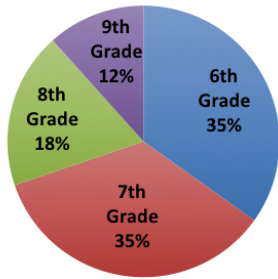


Evaluation Highlights for the 2017 Expanding Your Horizons (EYH) Conference at James Madison University

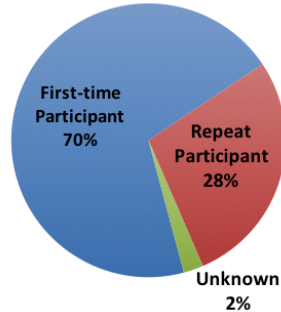
Demographics

Of the 204 student participants at the 2017 Expanding Your Horizons Conference, 172 participants completed the conference pre-survey. Demographic data is based on these 172 participants.

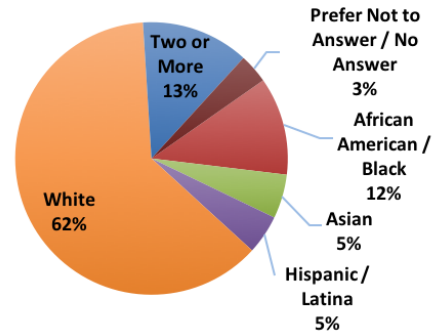
Grade Levels of Participants



Types of Participants



Self-Reported Ethnic Backgrounds of Participants

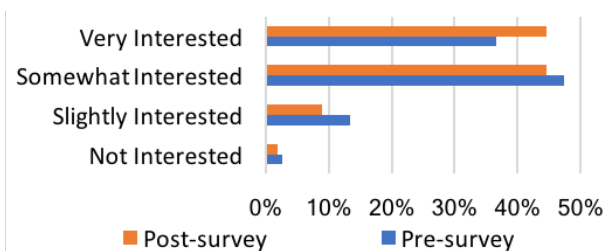


- **93% of participants** reported on the pre-survey that they **definitely plan to attend college**.
- **38% of first-time participants** and **61% of repeat participants** reported on the pre-survey that they are **very interested in a career that uses math or science**.
- **52% of participants** reported on the pre-survey that, other than EYH, they **do not participate in science, math, or computer activities outside of school but they would like to**.

Changes in Interests and Perceptions for First-Time Participants

All participants were asked on both the pre-survey and post-survey to rate their interest in STEM careers and their confidence in their future success in a STEM career and to provide their perception of the proportion of girls who are interested in STEM. Since the impact of attending EYH is expected to be greatest in the first year of attendance and many repeat participants entered the conference already reporting the highest possible levels of interest and confidence, the analysis below focuses on comparing these pre-conference and post-conference measurements for the 112 first-time participants who completed both surveys. First-time participants realized statistically significant gains in all three of these measures.

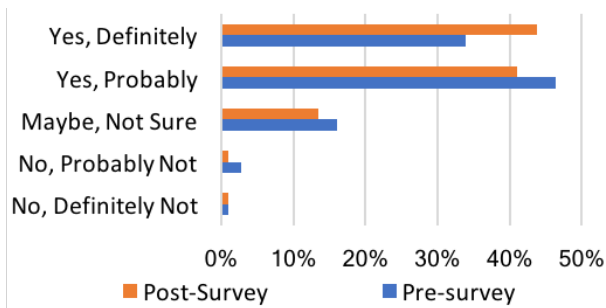
First-time Participants: How interested are you in a career that uses math or science?



After attending EYH, **20% of first-time participants reported increased interest in a career that uses math or science**.

For all first-time participants, the average increase in interest level was 0.14 points on a 4-point scale. (p-value=0.0035)

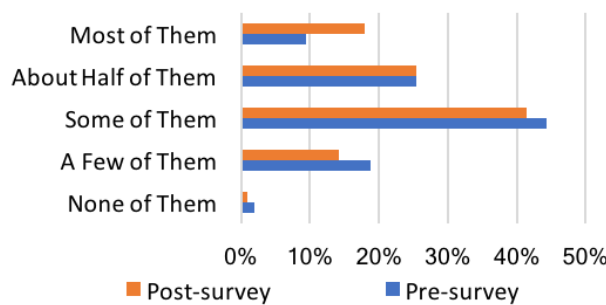
First-time Participants: Do you feel that you would be successful in a career that uses math or science?



After attending EYH, **22% of first-time participants reported increased confidence that they would be successful in a career that uses math or science.**

For all first-time participants, the average increase in confidence level was 0.16 points on a 5-point scale. (p-value=0.0060)

First-time Participants: What portion of girls your age do you think are interested in math, science, or computers?



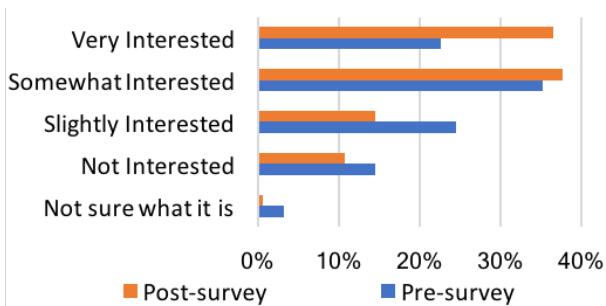
After attending EYH, **27% of first-time participants reported thinking that a larger portion of girls their age are interested in math, science, or computers.**

For all first-time participants, the average increase in perceived portion of girls who are interested was 0.236 points on a 5-point scale. (p-value=0.0010)

Changes in Subject-specific Interests for All Participants

To provide a more nuanced measure of interest in STEM, each participant was asked to rate their interest in learning more about 9 different STEM fields. Students were also given the option to indicate that they weren't sure what a field was. For 2017, the analysis of the subject-specific questions focused on the areas of biology, chemistry, and engineering since these fields were highlighted in the conference's keynote speeches and science demonstration. Analysis was conducted for the entire sample of conference participants since the content of the speeches and demonstrations was specific to the 2017 conference. Pre-conference and post-conference interest in these three fields were compared for all students who provided an interest rating on both surveys, and statistically significant increases in the average level of interest were observed for all three fields.

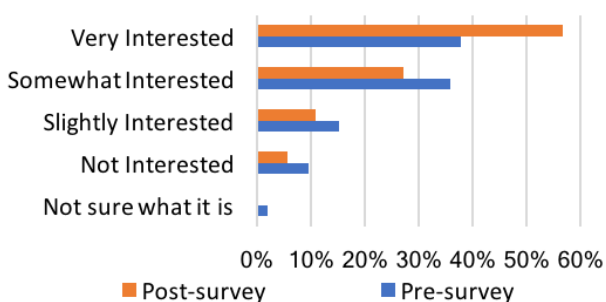
How interested are you in learning more about Biology?



31% of participants who indicated a level of interest, including not interested, in biology before the conference **reported a higher level of interest in biology** after attending EYH.

For participants who provided a pre-conference interest rating, the average increase in interest in biology was 0.33 points on a 5-point scale. (p-value<0.0001)

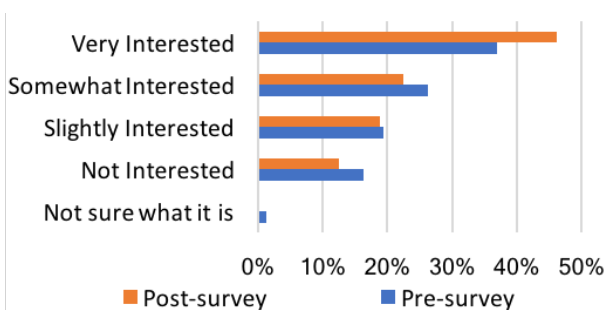
How interested are you in learning more about Chemistry?



35% of participants who indicated a level of interest, including not interested, in chemistry before the conference **reported a higher level of interest in chemistry** after attending EYH.

For participants who provided a pre-conference interest rating, the average increase in interest in chemistry was 0.34 points on a 5-point scale. (p -value<0.0001)

How interested are you in learning more about Engineering?



29% of participants who indicated a level of interest, including not interested, in engineering before the conference **reported a higher level of interest in engineering** after attending EYH.

For participants who provided a pre-conference interest rating, the average increase in interest in engineering was 0.20 points on a 5-point scale. (p -value=.0038)

Follow-up Actions After the Conference and Feedback from Parents

Adults who registered student participants received an online survey invitation approximately a month and a half after the conference. Forty-seven parents and guardians responded and provided information about 49 of the 204 student participants. Since attending EYH,

- **98%** of these students had **talked with their parent/guardian about what they had learned** at EYH,
- **89%** of these students had **expressed increased interest in a career that uses math or science**,
- **89%** of these students had **expressed increased confidence with regard to their potential for success in a career in math or science**,
- **67%** of these students had **expressed interest in taking additional math or science classes** in the future.

More information about the Expanding Your Horizons Conference and this evaluation project can be obtained by emailing the conference directors, Drs. Elizabeth Arnold and Katie Quertermous, at eyh@jmu.edu.