Demographic effects on student-reported satisfaction with teams and teammates

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Abstract
This study used team feedback responses (ratings of self/peers and of team satisfaction, all collected via CATME) from 11 sections of Engineering 100 offered between Fall 2009 and Winter 2014. The analysis looked for relationships between team satisfaction, peer ratings, team scores on reports, and student characteristics measured from Registrar data (gender and race, international student status, and first-year GPA).

There are a lot of statistically significant effects. Here are things that “matter” by effect size (Cohen’s d).

• Students on teams with two or more women are less satisfied than students on teams without women or teams with a single woman. This is true for both the men and the women on teams with these gender breakdowns. (Cohen’s d = 0.67)
• Students on teams with international students are less satisfied than students on teams without international students. This is true for the non-international students but not the international students on the teams. (Cohen’s d = 0.74)
• Men rate women lower on “having related knowledge, skills, and abilities.” (Cohen’s d = 0.69)
• Women are rated higher than men on other CATME categories by both genders. Men rate men higher than women rate men. (Cohen’s d ranges from 0.12 to 0.32)

Implications/Issues for further study
The team satisfaction findings that teams with two or more women, and teams with international students, are less satisfied than others require further research. Perhaps by identifying issues these teams face better, we can better support students on teams with these demographic characteristics.

I will reconsider my use of peer feedback to scale project scores. I have always thought that I am rewarding people for good team contributions, but I need to be careful that I am not allowing students’ identity characteristics to affect their grades.

Sample
N = 620 students on 132 teams of 4 or 5 students

Team-based, problem-based learning class. All sections represented here are considered “design build test” (DBT) and have significant hands-on building components. Students use CATME to rate themselves and each other, as well as their satisfaction with the team, at the end of an ~8 week DBT project.