

If Not With Fennema in the 1970s, Then When?

Helen Forgasz
 Monash University
 helen.forgasz@monash.au

Jennifer Hall
 Monash University
 jennifer.hall@monash.au

It has generally been considered that Elizabeth Fennema was a trail-blazing researcher in the field of gender and mathematics education. Fennema's (1974) literature review encompassed 36 U.S. studies of mathematics achievement from 1960 onwards. She claimed that "such studies were difficult to find because often when sex is used as an independent variable, it is treated and discussed casually, if at all" (p. 127). Fennema's research question was "Are there sex differences in mathematics achievement?" (p. 136), and, by examining this body of work she wanted to determine whether boys' superiority in mathematics learning was a myth or a reality. In the final section of the manuscript, Fennema posed seven questions; these became the springboard for her subsequent research and inspired other researchers in the field.

Not taking anything away from Fennema's (1974) review or her subsequent groundbreaking research in the field, it would appear that there is quite a large body of research prior to 1960 in which gender differences (then termed "sex differences") in mathematics learning were reported. Leder's (1992) review of the literature in the two decades prior makes mention of some of work published before 1960, "Then, as now, gender differences in mathematics learning were attributable glibly by some... to differences in innate abilities whereas others... to differences in ... interests and perceptions of future usefulness of the subject" (p. 598).

The narrative in the field of gender and mathematics research typically involves a 'start' date of the 1970s (despite Leder's (1992) references to four studies from before 1960), usually with reference to the Fennema (1974) review or to her subsequent research with Julia Sherman (e.g., Fennema & Sherman, 1977). When searching for articles to add to the IOWME publications page (Hall, 2024), Jennifer stumbled upon an article (Lambert, 1960) about mathematics ability and masculinity. Following back from the references in that article, we continued to find earlier research about gender and mathematics, dating back more than a century ago. As experienced researchers in the field, we were surprised to find so many historical articles of which we had not been aware.

In this session, we will explore the lessons that we learnt from our serendipitous finding of the trove of research on gender and mathematics learning outcomes prior to 1960. In fact, the research stretched back as far as the late 19th century. In light of our experience, we will also highlight the challenges that researchers face in their own fields of expertise in mathematics education, as well as suggesting ways to overcome these challenges.

References

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