such marks as bases for predicting scholastic success. W. H. Hughes presented data which showed closer agreement among the personal attitudes which teachers ascribed to their pupils than among the academic grades achieved by the same pupils. W. L. Uhl presented closely related data which have been found under the general direction of August Dvorak. These data enable one to employ regression coefficients in the predicting of college success. By using these coefficients upon students of high-school grades the amount of error is reduced about 50 per cent. as compared with the error when raw grades are used. John W. Harbeson presented a large amount of similar corroborative data drawn from high-school and junior college studies which he has made. Charles C. Weidemann presented the results of the study of a scoring key for true-false and indeterminate examinations in the history of education. Instructors in this subject were asked to pass judgments upon the truth or falsity or doubtful character of 160 statements in the history of education. By obtaining judgments upon a point scale some of the objections to the use of true-false examinations seem to have been obviated. The present status of elementary business training in the public junior high schools of the United States was presented by Benjamin R. Haynes. One of the chief points in his findings is that many of the commercial subjects are moving upward rapidly into the senior high school. Grace M. Fernald gave the results of special remedial reading technique. She included demonstrations of her varied procedures by having two non-reading pupils perform before the group. Betty Trier Berry presented somewhat closely related data upon the improvement of reading at the college freshman level. The practical application of methods of recording the observations of classroom instruction was presented by means of charts and tables by John Waage, who has modified the Morrison and Barr technique so that he can use this technique in his own supervisory activities.

OBITUARY

EDWARD HART, 1854–1931

DR. EDWARD HART, professor emeritus of chemistry of Lafayette College and member of the faculty since 1874, died at his home on Saturday, June 6, in his seventy-seventh year. He is survived by his wife and seven children.

Dr. Hart was born in Doylestown, Pennsylvania, and studied law for two years, after which he went to Dr. Thomas M. Drown in Philadelphia to study chemistry. They came to Lafayette together in 1874, the young Hart ranking as assistant. During 1876 and 1877 he was at Johns Hopkins University with a fellowship under Dr. Remsen and he is believed to have been the first one to receive the Ph.D. degree from that institution.

Dr. Hart published numerous papers and he took out many patents, particularly for his nitric acid condenser and ceresine bottle for hydrofluoric acid, for the latter of which he was awarded the John Scott Medal. He became editor of the *Journal of Analytical Chemistry* in 1882, one of the first journals in America devoted exclusively to chemistry. Later, in 1892, he was appointed editor of the *Journal of the American Chemical Society* and it was decided to merge the two journals. Dr. Hart had already started a printing establishment in 1887

where the journals were printed. This became later the Chemical Publishing Company, managed by Dr. Hart until his death. From it also started the Mack Printing Company, and thus Easton came to be one of the largest centers of scientific publication. He gave up his editorship of the journal in 1901. .

In 1881 he started with one of his pupils, John T. Baker, to manufacture pure chemicals. In a year they took into the firm another of his pupils, George D. Adamson, and thus was formed the firm of Baker and Adamson which grew until it was absorbed into the General Chemical Company in 1901 and into the Allied Chemical and Dyestuff Corporation still later. J. T. Baker Chemical Co. branched off, starting business across the Delaware River in Phillipsburg, N. J.

Few teachers have been connected with the same institution for fifty-seven years. Still fewer have shown so great versatility and energy. It is worthy of note that Dr. Hart did not win a bachelor's degree in course from any college, but no doubt his training with Judge Watson and Dr. Drown gave him the ability to impress Dr. Remsen with his merit, and some years later Lafayette College gave him an honorary B.S. and thus he became a graduate without classmates. He left a lasting imprint upon American chemistry. He also took a part in local affairs, having been president of the Board of Trade, of the Northampton County Motor Club, member of the City Council, progressive candidate for Congress. In 1924, there was held at Easton an Edward Hart celebration, when the college awarded him an LL.D. degree. At that time Dr. Wiley, Dr. Hildebrand, Dr. Nichols and Dr. Edgar F. Smith were among those friends who paid him honor. They have now all passed on.

EUGENE C. BINGHAM

LAFAYETTE COLLEGE

SHIBASABURO KITASATO

SHIBASABURO KITASATO, the founder of the Kitasato Institute of Tokyo, a pioneer in the field of bacteriological research and one of the outstanding figures of modern Japan, passed away suddenly, at the age of seventy-five, on June 13, 1931.

Kitasato was born in 1856, at Ogunigo, a mountainous village in Kiusiu, Southern Japan, where he received his early education. After studying at the then newly established Medical School in Komamoto, and at the Government Medical School at Tokyo, the forerunner of the present Faculty of Medicine of the Tokyo Imperial University, he entered the service of the Central Bureau of Public Health.

In 1885, he was sent to Germany by the Japanese government in order to study bacteriology under its founder, Robert Koch. Devoting himself to careful studies in this new field, he succeeded in obtaining the pure culture of the tetanus bacillus. Furthermore, he proved that the antitoxin produced in the animals which were immunized against tetanus toxin was a specific therapeutic agent. Kitasato's work on tetanus was published conjointly with that of von Behring on diphtheria under the title of "Production of Immunity to Diphtheria and to Tetanus in Animals." This was the foundation of serotherapy, by which the whole world was benefited.

While he was pursuing his work under Koch, particularly in the field of the study of tuberculosis, the time came for him to return to Japan. But the Emperor of Japan, learning of Koch's earnest desire to retain his assistant, granted Kitasato a fund which enabled him to continue his study in Koch's institute, under imperial patronage. When after seven years' sojourn in Germany he returned home in 1892, the German government conferred upon him the title of "Professor," the first honor given to a foreign scientist by the German government.

Through the generosity of Yukichi Fukusawa, one of the greatest figures of the Meiji era, Kitasato established a laboratory for the study of bacteriology, which was the first institution for scientific research in Japan. This laboratory, later brought under the control of the Hygiene Society of Japan, subsequently by continual enlargement developed into an institute in which research in bacteriology and the study of infectious diseases made steady and firm progress. Recognizing the services which it rendered, the government granted financial aid for a new building and in 1899 took over the institute under the control of the Ministry of the Interior. The work of the institute, organized and directed by Kitasato, was enlarged and finally the vaccine lymph farm and the serum institute, both of which had been established by the government, were amalgamated with the Institute for Infectious Diseases under Kitasato. New buildings were erected at Shirokane-daimachi in 1905. Meanwhile the institute had published the results of several important researches in bacteriology, and at the same time Kitasato had, at the request of the government, gone abroad on various missions. It is particularly noteworthy that during an epidemic of bubonic plague in 1894 he went to Hongkong and discovered the plague bacillus. In 1911, he visited Manchuria to study preventive measures against pneumonic plague, during the most violent epidemic experienced in recent years. At an International Plague Conference held at Mukden, Kitasato was elected its president to take charge of this important work.

In 1914, the Imperial Institute for Infectious Diseases, which Kitasato had established and directed, was transferred to the control of the Ministry of