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## **Approaches to Researching Females and STEM**

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Below are suggested approaches to researching females and STEM (science, technology, engineering, and mathematics).

- Conduct varied types of quantitative, qualitative, and mixed-methods research to provide both quantitative power and nuanced insights on females and STEM. Create instruments, methods, and analyses designed to provide such information. In mixed-gender research, disaggregate data by sex and other social identities, such as race/ethnicity and social class.
- Research key factors that positively and negatively influence females' access to, dispositions toward, and performance, experiences, and voluntary participation in STEM over time. Examine in- and out-of-school factors, as well as education policy and its implementation. Consider present influences and the potential role of past influences examined retrospectively.
- In addition to studying education practices, curricula, and instructional materials, investigate the role of significant individuals in relation to females and STEM, such as peers, family members, education professionals (teachers, school administrators, school counselors, teacher educators, etc.), and employers. Also consider the role played by the media and other information/image sources, among other community and societal influences related to females' life experiences.
- Attend to intersections among social identities, such as gender and race/ethnicity, social class, and/or exceptionality. Consider the role of culture, and make cross-cultural comparisons within and across nations.

As with any research, it is important to identify gaps in existing research and to attempt to help fill those gaps, as well as to contribute to theory regarding females and STEM.

### ***Selected Resources***

- Gender Statistics Manual (United Nations Statistics Division): <http://unstats.un.org/unsd/genderstatmanual/>
- Jelić, N. (2013). *Bias in conducting research: Guidelines for young researchers regarding gender differences*. <http://blog.efpsa.org/2013/11/30/bias-in-conducting-research-guidelines-for-young-researchers-regarding-gender-differences/>

- Wedege, T. (2011). Gender as a foreground and a background in mathematics education research. In C. Rudälv & B. Melander (Eds.), *Kvinnor och matematik: Konferens den 14-16 juni 2009, Konferensrapport* (pp. 55-65). Umeå: Print&media, Umeå universitet.  
<http://dspace.mah.se/handle/2043/13210>