Cultivating Research for Engaging Advanced Technology in Education (CREATE)

Research indicates that girls' negative views of the fields of science, technology, engineering, and mathematics (STEM) are often due to social and cultural influences. Family, schools, and media are likely to impose stereotypic role expectations on girls and infuse girls with ideal "Barbie doll" img of girls.

Girls need to be exposed to social environments that will encourage them to overcome ungrounded social stereotypes and build constructive views of their competency in STEM. Although the stereotypic views of family, teachers, or friends cannot be immediately changed or influenced, girl-friendly virtual social environments can be created to help girls build positive attitudes toward STEM.

This project is an investigation of the educational potential of virtual peers, often called pedagogical agents as learning companions (PALs), to change high school girls' negative self-img and attitudes toward STEM, moving them in a desirable direction. The goals of the project include 1) investigating the effectiveness of PALs in facilitating girls' self-confidence and efficacy in learning math and 2) investigating the characteristics of PALs critical to that end.

MathGirls Team

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