High-Impact Practices (HIPs)—opportunities such as first-year and capstone programs, collaborative projects, service and community-based learning, and internships—receive a lot of attention in national research studies on student learning and achievement. According to the National Survey of Student Engagement (NSSE), these practices have strong positive effects on student learning because they require “considerable time and effort, facilitate learning outside of the classroom, require meaningful interactions with faculty and students, encourage collaboration with diverse others, and provide frequent and substantive feedback.”¹ Similarly, the Association of American Colleges and Universities (AAC&U) reports that effects of HIPs in fact “increase rates of student retention and student engagement” and “have been shown to be beneficial for college students from many backgrounds, especially historically underserved students, who often do not have equitable access to high-impact learning.”² National studies frequently focus on HIPs because of their importance in engaging students in communities, making them better prepared for post-undergraduate careers and further education, and contributing to student learning outcomes.

As the NSSE and AAC&U reports show, HIPs help foster deep learning and, as such, they are important to a student’s undergraduate experience. UMass Amherst’s Strategic Plan promotes student involvement in HIPs, and more broadly students’ active learning engagement, as a part of the campus priorities. Specifically, UMass Amherst becomes a destination of choice for students when the university promotes “immersive, residential experience with many options and outstanding preparation for life and work,” and HIPs satisfy this call.³ In this report we investigate UMass Amherst graduating students’ HIP participation and the role these HIPs may play in enhancing their experiences and their learning and employment outcomes.

University of Massachusetts Amherst Senior Survey

Since 2004, the UMass Amherst Graduating Senior Survey has asked students about their HIPs involvement and, beginning in 2016, includes students’ rating of how much they have learned during their time at UMass Amherst. In this report, we consider the patterns of student participation in HIPs and the relationship between participation and learning outcomes, future employment and education, and disciplinary and curricular requirements. In general, our results mirror those in studies conducted by NSSE and AAC&U, suggesting a positive relationship between HIPs involvement and student learning outcomes.

We know from national surveys that students report deeper learning connected to HIPs. In order to trace the effects of HIPs on the UMass Amherst campus, we asked graduating seniors about their involvement in five HIPs: Study Abroad; Community Service or Volunteer Work; Practicum, Internship, Field or Coop Experience, Clinical Assignment; Research with Faculty Outside of Course/Program Requirements; and Culminating Senior Experience. Overall, just about two-thirds of seniors report participating in practica and internships and

² [https://www.aacu.org/resources/high-impact-practices](https://www.aacu.org/resources/high-impact-practices)
³ [https://www.umass.edu/chancellor/sites/default/files/jtfsf-faculty-senate_5-9-13_0.pdf](https://www.umass.edu/chancellor/sites/default/files/jtfsf-faculty-senate_5-9-13_0.pdf)
community service/volunteer experiences; half have a culminating experience; and about a quarter study abroad or participate in a research project with faculty. These rates are similar to those of seniors at other research universities (see http://www.umass.edu/oapa/oapa/reports/senior_survey/applied_learning_experiences.pdf).

Here we explore these general rates in more detail by looking into which students are most likely to participate in a particular HIP and which students are likely to engage with more or fewer HIPS.

Patterns of Participation in HIPS by Student Demographics
The trend line across number of HIPS in Graph 1 shows that three-quarters of UMass Amherst students participated in between one and three HIPS, with over half of the seniors participating in either two or three HIPS.

Race/Ethnicity
The rates of student participation across different racial/ethnic groups are generally similar, although it is worth noting a couple of variations (Graph 1). Black and Latino students are slightly more likely to report participating in no HIPS and have slightly lower participation in two or three HIPS. Black students are slightly more likely to participate in four HIPS.

Gender
Differences in participation by gender are also small, although women are somewhat more likely to participate in more HIPS than men. For example, women are more likely than men to do three, four, or five HIPS, and men are more likely to not participate in any HIPS. These differences may be explained, in part, by the differences in HIPS participation by academic discipline, some of which have substantial differences in male and female enrollment (see following section).

School/College
We observed three key trends in participation in HIPS by School and College: (1) CICS students are most likely to participate in only one HIP; (2) students in HFA, SBS, and CNS participate in fewer HIPS; and (3) applied Schools and Colleges (except CICS) show higher HIPS participation rates. These differences are, at least in part, related to differences in the School’s or College’s curricular requirements, where certain majors are more likely to require a capstone experience, encourage or require internships or practica, and/or strongly encourage research or community service experiences. For example, Nursing students participate in multiple HIPS (excluding study...
abroad), and nearly 100 percent of Nursing students participate in a capstone project. The patterns for Nursing and for other Schools and Colleges mirror the patterns found in national NSSE analyses. OAPA provides detailed pictures of HIPs student participation by major as a part of the Departmental Profile reports available at http://www.umass.edu/oir/department-profile/school-college-detail.

![Graph 2. HIPs Participation: Number of Types by School/College and Overall](image)

HIPs and Student Satisfaction, Learning Outcomes, and Future Trajectories

The Senior Survey also makes it possible to explore the relationship between HIPs participation and other outcomes, including student satisfaction with the university, self-reported learning outcomes, and students' future work and post-graduate education plans.

**Satisfaction**

There is a relationship between students' HIPs participation and their level of satisfaction both with their major and with their overall UMass Amherst experience. Students who report participating in more HIPs show higher levels of satisfaction than those who have not participated in any HIPs. It is important to note that these differences may be confounded by differences in HIPs participation and levels of satisfaction within specific majors. For example, students in applied majors such as ISOM, Nursing, and PHHS report high levels of overall satisfaction, and they are also more likely to participate in more HIPs.

**Learning Outcomes**

In terms of students' ratings of the University's contribution to their learning outcomes, we see a slight trend in student HIPs involvement and higher student self-reported learning outcomes. Graph 3 shows that the more HIPs a student participates in, the higher their rating of UMass's contribution to their learning.

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While not shown here, Learning Objectives that require students to work with others (i.e., relating to people different from you; being an engaged member of society; working effectively with others; and speaking clearly and effectively) have higher ratings with regards to number of HIPs.

Post-Graduate Plans

There is also a relationship between student HIPs participation and their reported job prospects at graduation. Specifically, for each increase in the number of HIPs participation, the proportion of students who report having a job at graduation increases. This pattern holds across all Schools and Colleges. However, it is particularly strong in applied disciplines where students may be more likely to be able to obtain a job prior to graduation and are more likely to be required to participate in a number of HIPs.

Conclusion and Future Studies

The results of the Senior Survey provide us with detailed information about student participation in HIPs at UMass Amherst and its relationship to a number of outcomes. These results are not surprising since they generally reinforce the results from national studies. HIPs require students to practice skills in a variety of contexts, giving them the opportunity to apply their learning in diverse ways. These opportunities reinforce what students learn in their courses and help prepare them for future employment and community investment.

There are two important lines of inquiry for future research. First, the HIPs included in the Senior Survey reflect a narrow subset of all types of HIPs and may emphasize those tied specifically to certain kinds of majors, while missing some emphasized in other disciplines. We will explore the possibility of including additional HIPs categories in future research. Second, our research focuses entirely on participation levels, not on the quality of the experience in those HIPs. It is likely that some study abroad or faculty research experiences (for example) are better organized and more effective in helping students learn than others are. Following from this, some HIP experiences are likely to contribute more positively to student outcomes than others. Future research should consider the “fidelity” of HIPs implementation—the extent to which the HIPs are effectively meeting the intended HIP goals. Given we do not know about the quality of HIPs experiences students have, the effects we find here may underestimate the true impacts of particularly well-designed and effective HIPs experiences. Future research should include a study of HIPs that are well designed to consider their impact on student outcomes.