National Survey of Student Engagement (NSSE) Population Analysis, 9/1/2016

The National Survey of Student Engagement (NSSE) is an online survey that studies how students use their time at CSU and how participation in curricular and extra-curricular activities impacts student development. The NSSE has been administered to undergraduates at CSU since 2001. The most recent version of the survey deployed in Spring 2016 includes undergraduate participants at the Freshman, Sophomore, and Senior class ranks.

The NSSE provides data that CSU can use to improve undergraduate education and campus experience. However, only a subset of solicited students respond to the NSSE and thus it is important to investigate the degree to which NSSE respondents are representative of the entire CSU population before applying insights from survey data. The following brief report contrasts population characteristics for NSSE respondents with population characteristics for CSU’s student body overall, with the goal of identifying the degree to which NSSE respondents represent the general population.

In terms of survey response rate, 36% of CSU freshmen responded to the NSSE compared to 26% of solicited freshmen nationwide. CSU senior response rate is also substantially higher than seniors nationwide, 34% versus 31%. CSU sophomores exhibited the lowest response rate among survey classes at 27%; NSSE does not provide a nationwide average for sophomores. Overall, these response rates suggest that CSU students are relatively more likely to participate in the NSSE than the average undergraduate.

Figure 1 shows mean data for the overall CSU freshmen population compared to the population of freshmen who successfully completed the NSSE. The “95% Confidence Interval” columns display the 95% confidence interval surrounding the NSSE population mean. For variables highlighted in red the CSU population mean falls outside the NSSE group’s 95% confidence interval.

Among the freshman NSSE population male students are substantially underrepresented (38.6% NSSE, 49.1% CSU); this finding is in line with most survey research at CSU and nationwide. First generation students and Colorado residents are proportionally represented while Pell, Minority, and Full Time students are slightly overrepresented in the NSSE sample. On measures of academic preparation (high school GPA and CCHE index) NSSE freshman score substantially higher than the freshman mean. Freshman NSSE participants also significantly outscore freshman overall on freshman CSU GPA.

Figure 2 shows similar data contrasting NSSE sophomore demographics with CSU sophomores overall.
Mean population parameters for sophomore NSSE participants are much more similar to sophomores overall than the corresponding freshman contrasts shown in Figure 2. We still observe a substantial overrepresentation of both female participants and Pell recipients in the NSSE population. However, every other CSU sophomore population parameter falls within the 95% confidence for NSSE sophomores. This finding is particularly notable for measures of academic preparation and achievement among, as there is no evidence of the massive advantage observed for NSSE freshmen versus the overall freshmen mean.

Figure 3 replicates the above analysis for NSSE senior participants and CSU seniors overall.

Among seniors we observe that CSU population proportions for Colorado residency, first generation status, Pell status, and minority status all fall within the NSSE seniors 95% confidence interval. Males remain underrepresented, as expected. NSSE seniors significantly outperform the overall senior population on both measures of pre-CSU academic preparation (High School GPA and CCHE Index) and on CSU GPA. Part time students are also overrepresented among NSSE seniors compared to the overall senior population.

Summary of Findings
Overall, CSU students respond to the NSSE at a greater rate than undergraduate students nationwide. Males are underrepresented among NSSE respondents across all three classes. Freshman and Senior NSSE participants tend to exhibit above-average achievement compared to the CSU population overall, while Sophomore NSSE participant achievement is comparable to the CSU sophomore mean. For each NSSE class the representation of traditionally at-risk students (First Generation, Minority, Pell Recipient) is either at or significantly above the CSU mean.