Project STEP-UP
STEM Trends in Enrollment and Persistence for Underrepresented Populations

Social Engagement of Undergraduates: Do Majors Matter?

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An important component of undergraduate education is the extent to which students engage with others, the campus they attend, and the surrounding community (Astin, 194; Pascarella & Terenzini, 2005). Different types of engagement may include academic engagement, community engagement, and social engagement. This brief explores differences in students' social engagement, with specific attention given to differences by type of academic major, with the assumption that demands on students' available time for social activities may differ according to their majors. Specifically, do students who major in Science, Technology, Engineering, and Mathematics (STEM) fields participate in social activities less frequently than students in non-STEM majors? Differences by gender, race, and ethnicity are also explored.

In 2010, an online survey was administered by Project STEP-UP to undergraduate students at nine large, public, research universities. Of the students who responded to the survey, 1,881 completed the survey. Students were asked to respond to questions regarding their pre-college and college experiences, post-college plans, and experiences within their majors. This brief focuses on summarizing the results of the level of social engagement that students report while enrolled in college. The specific questions asked were:

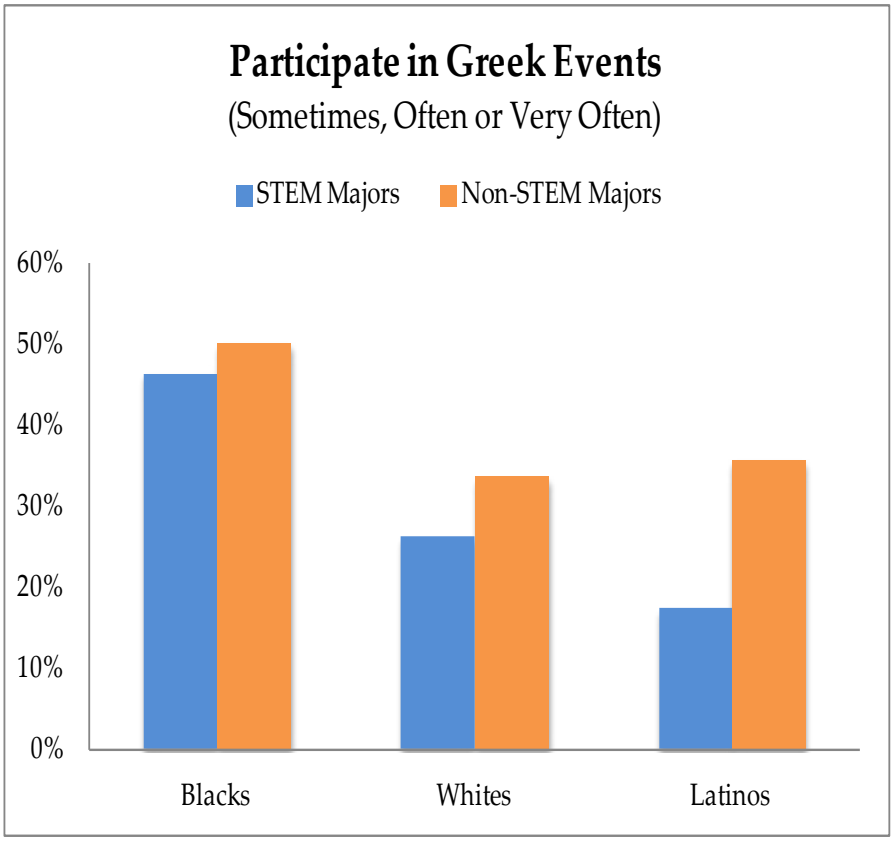
- How often have you participated in events sponsored by a fraternity or sorority?
- How often have you participated in events of activities sponsored by groups reflecting your own cultural heritage?
- How often have you participated in residence halls?
- How often have you participated in community service or volunteer activities?
- How often have you participated in religious or spiritual activities?

Each question was measured by a Likert Scale, which included possible answers of Never, Seldom, Sometimes, Often, and Very Often. In some analyses, these values were aggregated to compare low-levels and high-levels of participation. In addition, some comparisons were made between majority students and underrepresented minority students (e.g., Black, Latinos, and Native Americans). The findings summarized below are drawn from basic descriptive statistics and cross-tabulations. Chi-square analyses were performed, where applicable, and statistically significant differences at the $p<0.05$ level are reported. The findings are organized in the order of the survey questions listed above.

Greek-Sponsored Events

A statistically significant difference was found for students within STEM by race and ethnicity. 46.3% of Blacks, 17.3% of Latinos, and 26.2% of whites participated in events sponsored by fraternities or sororities sometimes, often, or very often. These values are compa-

red to students in non-STEM: 50% of Blacks, 35.7% of Latinos, and 33.5% of whites participated in Greek-sponsored events at the same rates. So while Black and white students in STEM and non-STEM fields participate in Greek-sponsored events at approximately the same rates, majoring in STEM seems to have a negative impact on the frequency of participation in Greek-sponsored events for Latinos. This may be due to time-constraints, a preference for participating in other (i.e., non-Greek-sponsored) activities, or simple disinterest in Greek life. While majors may have an impact on Latinos' participation in events or activities hosted by fraternities and sororities, future research on this observed difference should examine the availability and accessibility of Greek-sponsored activities and events to underrepresented minority students at large, public, research universities.



Cultural Group Events

Students were asked if they participated in events reflecting their own cultural heritage. Differences between underrepresented minority and majority students were statistically significant within STEM majors. Within STEM, 49.7% of underrepresented minorities and 13.8% of majority students participated in these types of events sometimes, often, or very often. In comparison, 63% of underrepresented minorities and 17.9% of majority students in non-STEM majors participated in events reflecting their own culture at the same level of participation (i.e., sometimes, often, or very often). These differences indicate that a greater percentage of underrepresented students in non-STEM fields participate in cultural events reflecting their own heritage, compared to underrepresented students in the STEM fields.

The differences detected in the analysis may be in part due to increased social networking opportunities within non-STEM majors with other underrepresented students of

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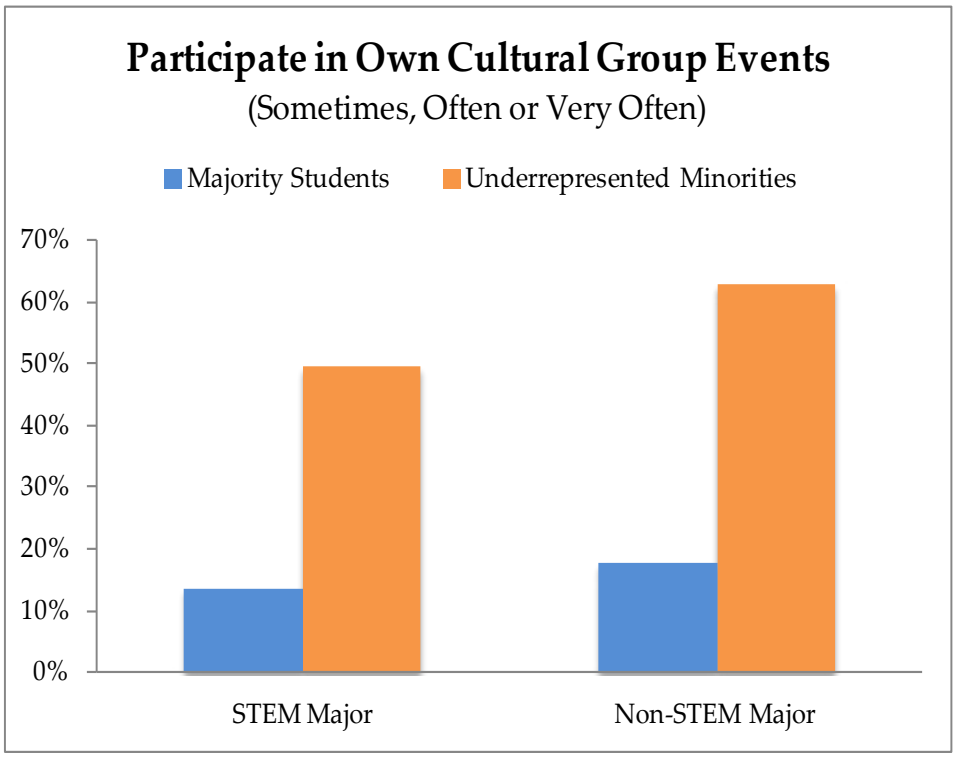
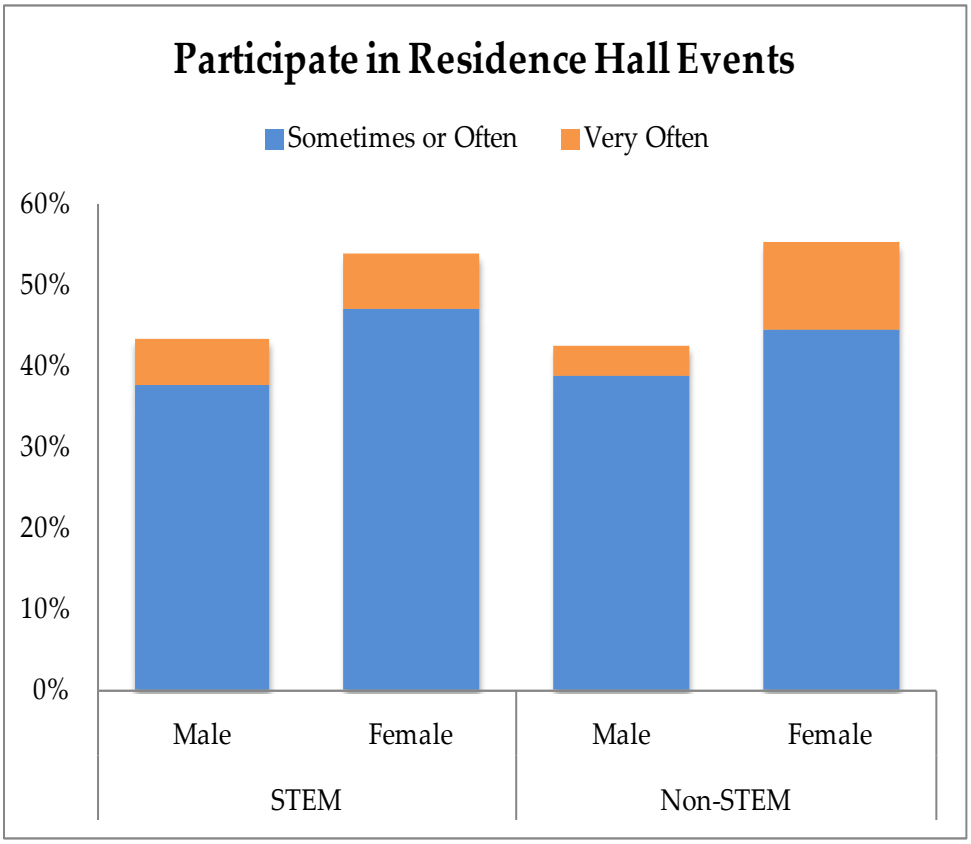


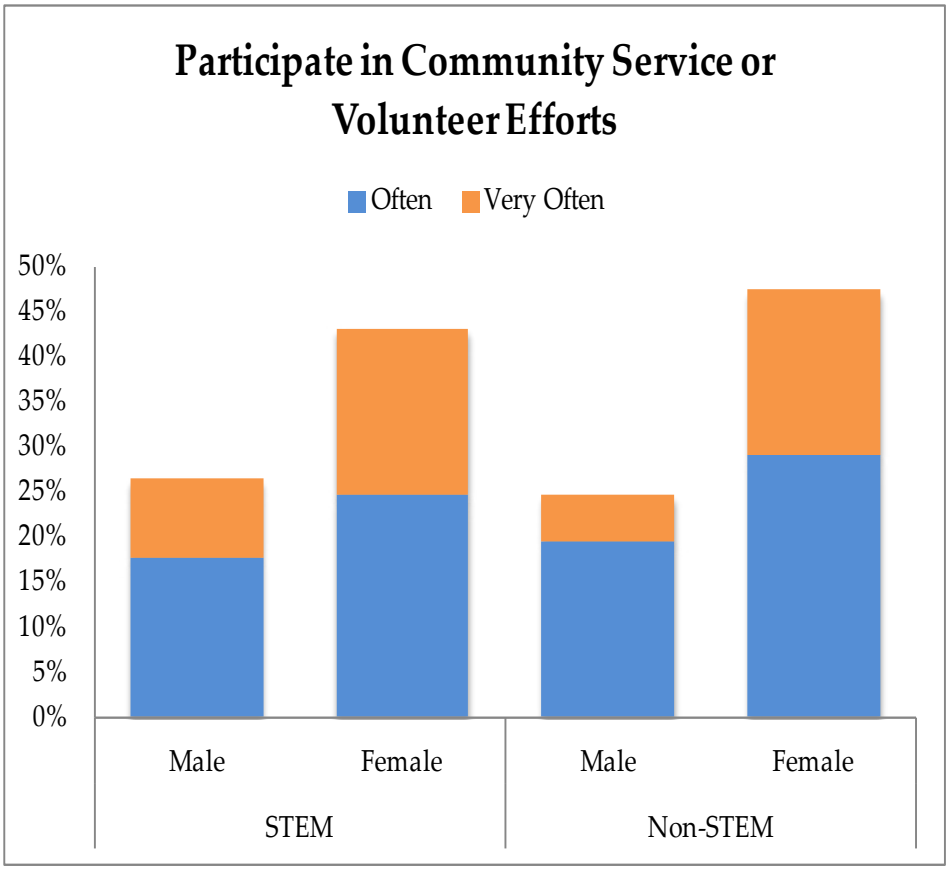
focused solely on or representing cultural heritage. As this is on interpretation of the findings, future surveys of or focus groups with students may explicitly ask about students' perceptions of what types of organizations may best reflect their own cultural heritage.

Residence Halls Events

Next, students' level of social engagement through participating in events sponsored by residence halls was investigated. Within STEM majors, the differences found between men and women's color, given the increased number of other students of colors within these types of majors, as compared to STEM majors. A number of student-based organizations that serve students of color, such as National Society for Black Engineers (NSBE) or Society of Hispanic Professional Engineers (SHPE), are offered within STEM majors, and the campuses included in this study feature local chapters of these national organizations. However, these groups are likely to be viewed by students as professional development organizations, rather than organizations



levels of participation were statistically significant. Within STEM majors, 37.6% of men sometimes or often participated in such events, as compared to 46.8% of women. An additional 6% of men and women who majored in STEM participated in residence hall events very often. Within non-STEM majors, 38.8% of men and 44.3% of women sometimes or often participated in residence hall events. Interestingly, 10.7% of women in non-STEM majors participated in such events very often, as compared to 3.7% of men in non-STEM, as well as their STEM counterparts. Women in non-STEM majors appear to participate in residence hall events at a higher rate than other students.



Examining differences in residence hall participation by race and ethnicity, by type of major, were not found to be statistically significant. However, without consideration of major, statistically significant differences were found between underrepresented minorities and majority students: 23.8% of underrepresented minorities participate in residence hall activities often or very often, compared to 17.3% of majority students. More specifically, 33.3% of Blacks, 16.9% of Latinos, 17% of Asians, and 17.3% of whites participate in residence hall activities often or very often.

A logical next step in exploring students' social engagement through residence hall activities would be to examine students' actions according to where their living situation during college, including whether or not they participate in a living learning community. These types of residential programs are increasingly popular amongst STEM majors, particularly in efforts to increase traditionally underrepresented students' sense of belonging and social network of support that may positively impact their persistence in STEM.

Community Service

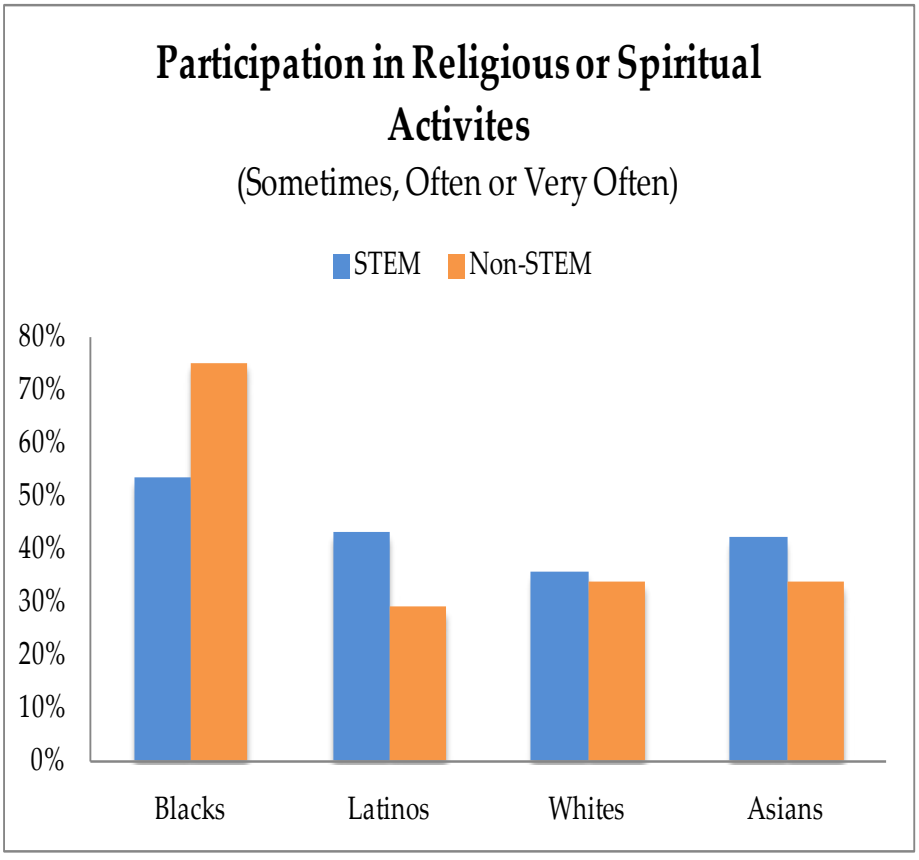
Differences between men and women's social engagement through community service and volunteer activities were statistically significant by gender, for both STEM and non-STEM majors. 17.6% of men in STEM majors volunteer or

partake in community service often, as compared to 19.4% of men in non-STEM majors. An additional 8.8% of men in STEM and 5.2% of men in non-STEM fields reported volunteering or participating in community service very often. In comparison, 24.6% of women in STEM participate often, while another 18.4% participate very often. Of women in non-STEM majors, 29% of women participate often and another 18.3% participate very often in community service. Women, regardless of the type of major they are pursuing, volunteer in community service projects more often than men. As women tend to seek out majors that allow them to nurture and care for others (Turner & Bowen, 1999), this finding is not surprising as we would expect similar preferences to extend to other parts of their lives while in college. A possible future line of inquiry regarding community service is to determine how college students, regardless of gender or major, find out about and engage in community service projects.

Religious or Spiritual Activities

Within STEM, statistically significant differences were found between racial and ethnic groups, both when individual groups were compared, as well as when underrepresented minority groups were compared to majority groups. Within STEM, 31.8% of underrepresented minorities participated in religious or spiritual activities often or very often, as compared to 21.2% of majority students. In comparison, 33.3% of underrepresented minorities and 15.1% of majority students in non-STEM participate in these activities often or very often. However, the differences between racial and ethnic groups within the non-STEM fields were not found to be statistically significant.

Specific racial and ethnic groups were then examined to look more closely at the differences just described. Within STEM, differences by race and ethnicity were statistically significant. 53% of Blacks, 42.7% of Latinos, 35.5% of Whites, and 41.8% of Asians participated sometimes, often, or very often in religious or spiritual activities. Although differences within non-STEM majors were not statistically significant, 75% of Blacks, 28.6% of Latinos, 33.5% of Whites, and 33.3% of Asians participated in religious and spiritual activities sometimes, often or very often. Majoring in STEM appears to



have a significant impact on Black students' participation in religious or spiritual activities, which may be reflective of the demands on their time to pursue their studies. On the other hand, a greater percentage of Latinos and Asians in STEM majors participate in religious or spiritual activities more frequently than their non-STEM counterparts. However, this observation maybe partially explained by the small number of participants who completed the survey.

Concluding Thoughts

This brief seeks to provide an overview of undergraduate students' level of social engagement, while also examining possible differences by gender, race/ethnicity, and/or major. The results suggest that important differences do exist, which has implications for how we conceptualize students' social engagement in college, as well as implications for offering programming to students to encourage and foster social engagement with campus, their peers, and the surrounding community. Researchers are encouraged to use these results to pursue additional investigations into students' social engagement patterns to better understand the differences identified in this study. In addition, practitioners can design programming that accommodates the different patterns of engagement found by each group of interest, while also encouraging students who do not engage as frequently to participate in more activities on their campus. Most importantly, this study highlights some ways in which students in STEM may experience college differently than students who major in non-STEM fields.

In 2011, Project STEP-UP will be conducting a follow-up study which will allow for changes in students' social engagement over time to be examined. The follow-up data will also allow for the effects of changing majors on how frequently students engage in social activities to be examined. An update to the study presented here, which will use both baseline and follow-up data, is expected to be released in 2012.

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