Cantley, Ian; Prendergast, Mark; Schlindwein, Franz
Collaborative cognitive-activation strategies as an emancipatory force in promoting girls’ interest in and enjoyment of mathematics: a cross-national case study.

Summary: The results of international large-scale assessments have revealed the emergence of gender disparities in attitudes to mathematics, with girls generally demonstrating lower levels of interest in and enjoyment of mathematics than boys. Given that attitudes to mathematics are key determinants of future STEM participation, collaborative cognitive-activation teaching strategies, which harmonise with the core tenets of feminist mathematical pedagogy, are proposed as a possible approach to improving girls’ relationships with mathematics. The results of a small-scale cross-national case study that incorporated this approach through a six week intervention are reported. The findings show a significant increase in girls’ enjoyment of mathematics but there was no significant change in boys’ attitudes. Potential implications for mathematics education policy and practice are elucidated.

Classification: C20 C60
Keywords: gender equity; enjoyment; collaboration; cognitive-activation
doi:10.1016/j.ijer.2016.11.004