



BLOG



GUEST BLOG: Cultural Stereotypes Steer Girls Away from Math

Andrew Meltzoff and Dario Cvencek // Oct. 10, 2011 // 12:01 PM



A "math is for males" stereotype has been used as part of the explanation for why so few women pursue careers in science, technology, engineering and mathematics (STEM). Attracting more women to the STEM disciplines is at the forefront of educational and political decision-making partly because these jobs - which pay more and are projected to grow more than non-STEM jobs during the next 10 years - provide great opportunities for women.



Some say that men and women are simply hardwired to be interested in different topics, and math tends to be of interest mostly to men. But we think cultural factors also play a significant role and that the power of math-gender stereotypes has been underestimated in how they influence the identity of the young child as a math learner.

With colleagues at the Institute for Learning & Brain Sciences at the University of Washington in Seattle, we're studying how culture seeps into the brain to influence children's choices and aspirations.

One of our recent studies revealed that the math-gender stereotype is evident as early as second grade. This is before gender differences in math achievement appear.

Just imagine, second-grade girls who are doing well at math thinking that they aren't good at it! This stereotype could affect what activities they engage in, as well as their career aspirations. The "math is for boys" stereotype may not be universal across cultures. One of us, Dario Cvencek, was born and raised in the former Yugoslavia and he remembers how people there thought that math went with girls just as much as it did with boys.

Cvencek led our study, published in Child Development, in which we used a computer-based categorization test to assess how strongly children in grades one through five link math with gender.

About The Blog

Education Nation's The Learning Curve has been made possible through the generous support of the Bill and Melinda Gates Foundation.

All statements and opinions expressed on this blog are those of the individual contributors, and not of the Bill & Melinda Gates Foundation or NBC News.

Related Posts



Female Mentors Needed to Get Girls Interested in STEM



Mentoring and Creating More Latino Scientists

More Posts

Related Resources



National Math + Science Initiative



National Lab Network

More Resources

Tags:

ALL HOT TOPICS CONTRIBUTORS

# runrrle

Visit [msnbc.com](#) for [breaking news](#), [world news](#), and [news about the economy](#)

In one part of the test, children sorted four kinds of words: boy names, girl names, math words and reading words. As early as second grade, children demonstrated the cultural stereotype for math: Boys and girls associated math words more strongly with boy names. In another part of the test, boys identified themselves with math more than girls did.

This means that girls not only make the “math is for boys” linkage, but that they also apply that stereotype to themselves. Stereotypes assimilated from the environment shape the child’s self-concepts. Here are some ways parents and educators can dampen the math-gender stereotype.

-Parents can point out the mathematics of daily life, such as in cooking, household building projects, shopping, saving money toward a goal and playing board games.

-Educators can emphasize persistence in approaching math, encourage the idea that everyone can do math and discourage the notion that “some kids are naturally great at math and some kids just aren’t.”

-Teachers should be very careful to call on girls at least as often as boys, recognize girls’ math achievements and use gender-neutral language, such as calling students “mathematicians” and not “you guys,” during math lessons.

-Parents and teachers can both be instrumental in situations when a child does not do so well in math. Instead of saying, “Don’t worry about it, you tried your best,” – a common response when girls do not do well in math – all children should be told, “If you work hard enough, you can do this.”

In the comments section below, we hope you weigh-in with other ideas and resources that can help diminish the “math is for boys” stereotype.

Children have their antennae up and are taking in stereotypes exhibited by parents, educators, peers, games and the media. Perhaps if we can depict math as being equally for boys and girls, we can help broaden the interests and aspirations of all our children.

*Andrew Meltzoff is co-director of the [Institute for Learning & Brain Sciences](#) at the University of Washington and holds the [Job and Gertrud Tamaki Endowed Chair](#) at UW. Dario Cvencek is a postdoctoral fellow at UW’s [Institute for Learning & Brain Sciences](#).*

Tags: [Gender Gap](#) [Guest Blog](#) [Math](#) [Parental Engagement](#) [Science](#)