Marie Gugle

By David Kullman

Of the fifty plus educators who have served as president of the National Council of Teachers of Mathematics, six have come from Ohio. Make that seven if you include NCTM's founding president, Charles Austin, who grew up in Waynesville, graduated from Ohio Wesleyan University, and taught at Milford High School before being lured away to head the mathematics department at Oak Park-River Forest High School near Chicago. The first true Buckeye, and first woman to lead NCTM, was Marie Gugle, who served as the fourth president of that organization from 1926 to 1928.

Marie was born in Columbus, Ohio on November 17, 1876. She graduated from high school there in 1893 and went on to earn a bachelor's degree from The Ohio State University and a master's degree from Columbia University. In 1900, she was back in her hometown, teaching seventh grade mathematics at Northwood Elementary School. She left Columbus for a while to teach high school mathematics in Toledo, and in 1916, she became the first female president of the Central Association of Science and Mathematics Teachers (now the School Science and Mathematics Association).

In 1920, while serving as assistant superintendent of Columbus Public Schools, Gugle authored a three-volume textbook series, titled *Modern Junior Mathematics*, designed to give junior high school students a working knowledge of mathematics. *Book One* dealt with bookkeeping and business math; *Book Two* was about geometry, and *Book Three* was an introduction to algebra. The series received enthusiastic reviews in both *The Mathematics Teacher* and the *Elementary School Journal*, and 21st century reprints of these books are still available. *Willie Fox's Diary*, a supplementary reading book for the primary grades, co-authored with Ruth Miller Hilkene, was also very popular.

In 1918, Gugle was elected as Secretary of the Department of Superintendence of the National Education Association (NEA). Perhaps it's no coincidence that the NCTM organizational meeting took place during a meeting of this Department, held in Cleveland two years later. At that 1920 meeting, Marie chaired a session on junior high school mathematics and served on the committee to draft a NCTM constitution. When *The Mathematics Teacher* became the official NCTM journal a year later, she was appointed to its editorial staff. Besides serving as the fourth NCTM President she also served three terms on the NCTM Board of Directors (1920-23, 1928-31, and 1931-34).

Gugle had a keen interest in geometry. Her 1930 *Mathematics Teacher* article, "Geometry in the Junior High School," addressed questions of why geometry should be taught in junior high school, what geometry should be taught, where it belonged in the junior high school course of study, and how it should be taught. A chapter on "Dynamic Symmetry" in the *Third NCTM Yearbook* focused on relations between geometry and art and also explored the golden ratio as seen in art and nature. She had presented an illustrated lecture on this topic at a meeting of the Detroit Mathematics Club in 1926 and at the fourth annual meeting of the Louisiana-Mississippi Section of the Mathematical Association of America, held in Shreveport in 1927.

Gugle was also widely respected for her views on mathematics curriculum reform, a topic that was as controversial 100 years ago as it is today. In 1922, she spoke at the MAA Ohio Section meeting about the problem of articulation between high school and college mathematics. She would later write an article for *The Mathematics Teacher* on "Revision of College Preparatory Mathematics." In it she addressed curriculum changes, with emphasis on geometry, that had been recommended by the National Committee on Mathematical Requirements in 1920 and the College Entrance Examination Board in 1923. She challenged collegiate mathematics instructors to "meet the secondary school teachers half way" and gave suggestions for what secondary schools and colleges could do to improve the transition from high school to college.

In the early twentieth century, proper use of leisure time was considered a "cardinal principle of secondary education," and many questioned how mathematics could help achieve recreational outcomes. While teaching mathematics at Toledo's Scott High School in 1913, Marie organized a Euclidean Club for students interested in mathematics, and she brought this idea with her to Columbus. She would later write a chapter in the *First NCTM Yearbook* about the recreational values of mathematics clubs.

Marie was an active member of the Columbus chapter of Altrusa International, and she served as governor of the Ohio-Michigan district in 1931-32. In 1938, she helped to organize the Columbus chapter of Delta Kappa Gamma, an international society for women educators, and was elected as its first president.

Marie Gugle finished her career as an educator in 1943, following eight years as principal of East High School in Columbus. She became a charter member of the Ohio Council of Teachers of Mathematics in 1951 and died at her Columbus home on April 1, 1960 at age 83. Harold Fawcett, President of NCTM at the time and founder of OCTM, composed her obituary for *The Mathematics Teacher*.