

2014 Summit: Future of Undergraduate Geoscience Education; January 2014

- ~200 educators representing broad spectrum of undergraduate geoscience education community
 - R1 research universities with undergraduate programs, 4-year and 2-year colleges
 - Faculty, heads & chairs, education researchers
 - Industry & professional society representatives
 - Working in small groups with collective presentations
- Collective agreement on most points; online survey developed to assess larger community views and status of community efforts. Many questions were designed for academics, and non-academics did not see those pertaining only to departments.

Survey: 2014-15

463 respondents: 68 were participants in the Summit (15%)

357 Academics (77%), 79 Industry (17%; 47 energy/oil/gas, 21 mining/ minerals exploration, 11 environmental/hydrogeology/engineering),

14 Government (3%), 7 Other (1.5%), 5 Professional Society Representatives (1%).

In results reported below, all non-academics are listed as employers.

315 Male (68%); 148 Female (32%)

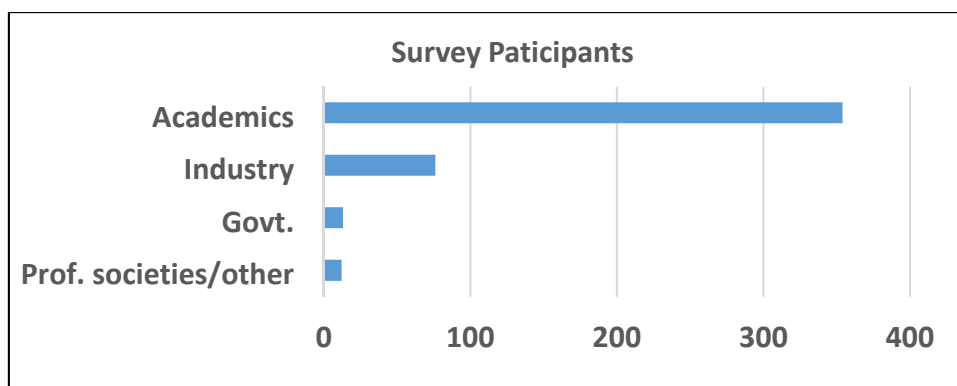
Ethnicity: 91% White/Caucasian, 2% Hispanic, 1% Asian, 1% American Indian/Alaska Native; 5% Other; 0% Black/African American and Native Hawaiian/Other Pacific Islander

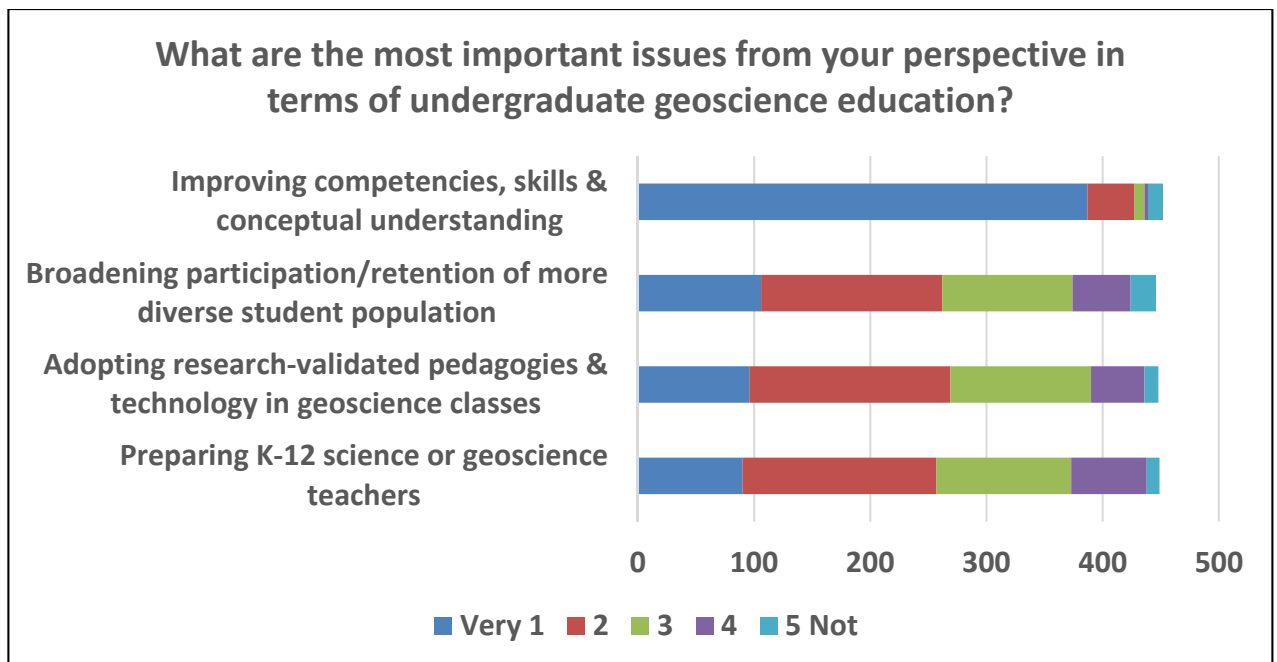
Academics:

Department Faculty size: 19% under 5; 31% 5-12; 21% 12-20; 12% 20-30; 17% over 30

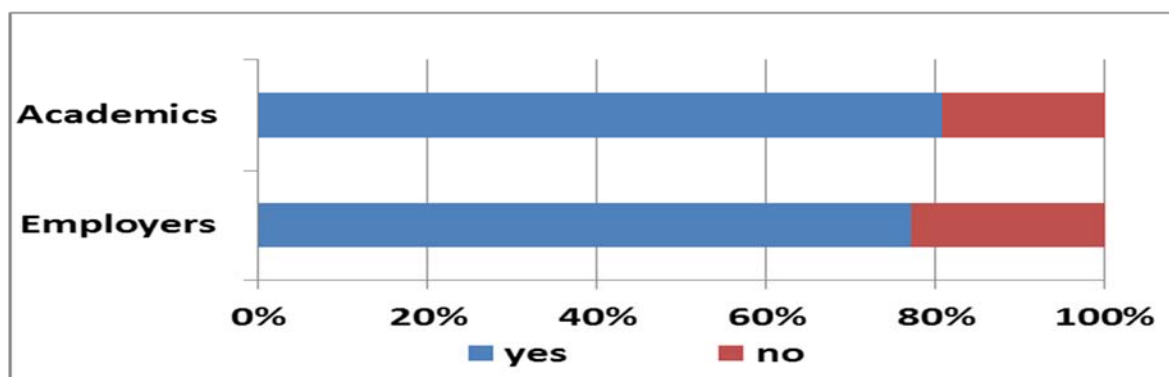
Institution type: 16% 2YC; 12% 4 year private; 30% 4 year state; 34% R1 public; 7% R1 private; 1% Hispanic Serving Institution

Position: 10% nontenure track/adjunct, 11% assistant professor, 23% associate professor, 40% professor, 11% department chair/head, 4% dean or upper administration

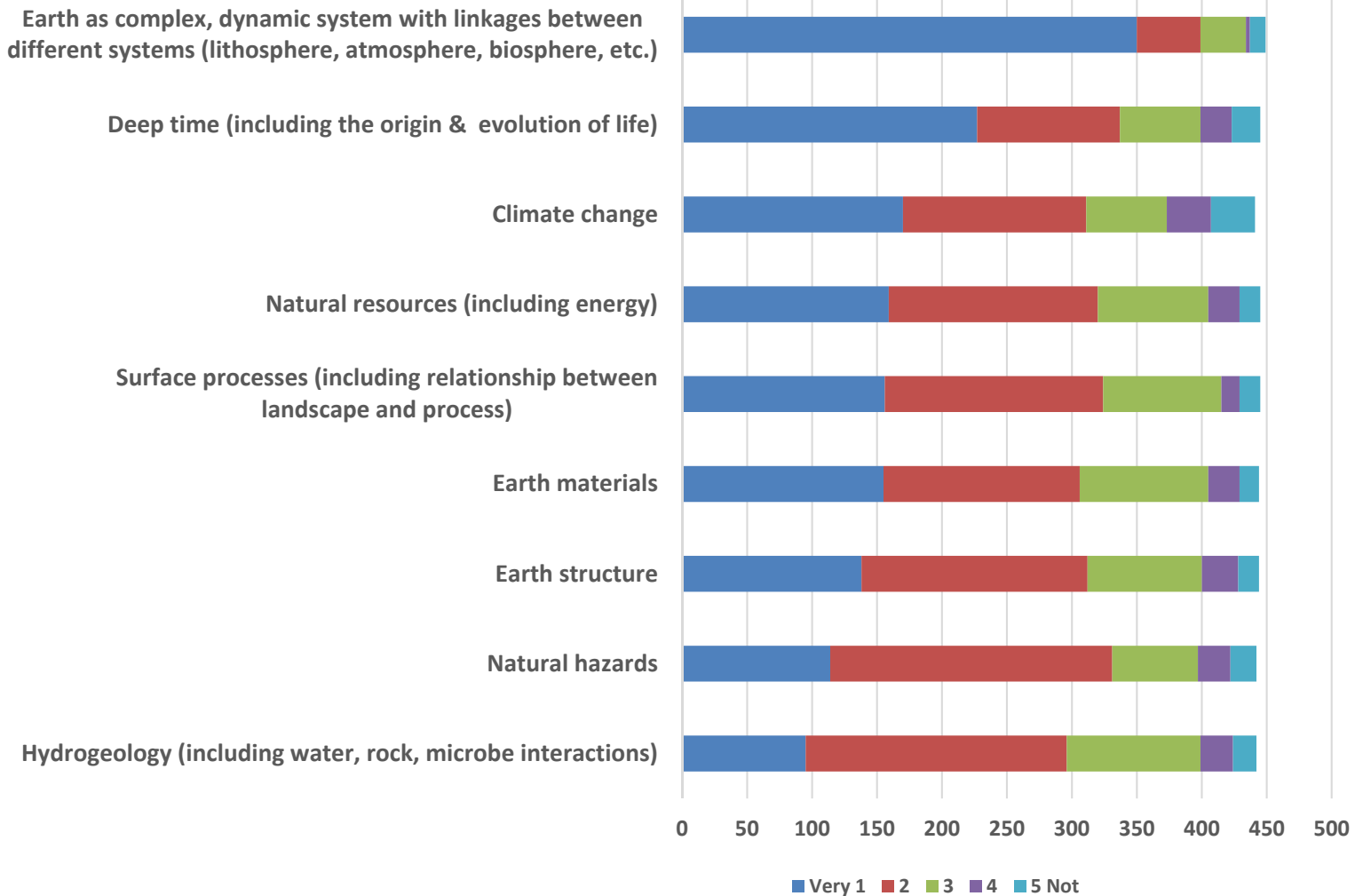




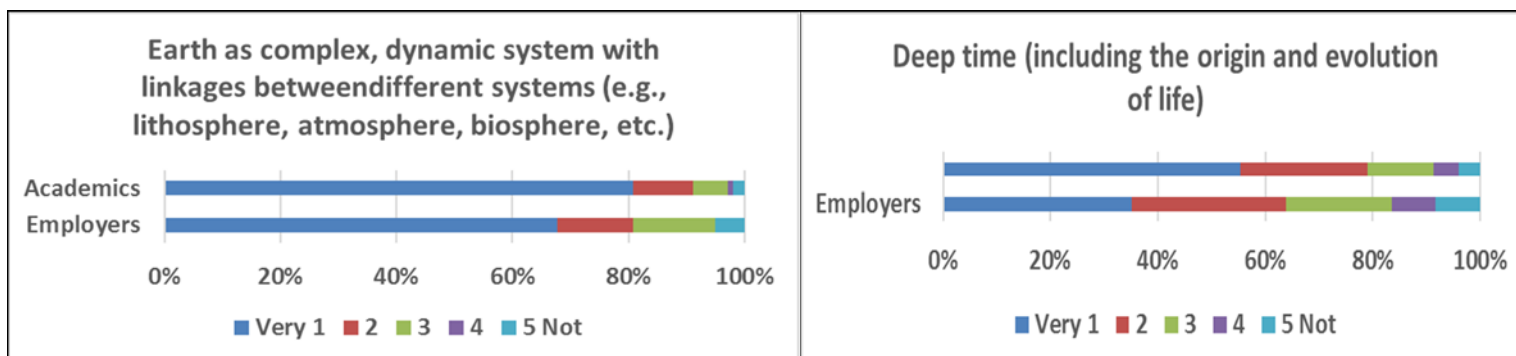
Major conclusion of Summit: Developing competencies, skills, and conceptual understanding is more important than taking specific courses

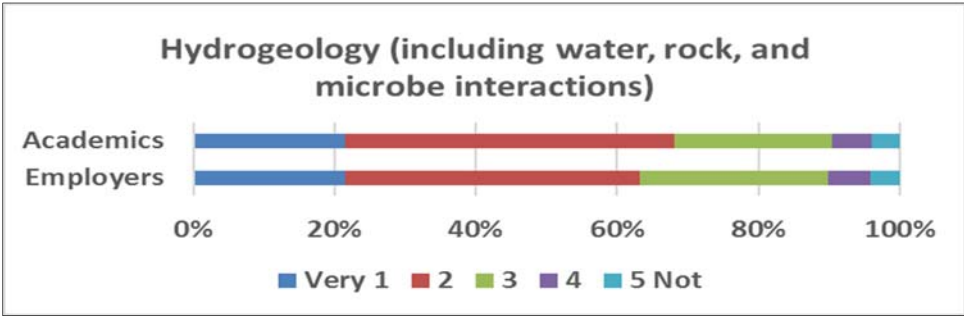
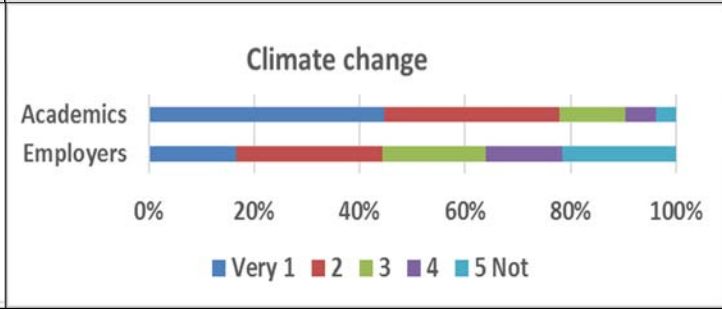
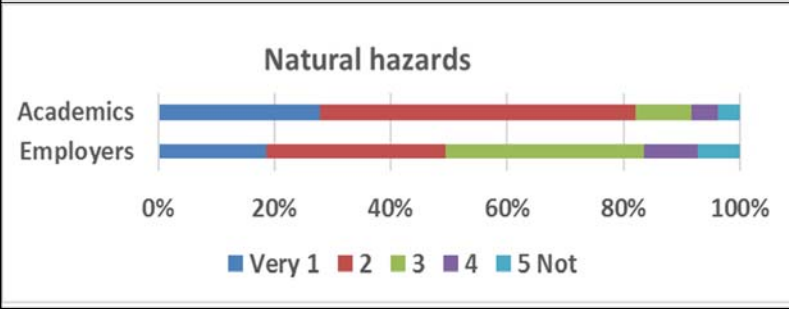
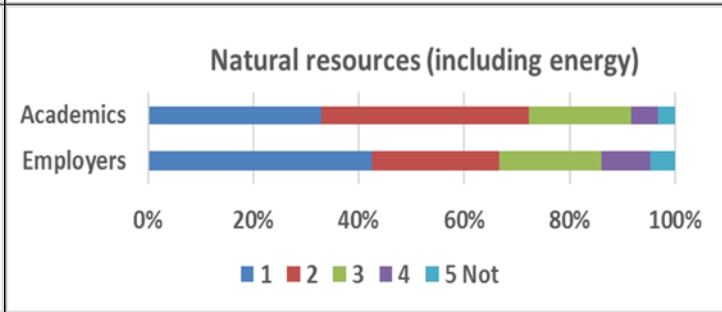
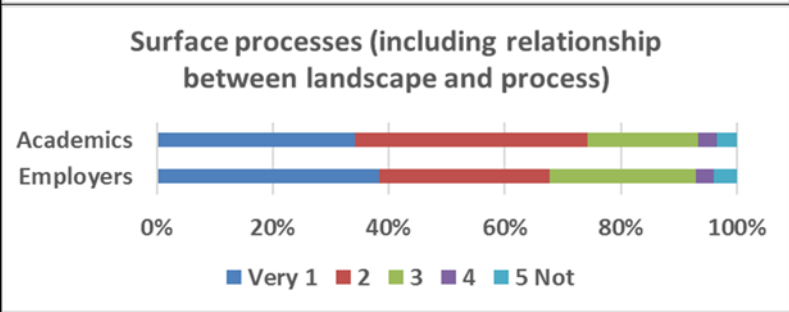
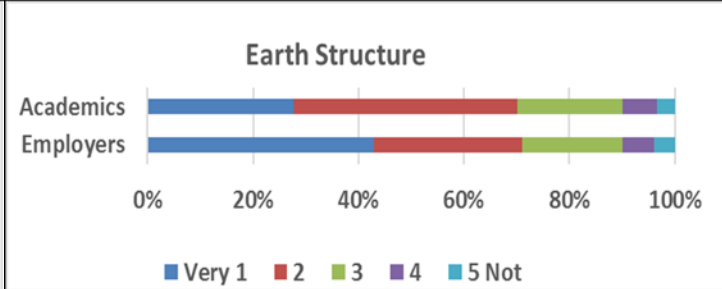
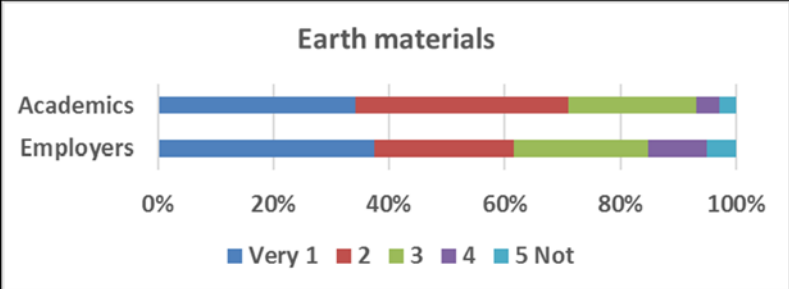


Important Concepts



Breakdown by Employment Category

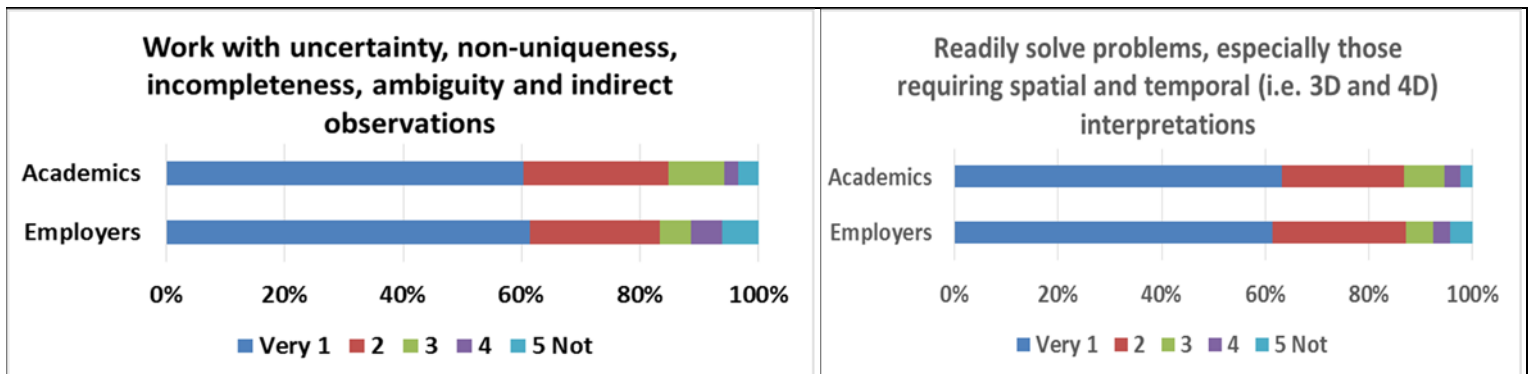


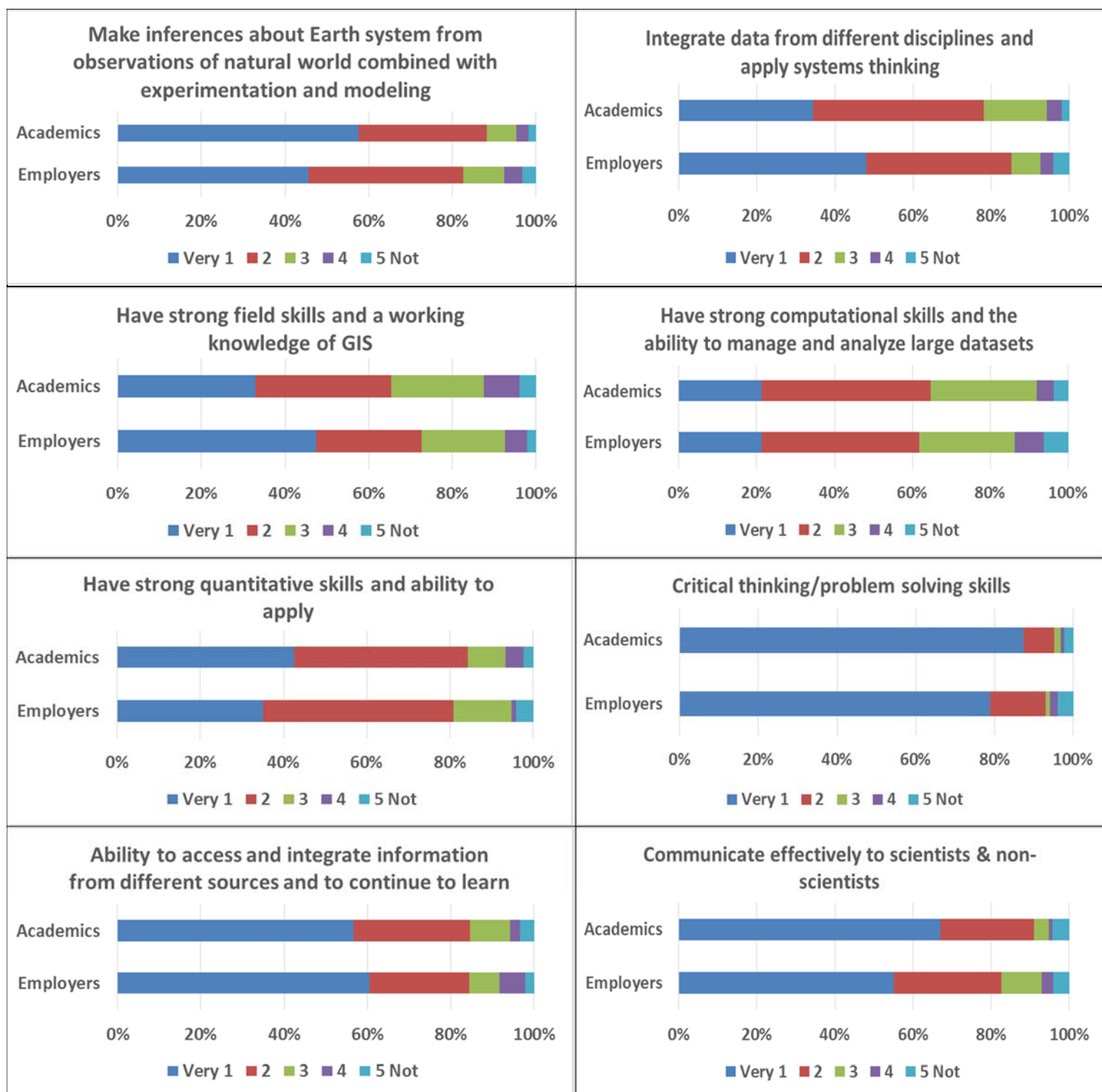


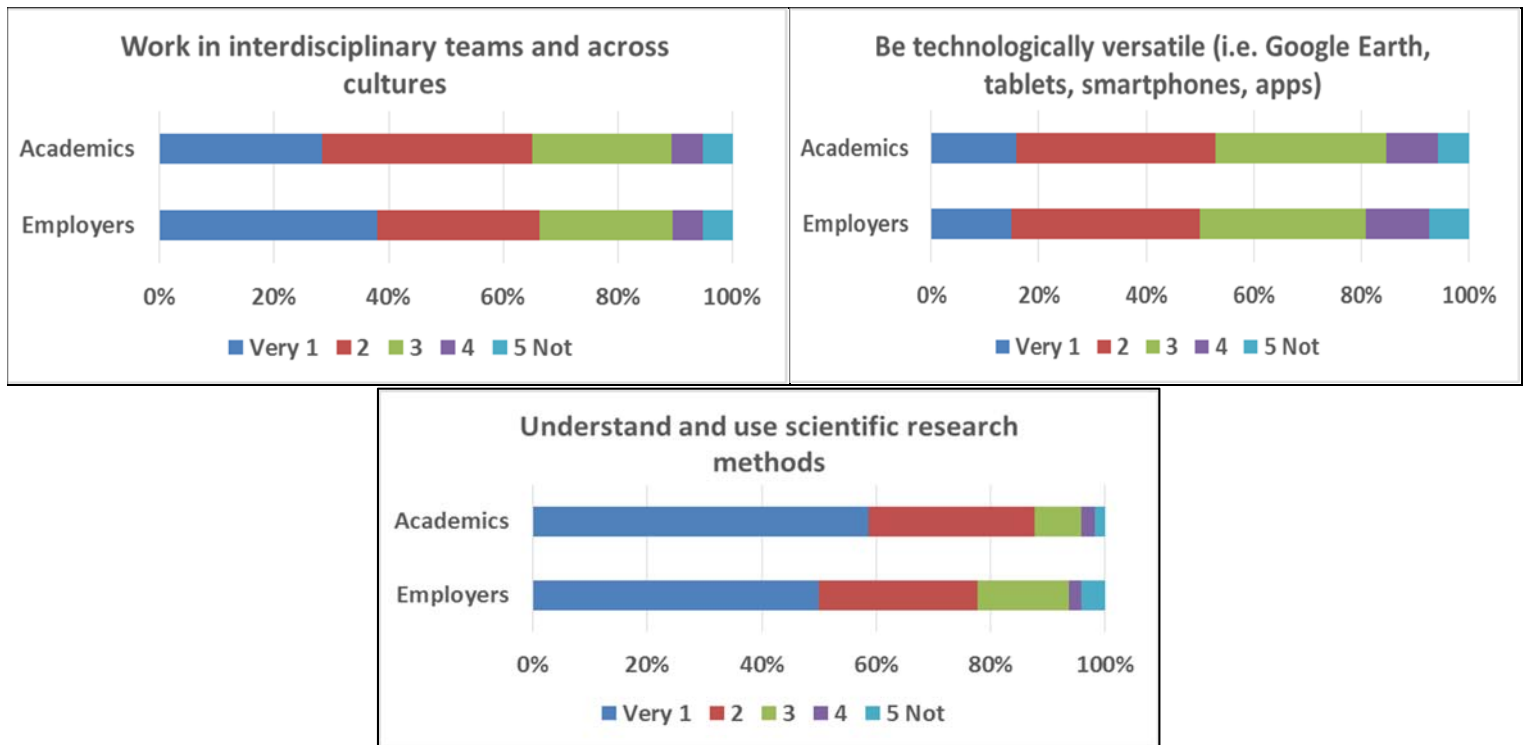
Skills and competencies as critical for undergraduate education



Breakdown by Employment Category



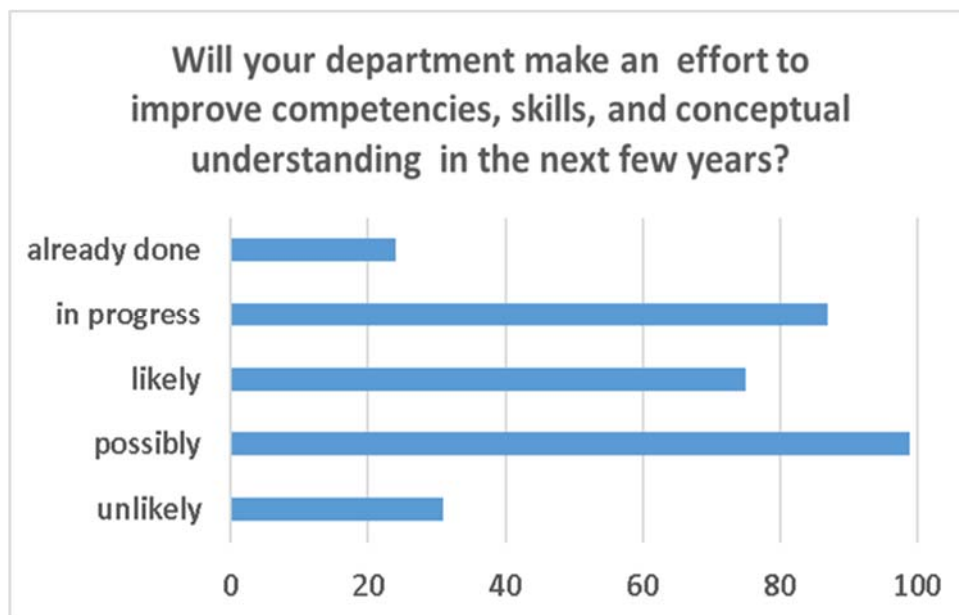


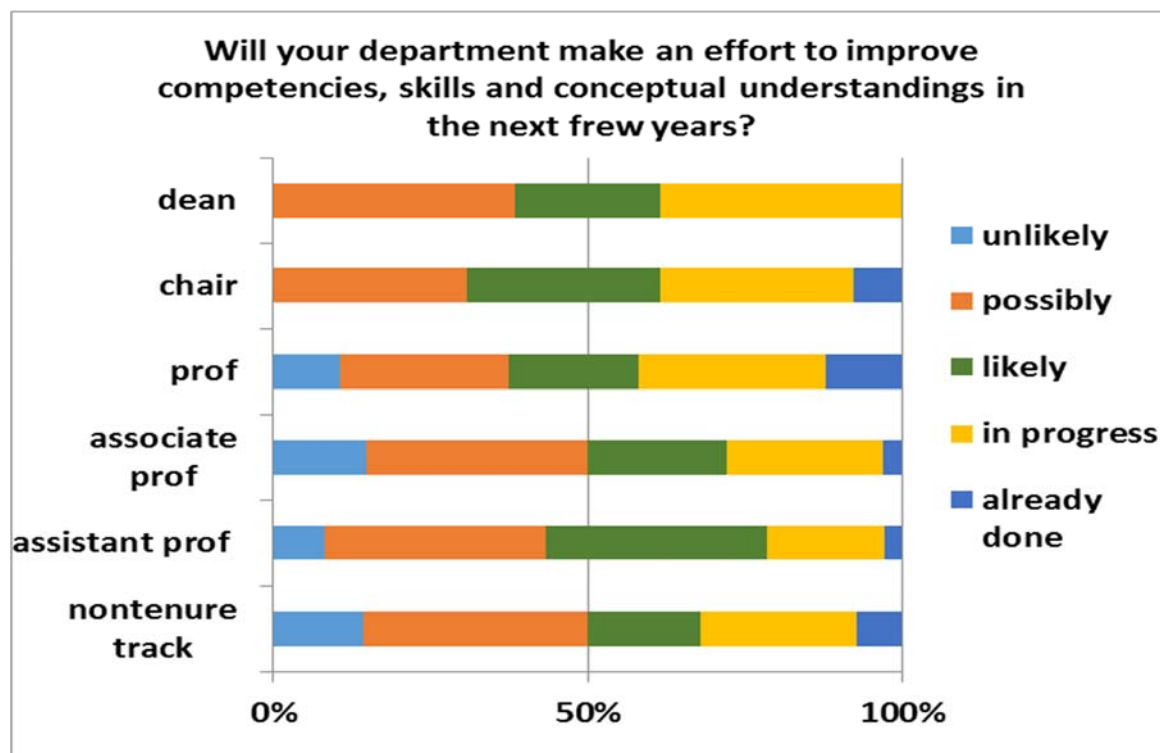


Assessment of status within departments

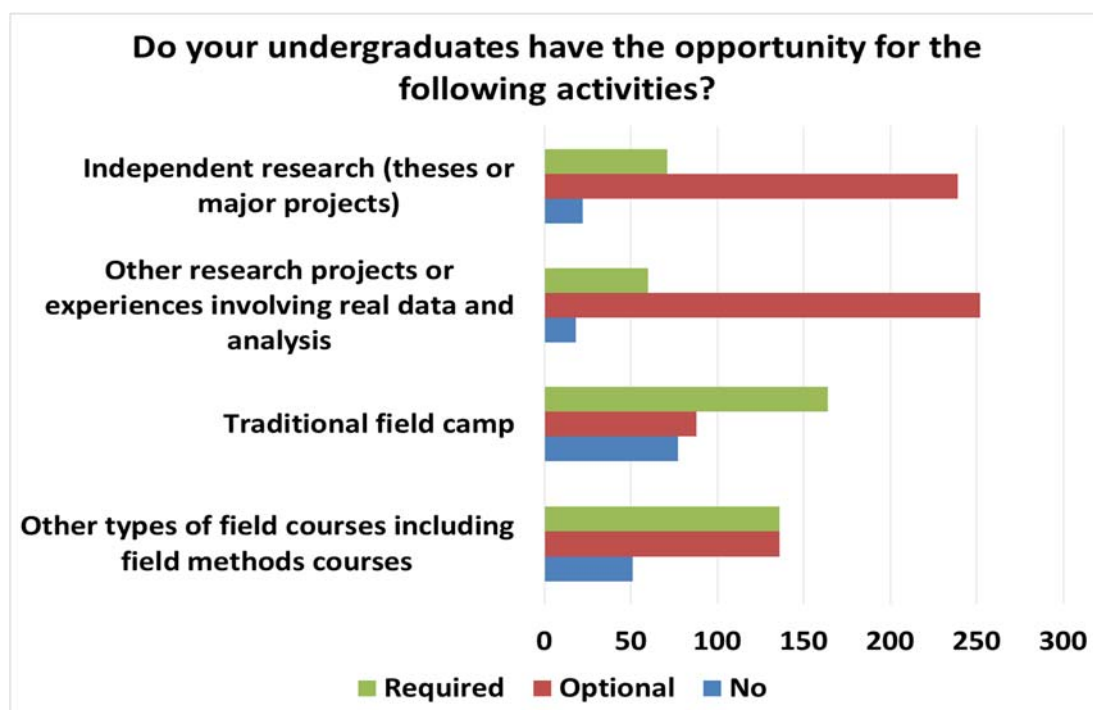
Is your department interested in making changes to your undergraduate curriculum to focus on competencies, skills, and conceptual understanding? Yes 231, No 79

Is the development of your institution's undergraduate curriculum, in terms of competencies, skills, or conceptual understanding, regulated at any institutional, local, or state levels? Yes 113, No 210

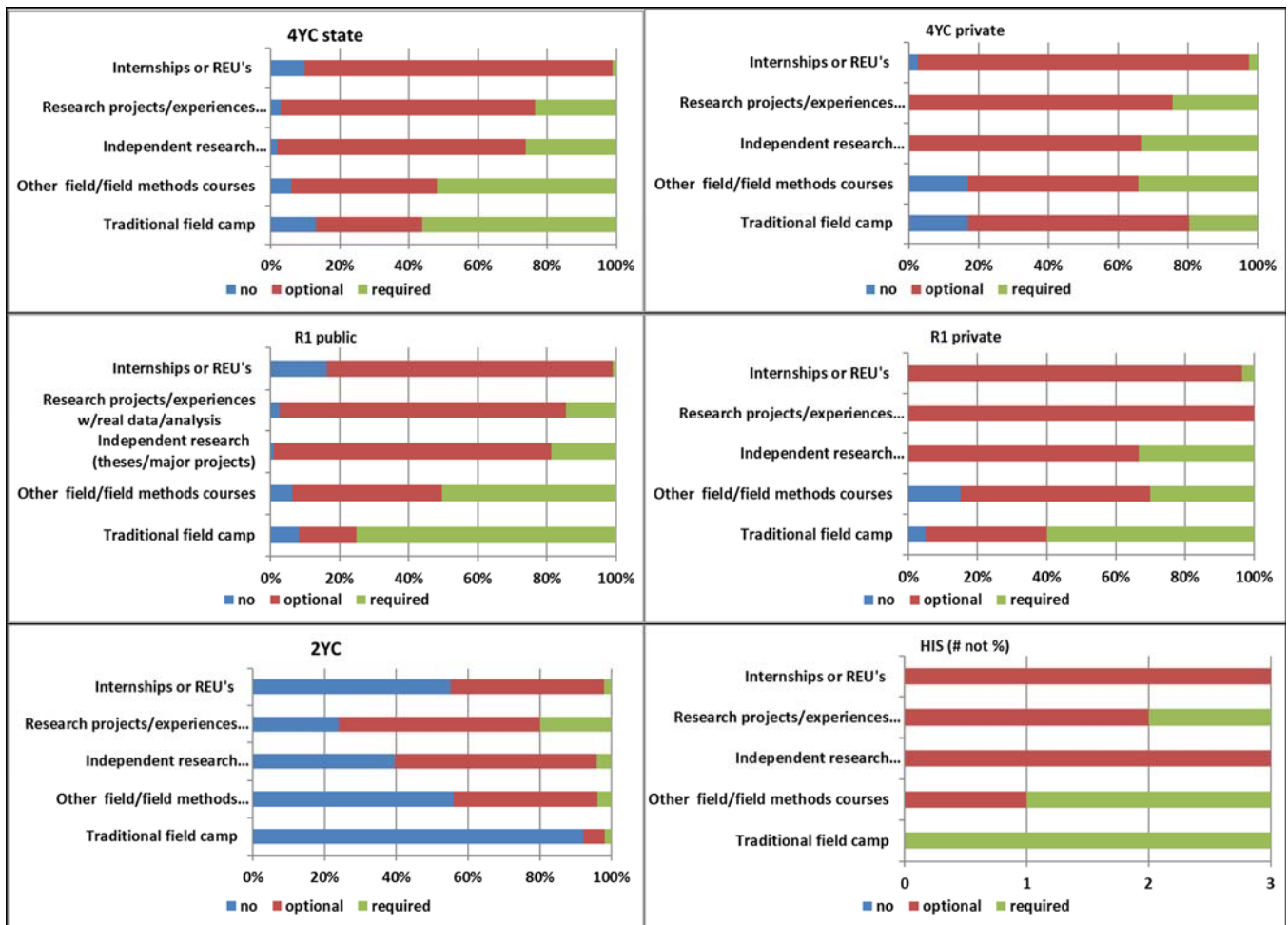




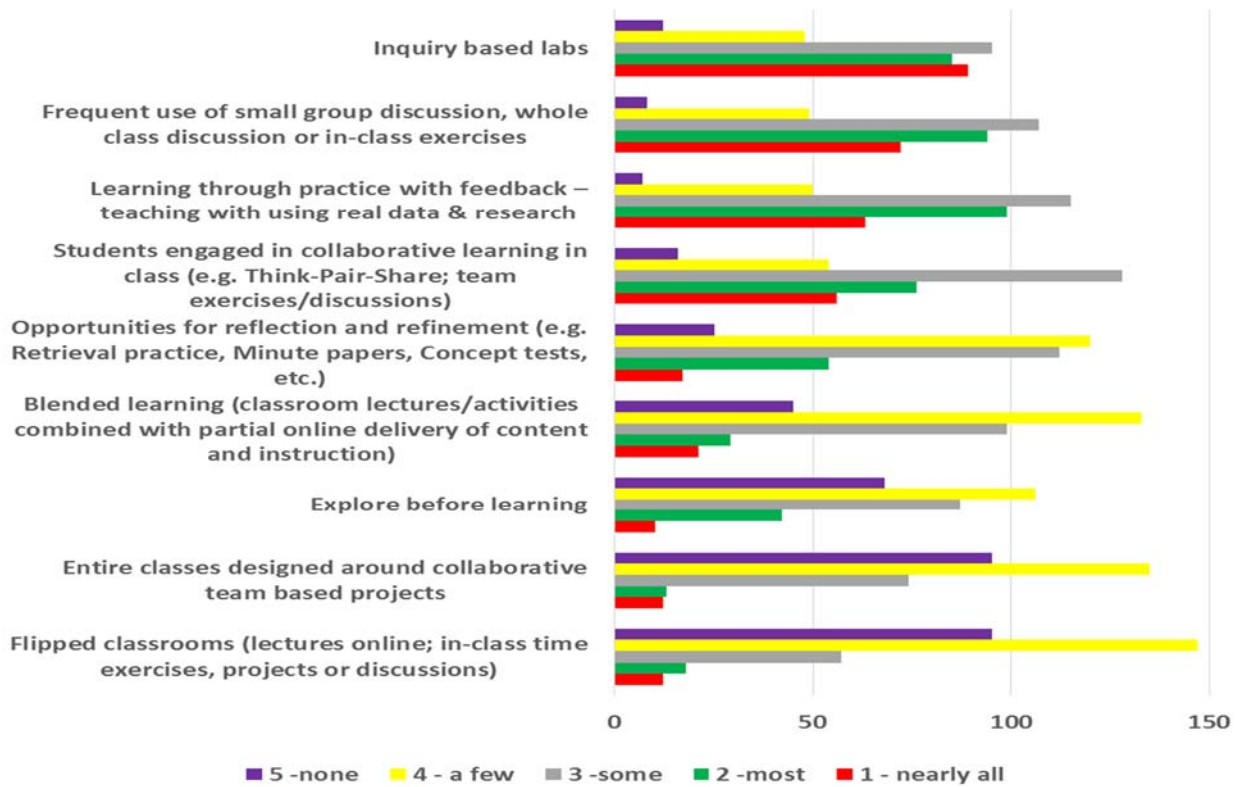
Does your institution track Student Learning Outcomes or other metrics of student success with in your department? Yes 181, No 141



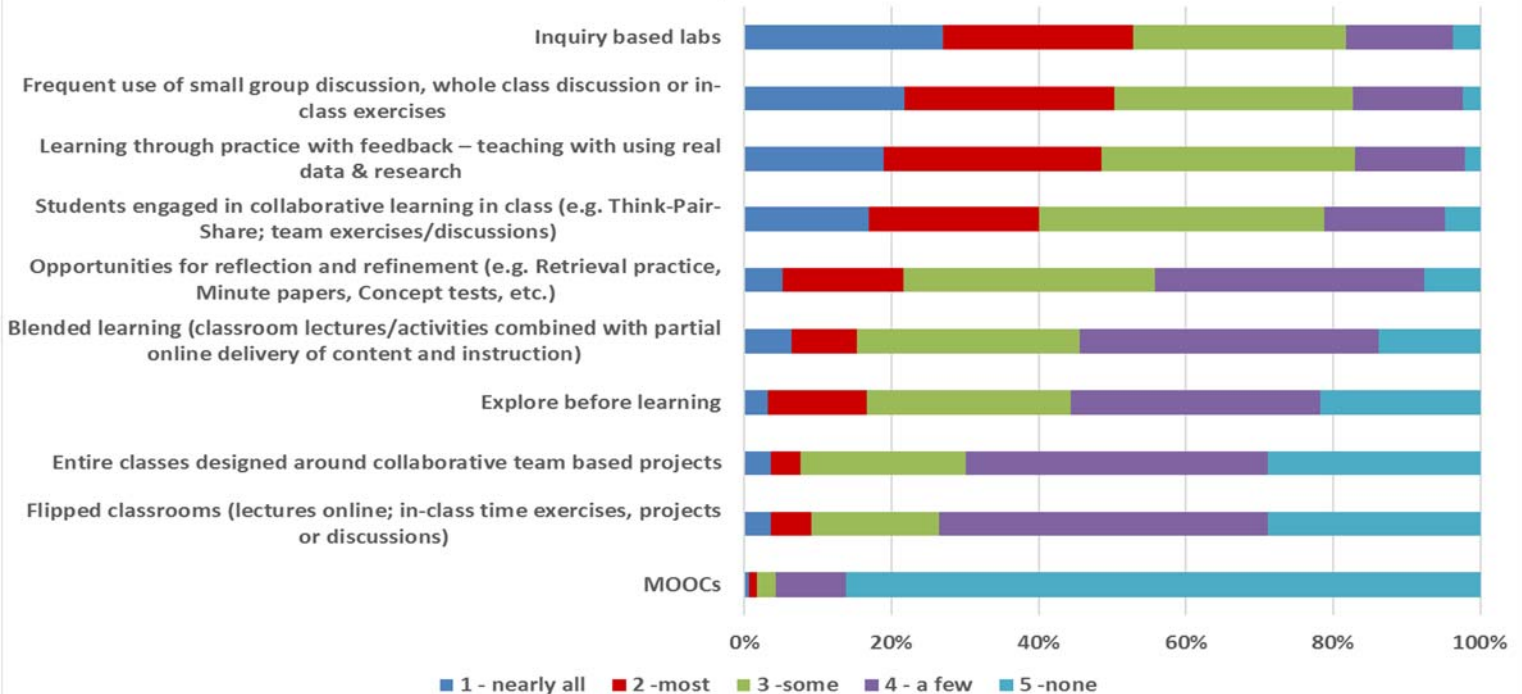
Breakdown by Institution type:



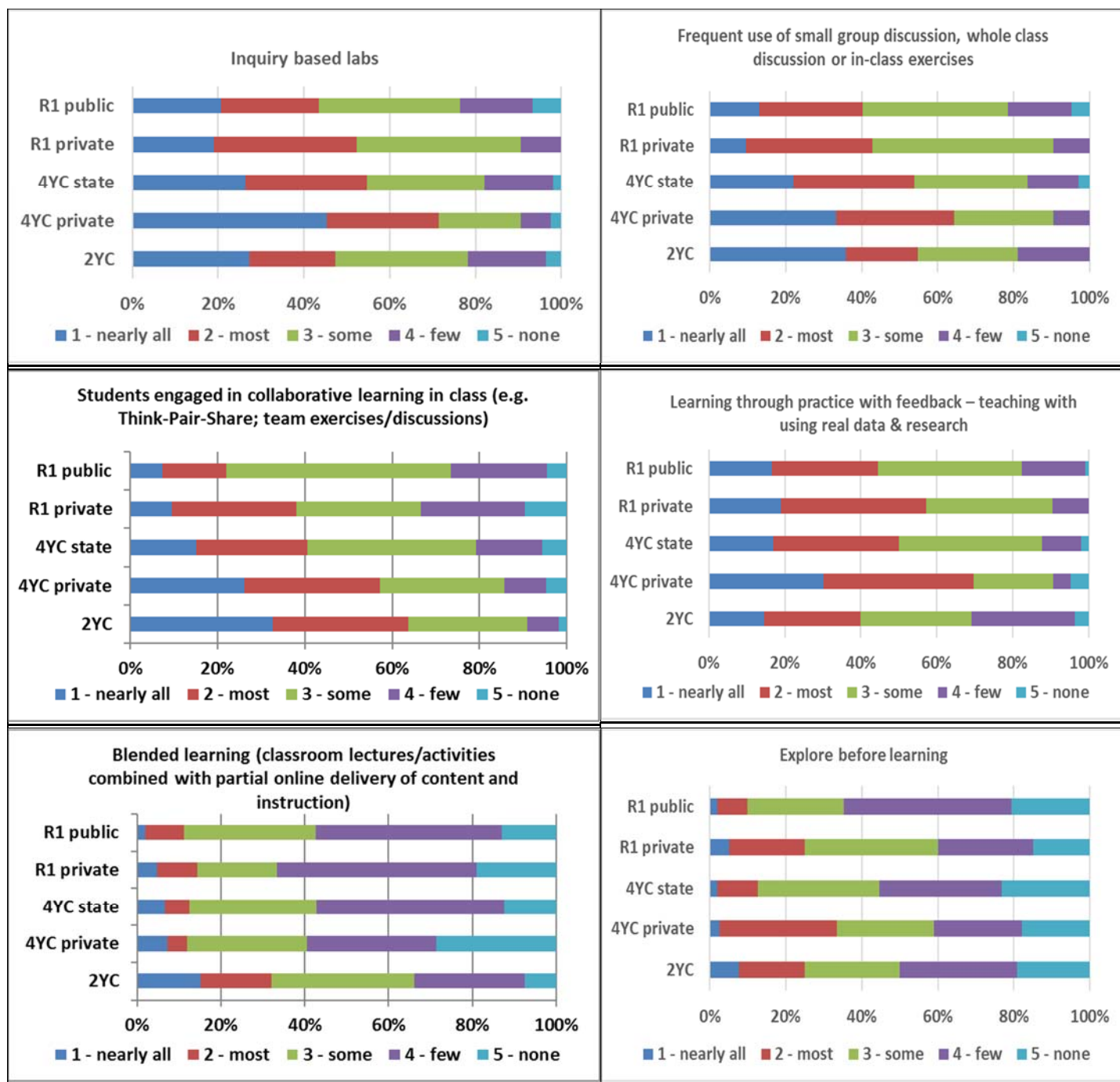
From what you know about your department, which of the below teaching methods are used by faculty in your department?

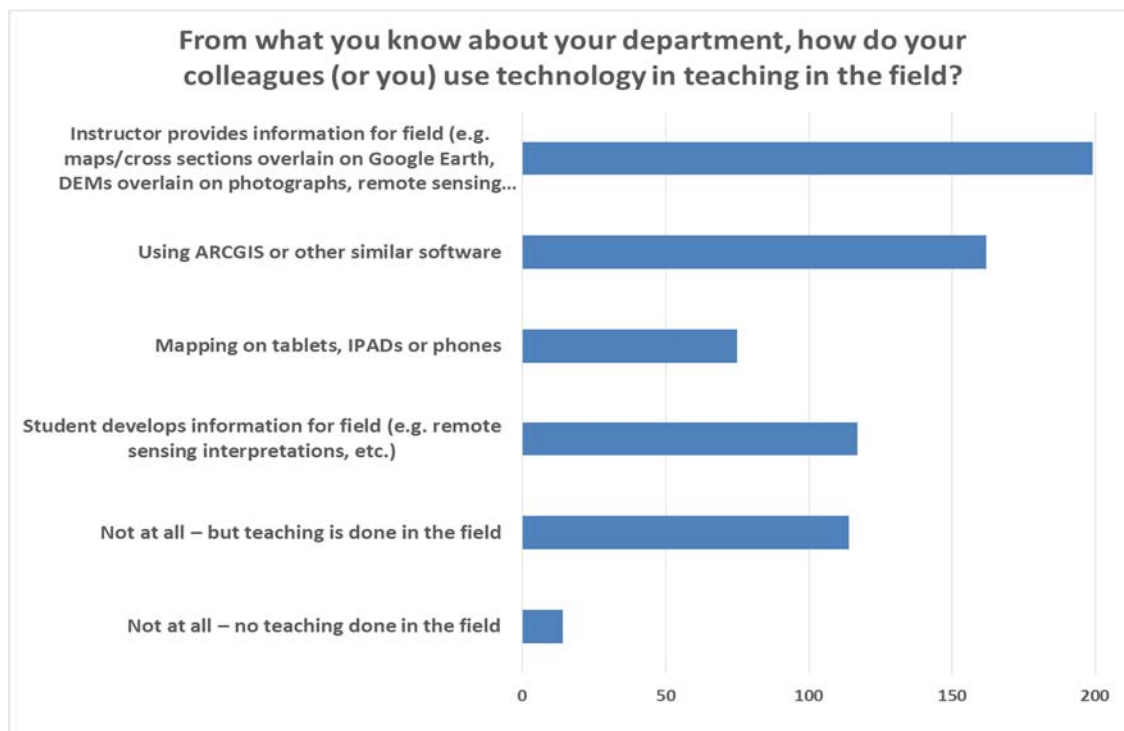
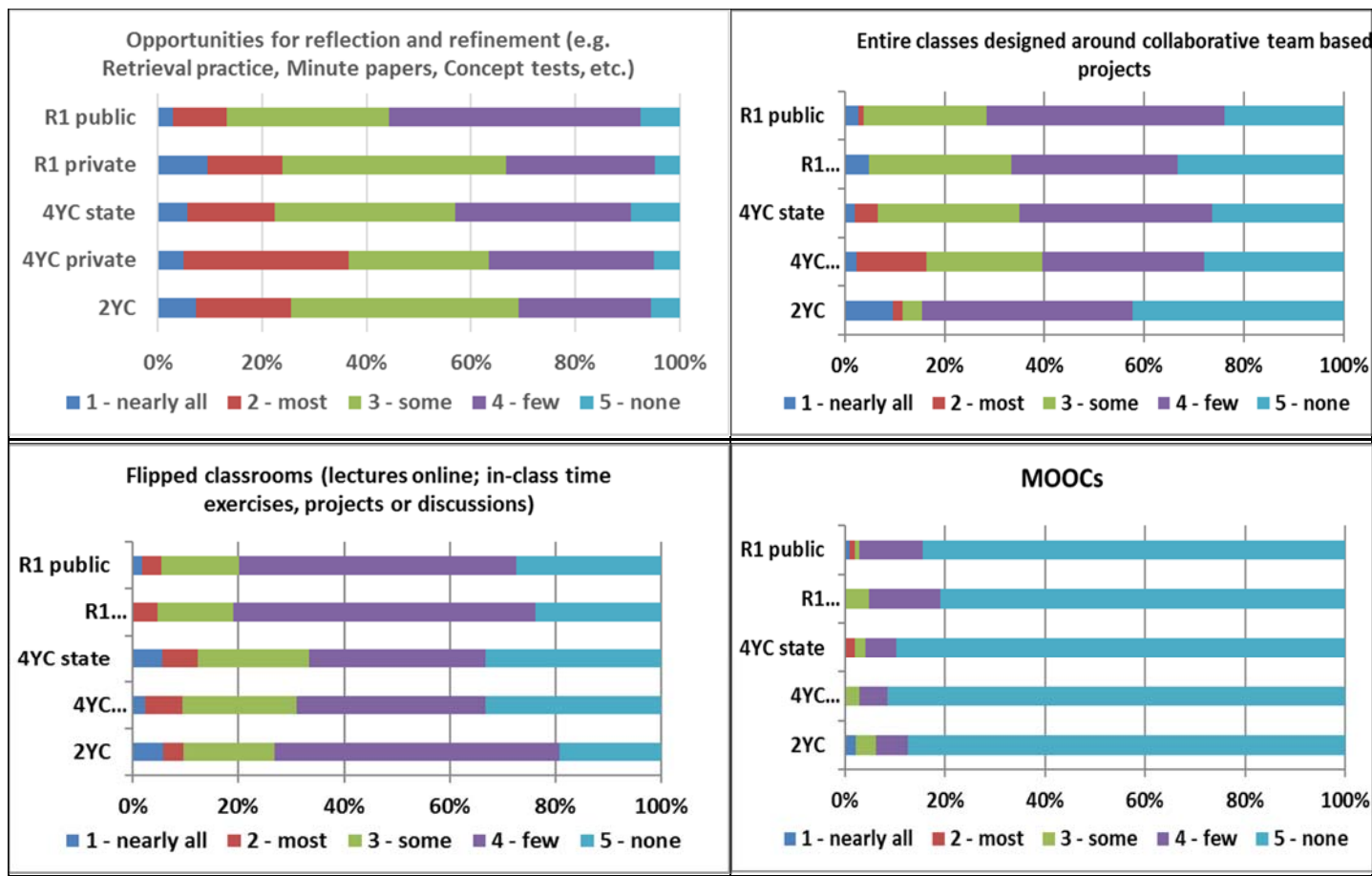


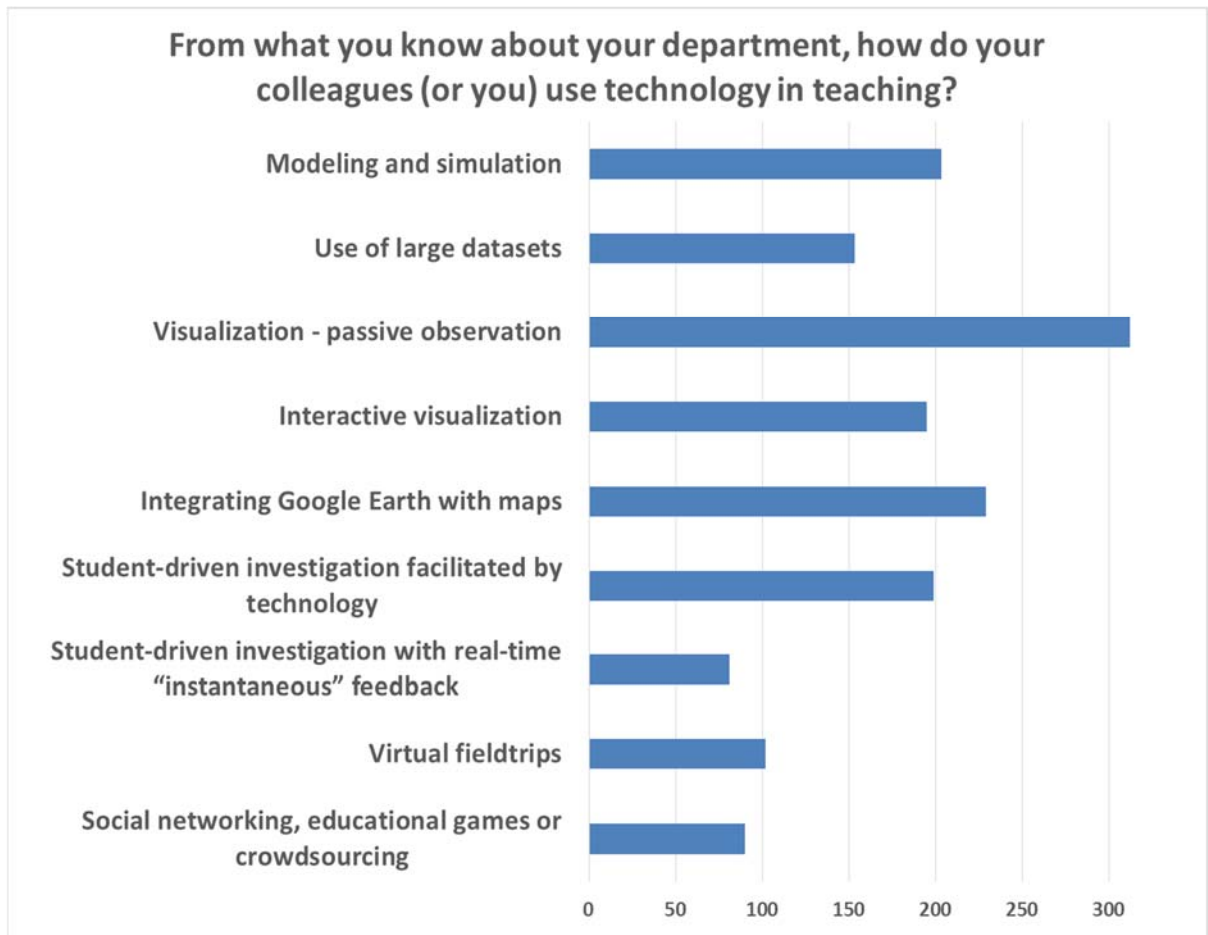
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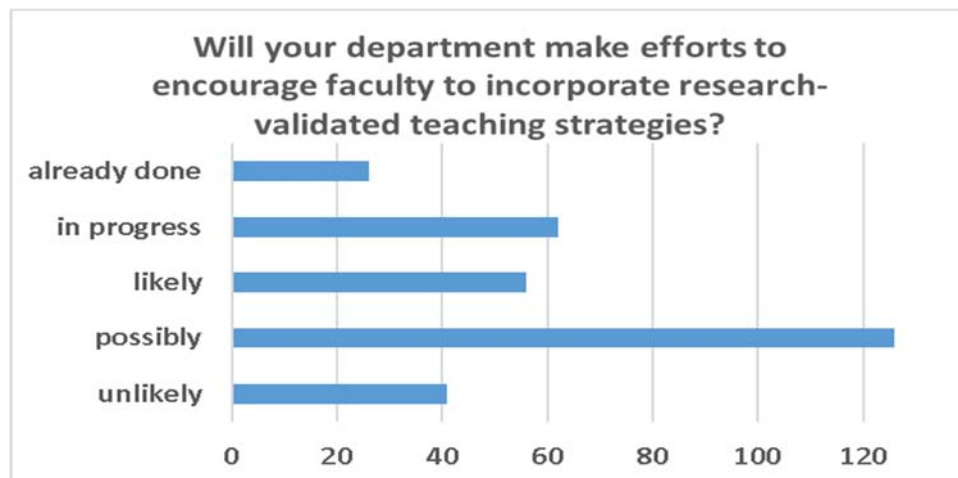
Breakdown by institution Type

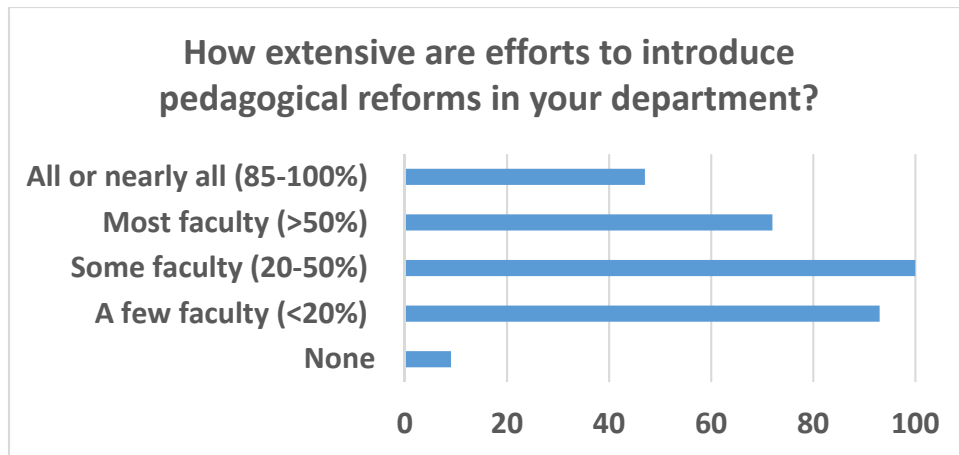




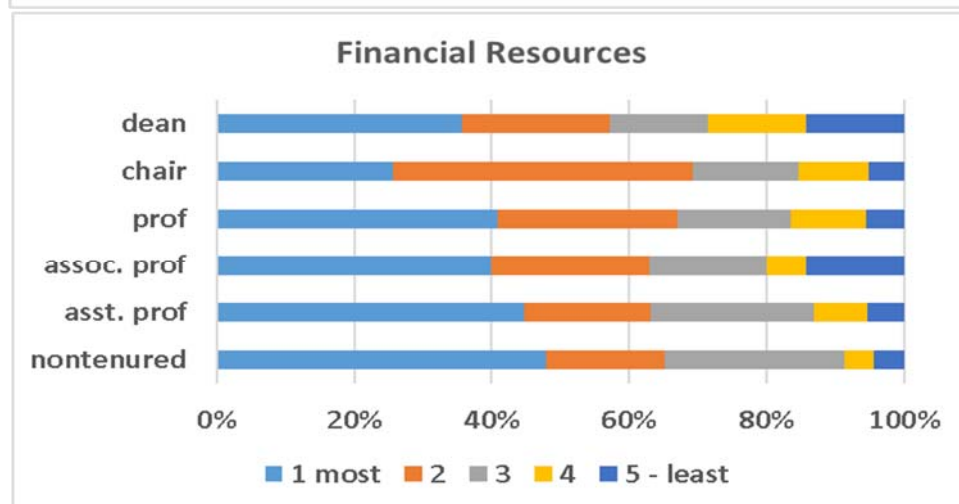
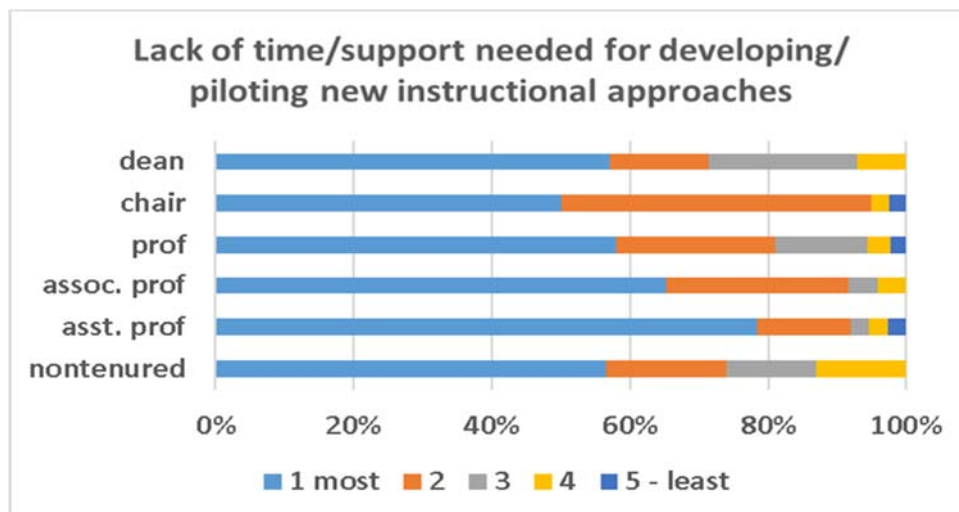


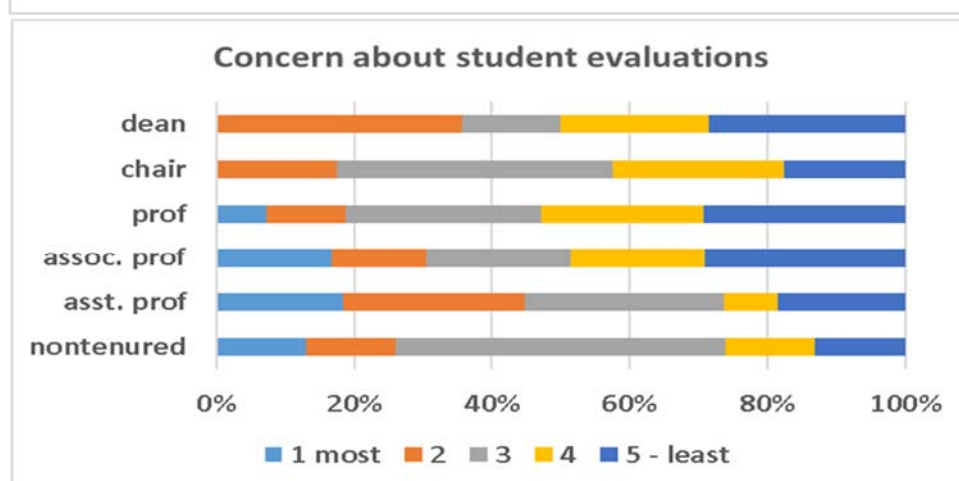
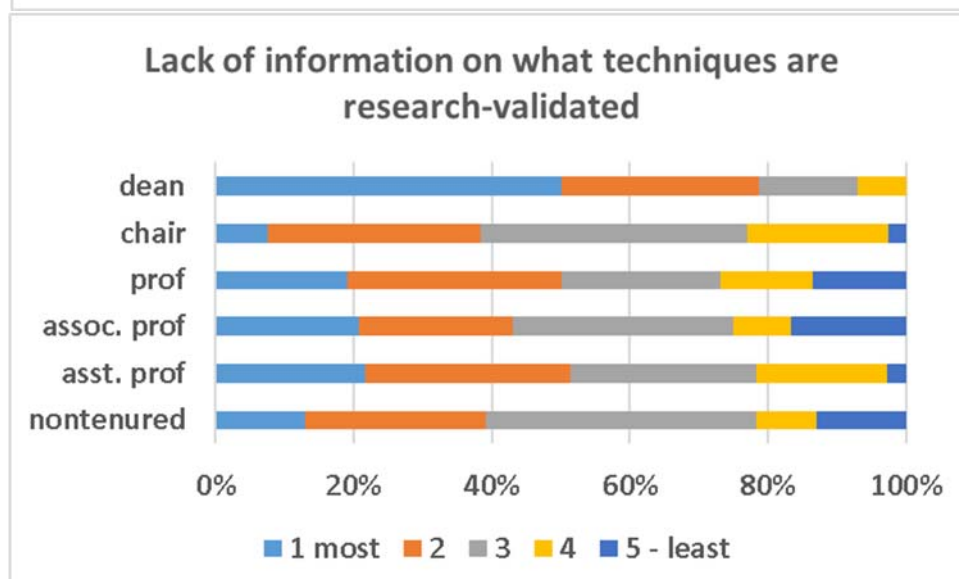
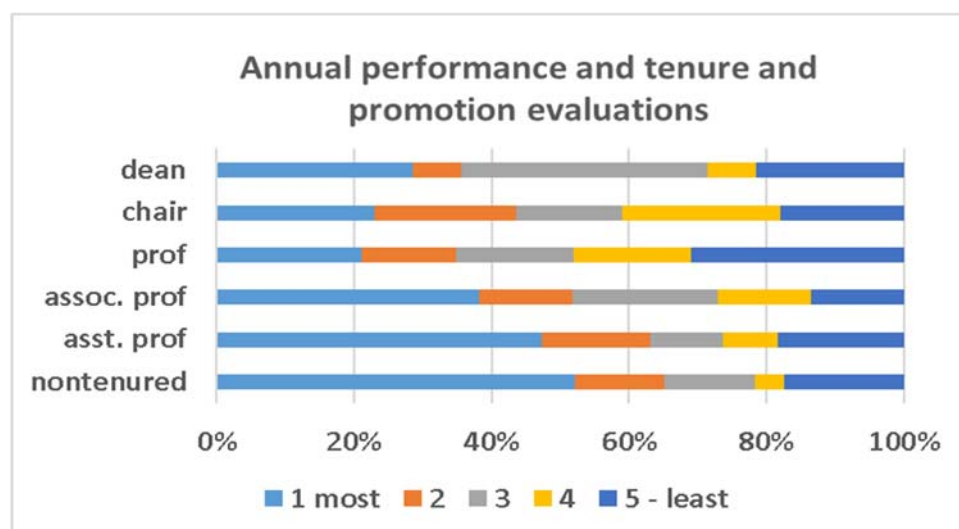
Is your department interested in making changes to how teaching is done at the undergraduate level?
Yes 238 No 64

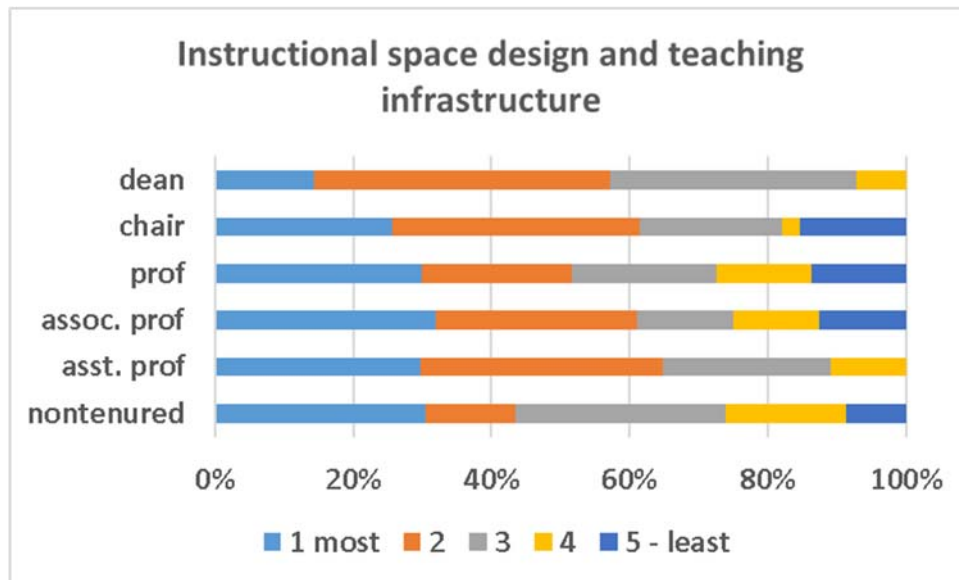




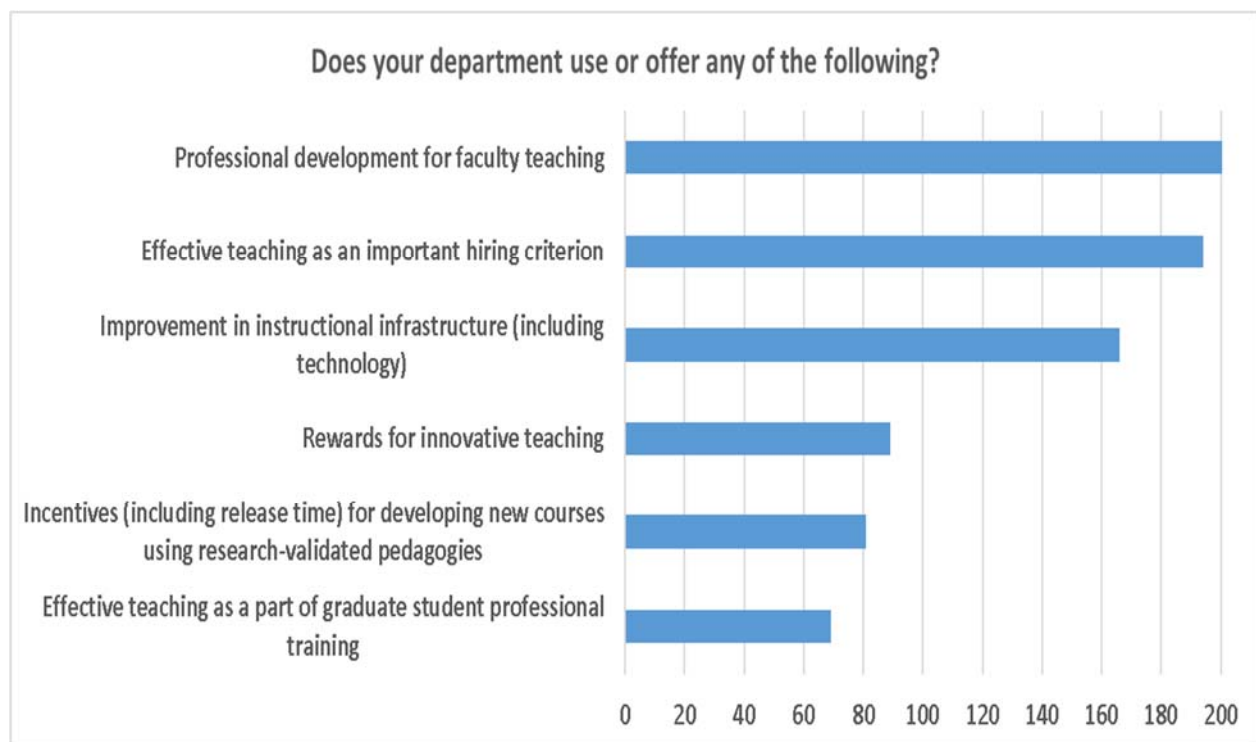
Obstacles/barriers identified by Summit to implementing research-validated pedagogies and uses of technology

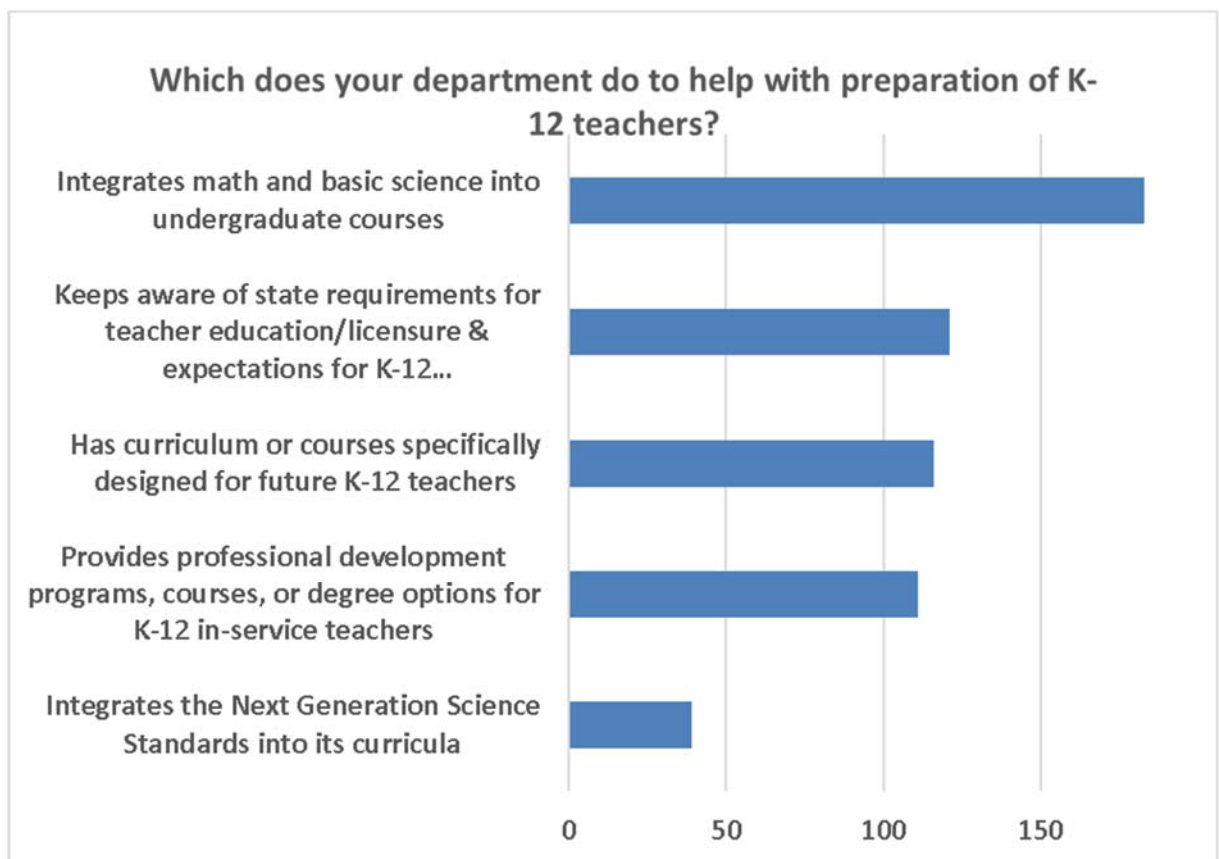
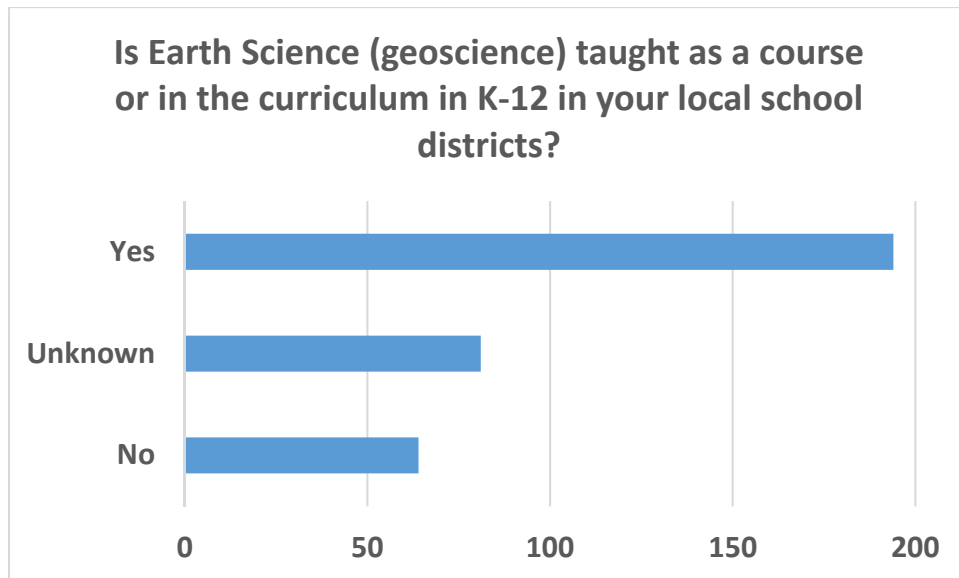




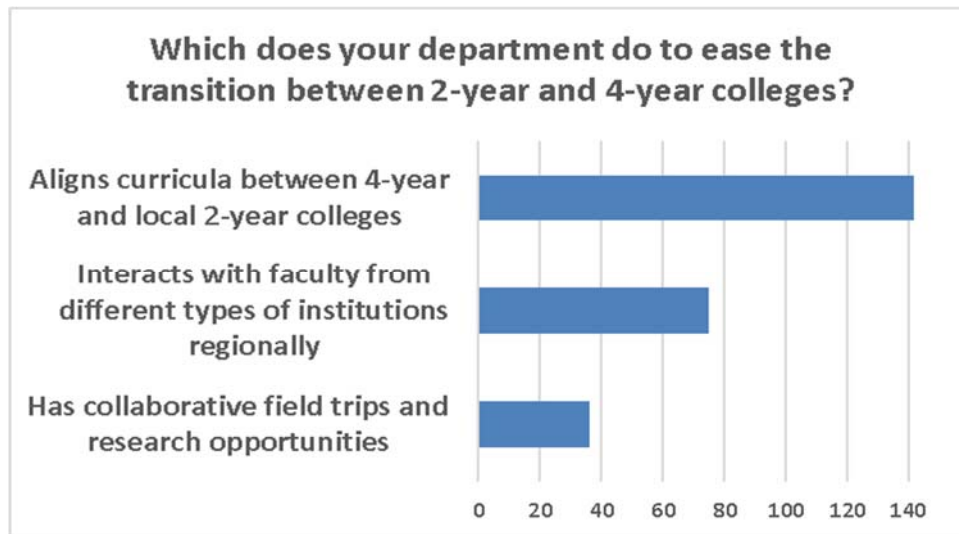


Proposed Incentives



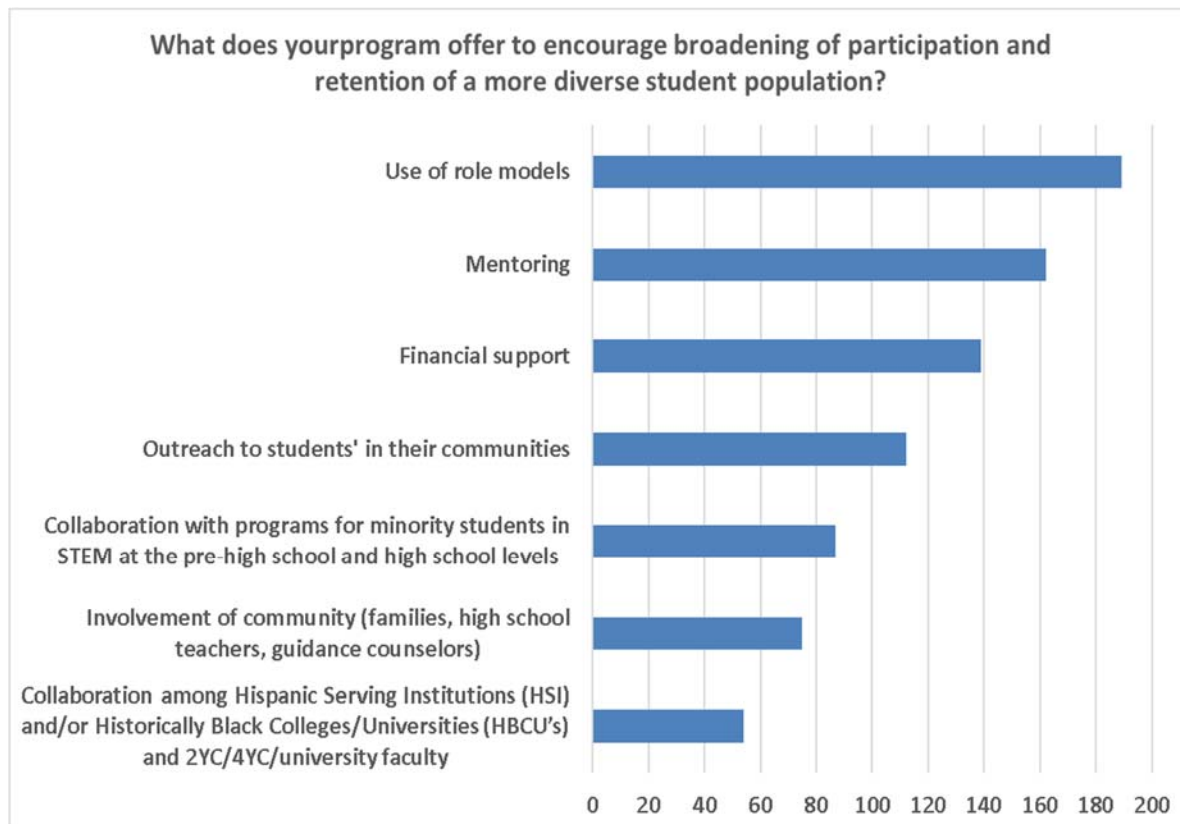


Does your department/company/organization sponsor, partner with or have any professional development programs for in-service K-12 teachers? Yes 156, No 272



Does your department/company/organization have or plan on any systematic efforts to encourage broadening participation and retention of a more diverse student population?

Yes 181, No 239



Does your department/company/organization track the participation and retention of minorities in your population?

Yes 237, No 182