



# OPAS Initiative

<http://opas.ous.edu/>

## *Engineering\_and\_CS\_Student\_Motivators\_v4.4 Survey Returns Highlights*

October 16, 2009

An overview of this project and the survey is available at [http://opas.ous.edu/EFSurvey/EFSurvey\\_overview\\_v4-4.pdf](http://opas.ous.edu/EFSurvey/EFSurvey_overview_v4-4.pdf)

Completed Surveys October 16, 2009: 695

### Demographics:

- Caucasian: 79% (may include multiracial)
- Male: 85% (with 1% prefer not to answer)
- OSU: 58% (n=403)
- PSU: 5% (n = 35)
- OIT: 30% (n = 207)
- Neither parent has bachelor's: 35%

### Classes they have taken:

- 36% have taken some form of computer programming or game design
- 40% have taken engineering, CAD or electronics; of those, 11% (n = 32) positively identify PLTW; therefore about 5% of the matriculators have taken a PLTW class, which is may be significant when access to PLTW is taken into account. That is an exercise we hope to do in a future analysis.
- 82% take pre-calc; only 62% take calculus, but 75% take physics

### Influences on the choice of major:

- What happens in class is most likely to be rated some-to-large influence, followed by ongoing experiences outside the normal school day, then events, and then on-the-job experiences. Of those able to have apprenticeships, internships and on-the-job training, 35% say it has a large influence.
- Hands-on experiences (56%) are still the most cited "large influence", followed by lectures, demonstrations, readings (50% - some influence) and "personal experience with friends, family, job" (47% - large influence). Visiting museums and other informal learning venues had "some influence" on 40% of respondents.

### OST participation highlights

- 24% did engineering other than robotics
- 12% did robotics
- 10% did computer science clubs and competitions
- 34% did competitive team sports
- 21% did recreational team sports

## OST Brand names

- 17% did 4-H (3% did SET projects such as TechWizards)
- 17% did robotics ( 7% FLL; 8% FRC; 2% FTC)
- 16% did OMSI camps and classes
- 15% saw OSU Engineering Ambassadors
- 10% participated in science fairs (NWSE cited)
- All other brand names are in single digits

## OST Access

- Educational level: 23% elementary, 39% middle school, 70% high school
- 38% did some of these activities during the summer
- 18% had trouble finding the activities they wanted to do most
- 8% had affordability issues

## What programmatic aspects are important?

- 76% - solving problems, hands-on work, learning by doing
- 68% -- learning about science, technology, engineering and math
- 55% - feeling challenged and growing into that challenge

Further analysis is planned, but advice, recommendations, and exploratory questions are welcome.

*Respectfully submitted,*

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