

## Historical Overview: Career Opportunities for Girls and Mathematics Education during the Progressive Era

This study is dedicated to evaluating effect of career opportunities prevalent among female population in the United States on women's mathematics education during the time high school education came to be accepted as a necessity for most children in the United States. A review of developments in the education of women during a time when new trends were being established aims to shed light on the long-term impacts of the challenges and issues we face today around the conversation of the underrepresentation of women in mathematics.

Time period from 1890 through 1920 in the United States is called Progressive Era and is known for its social, political, and education reforms. Shifting ideology and newly enacted laws for compulsory education sent students streaming to public schools, which in turn forced schools to accommodate a student population that was increasingly diverse, both in upbringing and in prior knowledge (Ravitch, 1974). Thus, in order to create a place for each child in the public school system, educators saw the solution in the diversification of education. The position of diversified education was to adapt school curriculum to meet utilitarian demands and to incorporate vocational, manual, commercial, and industrial studies into the public school system. This idea received the needed support, and high schools began to join students under the same roof, though not for the same classroom experience (Kliebard, 2004). Differentiated curriculum demanded the elimination of some subjects, and this movement specifically targeted mathematics, along with the other subjects (Kilpatrick, 2009).

Subjects differed based on the professions foreseen by (or for) students, and since many of the vocations were gender specific, so was the education. Data from the 1910 U.S. Census for women's occupations shows that occupations such as bookkeeper, accountant, office clerk, and schoolteacher prevailed for women over the other possible categories of employment (Weaver, 1915).

This study will review data from multiple sources and perspectives—government, contemporary publications, private manuscripts and letters written by prominent educators and historians. Furthermore, review of the career opportunities for girls is incomplete without an examination of the occupational guidance that female students received from teachers and school administrators, parents and peers.

### References:

- Kilpatrick, J. (2009). The social efficiency movement in the United States and its effects on school mathematics. In K. Bjarnadottir, F. Furinghetti, & G. Schubring (Eds.), *Dig where you stand: Proceedings of the conference Ongoing Research in the History of Mathematics Education* (pp. 113-122). June 20-24, 2009, at Fjölbrautaskólinn í Garðabæ, Garðabær, Iceland.
- Kliebard, H. M. (2004). *The struggle for the American curriculum, 1893-1958* (3rd ed.). New York, NY: RoutledgeFalmer.

Ravitch, D. (1974). *The great school wars: A history of the New York City public schools*. New York, NY: Basic Books.

Weaver, E. W. (1915). *Profitable vocations for girls*. New York, NY: A. S. Barnes.  
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