

Summary

To many people, the University of Oklahoma has simply always been. Many probably never even consider that the programs and this place are the result of the vision, hard work and dedication of those who came before. Beginning from virtually nothing, men and women worked to turn the noble idea of public education into a real place of discovery, scholarship and personal growth – today's University of Oklahoma. Among those who influenced the early days of the university is Homer Levi Dodge – physics chair, graduate dean and founder of the Oklahoma Research Institute.

Dr. Dodge helped shape the OU Physics Department, the university and his profession with his forward thinking and ability to get things done. It is a rare opportunity that Dr. Dodge's accomplishments of a half-century ago will now be recognized in a way that will positively affect the department he helped to build for generations to come.



Homer Levi Dodge

Homer L. Dodge

Homer Dodge held many titles during an exciting career,

including professor, scientist, administrator, dean and president. A large portion of his career was spent advancing the teaching of physics. But in the bigger picture, whatever endeavor he was involved in, he was a builder. At OU, he created the engineering physics program, a degree program that advances society by bridging pure science with practical applications. He also was a founder of the Oklahoma Research Institute, created to provide scientific exploration on behalf of industry and government through sponsored research.

His multi-faceted career is further reflected in the following biography from the American Institute of Physics:

Homer Levi Dodge was born on October 21, 1887, in Ogdensburg, New York. His father, Orange Wood Dodge, taught at the Ogdensburg Free Academy, which Homer attended. His mother, Isabella Donaghue Dodge, was an active participant in the intellectual life of the community; after her death, the children's room of the public library was dedicated to her. From them their son acquired a deep appreciation of the natural world and was encouraged to challenge it both intellectually and physically.



Early in life, Dr. Dodge developed a love for the outdoors and canoes. Here he readies for a 500-mile canoe trip.

Homer Dodge graduated from Colgate University in 1910, and went on to obtain an M.S. in 1912 and Ph.D. in physics in 1914 from the University of Iowa. From 1906 to 1915 he spent his summers as a surveyor for the United States Geological Survey. At Iowa he taught physics first as a graduate assistant, then as an instructor, and finally in 1915 as an assistant professor. He was especially interested in applied physics, and concentrated on laboratory experiments and equipment and the investigation of materials. During World War I he was a member of the National Research Council Sub-committee on Detection of Invisible Aircraft; in 1919 the War Department published the results of his investigations. While at Iowa, he applied for and was eventually granted two patents, one for an improved rheostat and the other for a porous damper for

acoustical instruments. In 1917 he married Margaret Wing, with whom he had two children, Alice Isabella in 1920 and Norton Townshend in 1927.

In 1919 Dodge became chairman of the Physics Department at the University of Oklahoma, and in 1926 dean of the graduate school. He also developed and directed a program in applied physics for engineers and geologists.

Homer L. Dodge

He was president of the Board of Trustees for the School of Religion from 1927 to 1944. In 1941 he organized within the university the Oklahoma Research Institute and became its first director. The purpose of the Institute was to conduct research that could be supported by the state government and industry. During this time, most of his papers and lectures reflected his interest in education and his investigations into methods of improving it.

When Dodge began teaching at Iowa, a far greater emphasis was placed on research than on teaching, as American physicists tried to build up departments that could provide the same level of training as their European counterparts. Although Dodge published many research papers, he was becoming more interested in the education of future physicists, and he and Paul Klopsteg, who was then at the University of Minnesota, tried to influence the American Physical Society (APS) to take up these concerns. The APS appointed Dodge as their official representative on the editorial staff of the journal *School Science and Mathematics*, where he edited a column called "Research in Physics," which presented the newest developments in the field. He oversaw this column from 1916 to 1924 and contributed many articles.



Prior to accepting his job at OU, Dr. Dodge skates on the Iowa River with his wife, Margaret.

Since the APS did not provide an official outlet for the concerns of those who were interested in teaching as well as research, Dodge and Klopsteg met with their colleagues at the December 1930 meeting of the APS to organize the American Association of Physics Teachers (AAPT). They were able to excite the interest and active participation of many prominent physicists, such as Karl T. Compton, Frederick Palmer Jr., Floyd K. Richtmyer, Marshall States, and William S. Webb. Shortly after its establishment, the AAPT became one of the five founding societies of the American Institute of Physics (AIP). Homer Dodge was elected first president of the AAPT, and then became a member of its Governing Board from 1933 to 1939. He served as chairman of the Membership Committee from 1934 to 1937, guiding a very successful membership drive, and was also a member of the Committee on the Training of Physicists for Industry. He was awarded the Oersted Medal in 1944, gave the Richtmyer Lecture in 1947 and received a Distinguished Service Citation for contributions to the teaching of physics in 1977. He was instrumental in setting up in 1932 the *American Physics Teacher*, the journal of the AAPT, whose name was changed to the *American Journal of Physics* in 1940, under the editorship of his Oklahoma colleague Duane Roller.

Dodge was a member of the AIP Governing Board from 1932 to 1935; made chairman of its New York headquarters building fundraising committee in 1939; and was a member of the War Policy Committee in 1942 and chairman in 1943. He was active in Sigma Pi Sigma, the physics honor society, serving as national president from

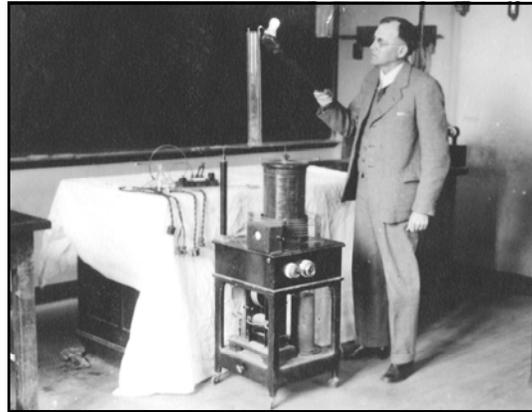
Homer L. Dodge

1947 to 1950, and a member of its Executive Council from 1950 to 1955. He was also active in the American Society of Engineering Education (ASEE), formerly the Society for the Promotion of Engineering Education (SPEE). He served as field director for a study on college and university teaching conducted by the American Association of University Professors, and the results were published in 1933. In addition, he was a member of the first educational advisory board for the Merchant Marine Academy in Kings Point, New York, from 1947 to 1952.

From 1942 to 1944, he took a leave of absence from the University of Oklahoma to serve as director of the Office of Scientific Personnel of the National Research Council. In 1944 he accepted the presidency of Norwich University, a military academy in Northfield, Vermont, that emphasized liberal arts as well as science and engineering. In 1950 he resigned as president to take over direction of the Cabot Fund, created by a generous donation from Dr. Godfrey Cabot, a Norwich trustee, to establish an aviation program at Norwich. He acted as director of the fund until 1953 and chairman until 1960.

In 1951 he was the only physicist in a group of engineers who traveled to Japan as part of the engineering education mission organized by ASEE at the request of the American Occupation Force. The group found the Japanese engineers locked into the European lecture tradition where the professor gave one lecture to a huge class, took no questions and made no effort to discover if he was understood and concentrated on research. The Americans toured their hosts' facilities, met them socially, and conducted sessions that relied upon discussion. They emphasized the diversity and flexibility of the American educational system, the approachability of its professors and instructors, its emphasis on both teaching and research and the benefits and strengths of this two-way communication. They demonstrated to the Japanese that there was no definitive answer that they could give them to help them improve Japanese engineering education, but that the answers would have to come from the Japanese themselves in response to their knowledge of their own needs, strengths and weaknesses.

In 1955, Dodge and his son Norton traveled extensively in the U.S.S.R., making the first study of Soviet education after World War II. Dodge returned to sound the alarm over the superiority of the Soviet scientific educational system compared with the American. Under the auspices of Sigma Pi Sigma, he toured many campuses, showing his slides and giving lectures on his experiences and conclusions. The 1950s, in fact, were given over in great part to lecturing and travel. Besides lectures on Japan and Russia, Dodge offered talks and illustrations



Dr. Dodge served as chair of the OU physics department from 1919 until 1942, the longest tenure of a chair in the department's history.

Homer L. Dodge

ranging from his earliest days of travel in the western United States up through his canoeing exploits on the St. Lawrence River in the 1950s. He was thus able to combine into this activity his interests in photography, travel, canoeing, the environment, southwest archaeology and anthropology, topography and education.

After his official retirement in 1960, Dodge devoted his time primarily to travel and canoeing, attending professional meetings and giving occasional lectures. He was active in several conservation, whitewater and outdoors associations, and participated successfully in many canoe races. He remained mentally active until the end, only surrendering grudgingly to physical restrictions in his last few years. His wife died in 1981; on June 29, 1983, he died in his home on his son Norton's estate in Mechanicsville, Maryland, at the age of 95.

Homer Dodge Career Highlights While at the University of Oklahoma

- 1919 — Named chair of the Physics Department, teaches electricity classes
- 1924 — Establishes new program, engineering physics, in College of Engineering, named first director
- 1924 — Hires young professor, Jens Rud Nielsen, who becomes one of OU's best known faculty members
- 1926 — Named dean of Graduate College
- 1930 — Helps establish American Association of Physics Teachers, elected first president
- 1932 — Elected to American Institutes of Physics governing board, serves three years
- 1941 — Founds Oklahoma Research Institute, named first director
- 1941 — Secures \$350,000 appropriation from legislature for construction of physics building. World War II interrupts, building constructed in 1948
- 1942 — Takes leave from OU to serve as director of the Office of Scientific Personnel of the National Research Council



Dr. Dodge (fourth from right) serves on President Bizzell's Administrative Council in 1938.