2nd Summit on the Future of Undergraduate Geoscience Education

More results

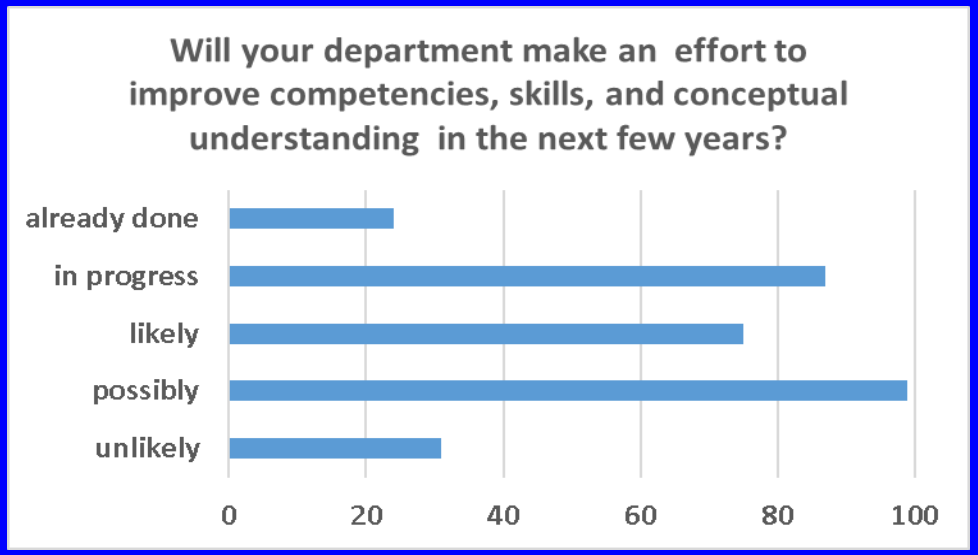
Sponsored by

Jackson School of Geosciences

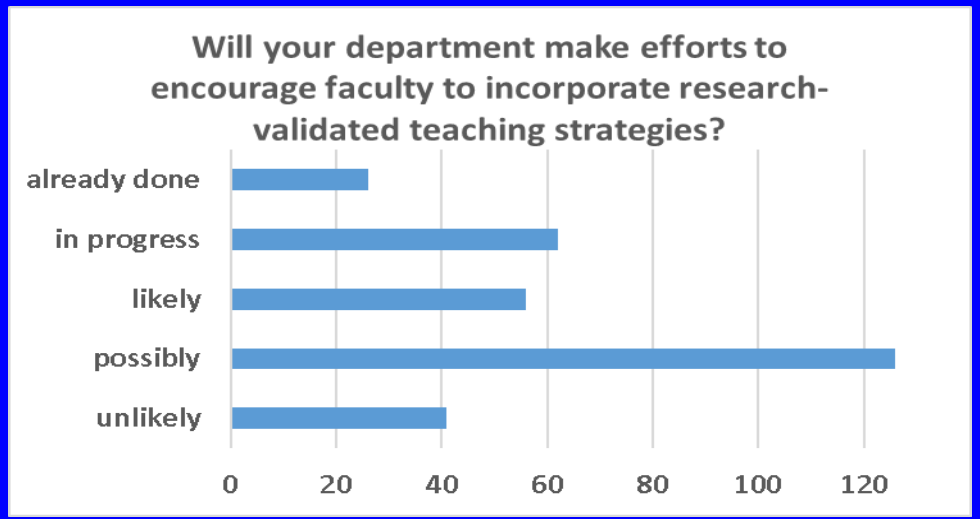
University of Texas at Austin

January 8-10, 2016

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



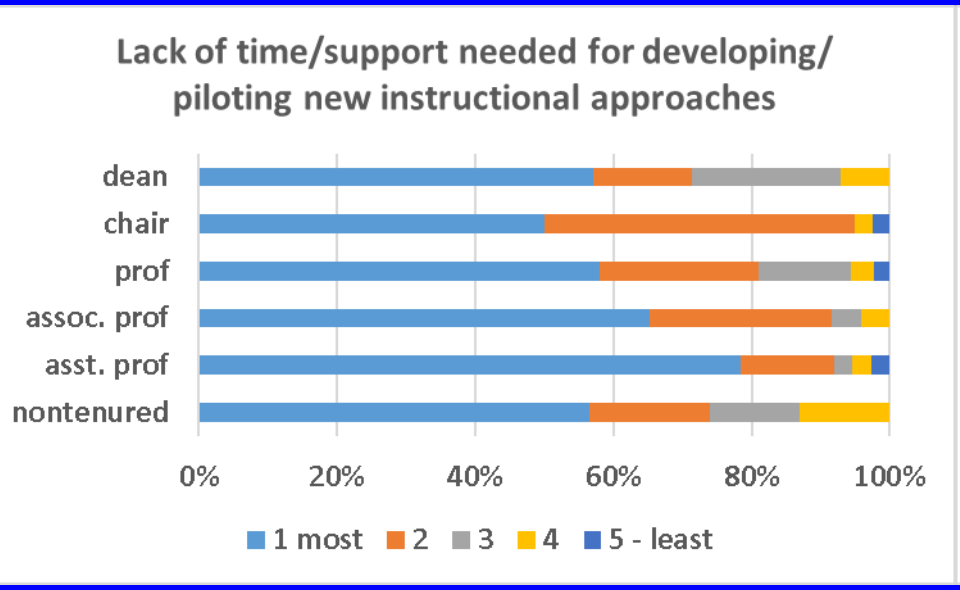
- **Is your department interested in making changes to how teaching is done at the undergraduate level? Yes 238 No 64**

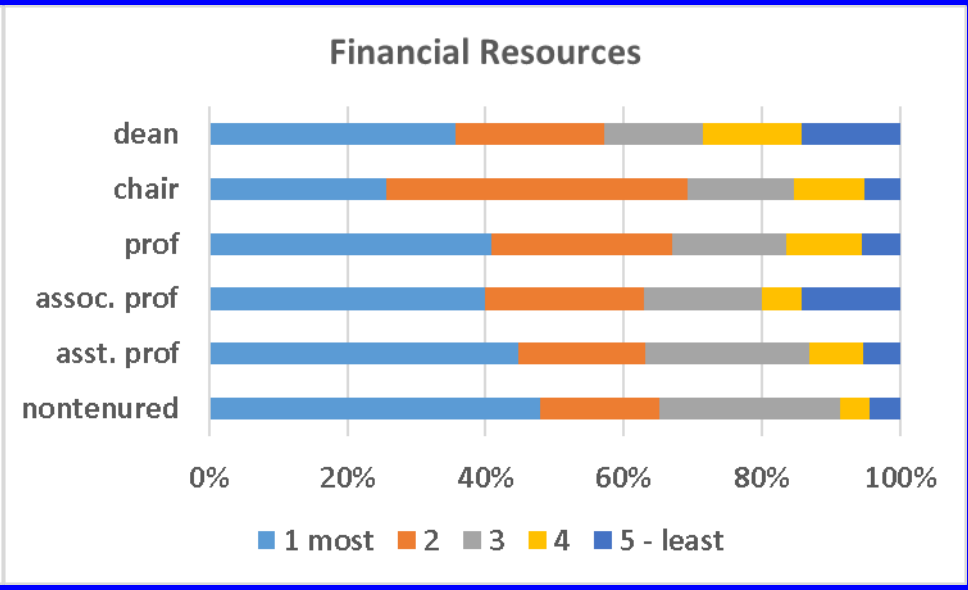


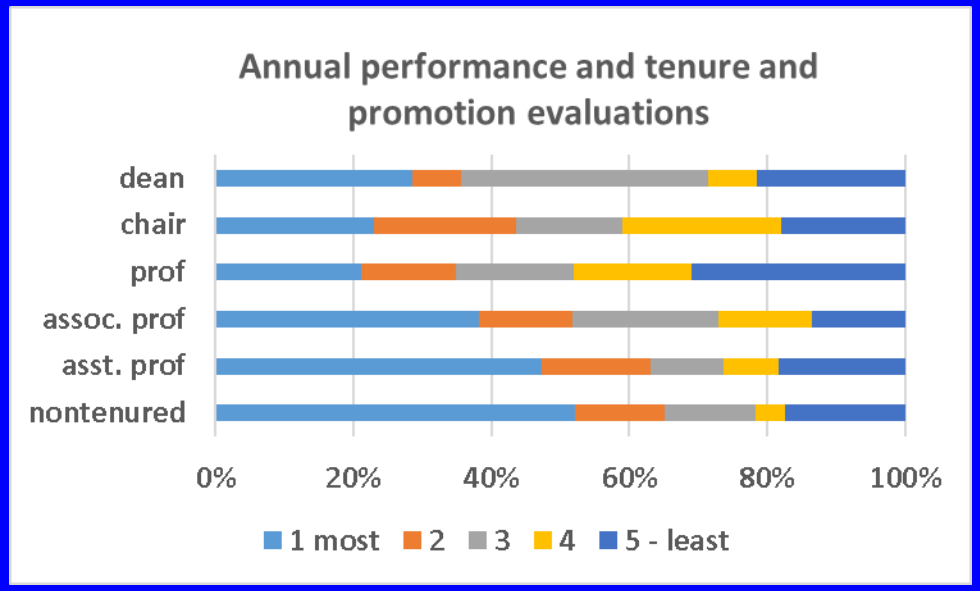
1st Summit: Barriers & Solutions

- **Resources – financial and space needs**
  - Time and support to develop and pilot new instructional approaches
  - Space redesigned from lecture-based to interactive classes
  - Technology infrastructure
  - Performance-based incentives to change
  - Investment in professional development activities
- **Annual performance evaluations and tenure and promotion do not reward efforts to improve teaching**
- **Different incoming student backgrounds & quantitative preparation**

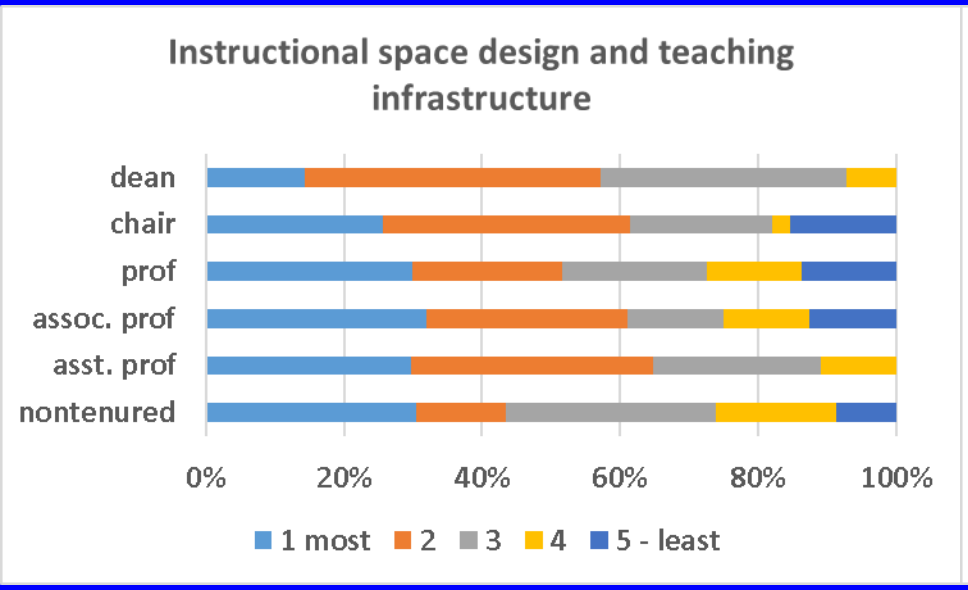
Obstacles/barriers identified by Summit to implementing research-validated pedagogies and uses of technology

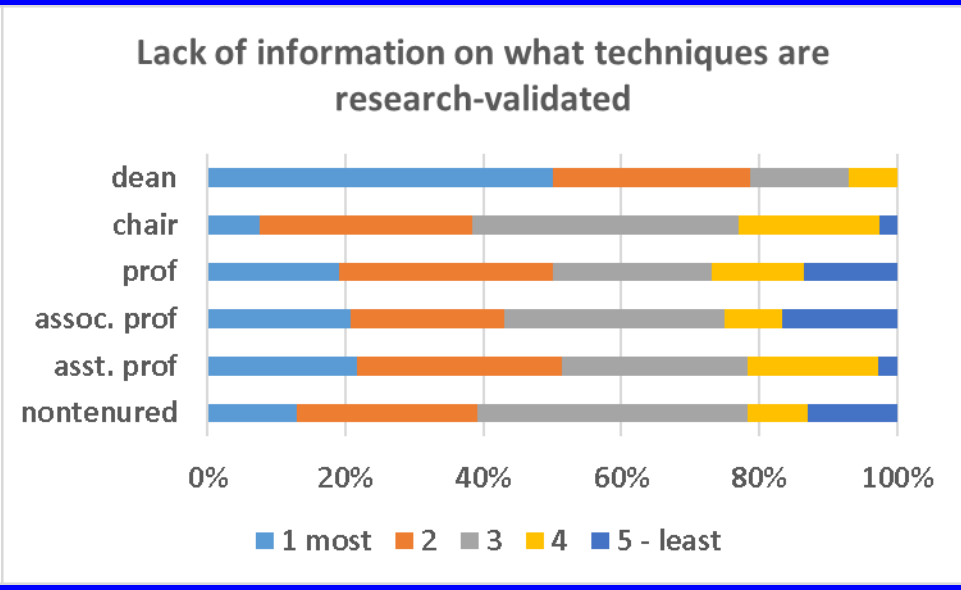


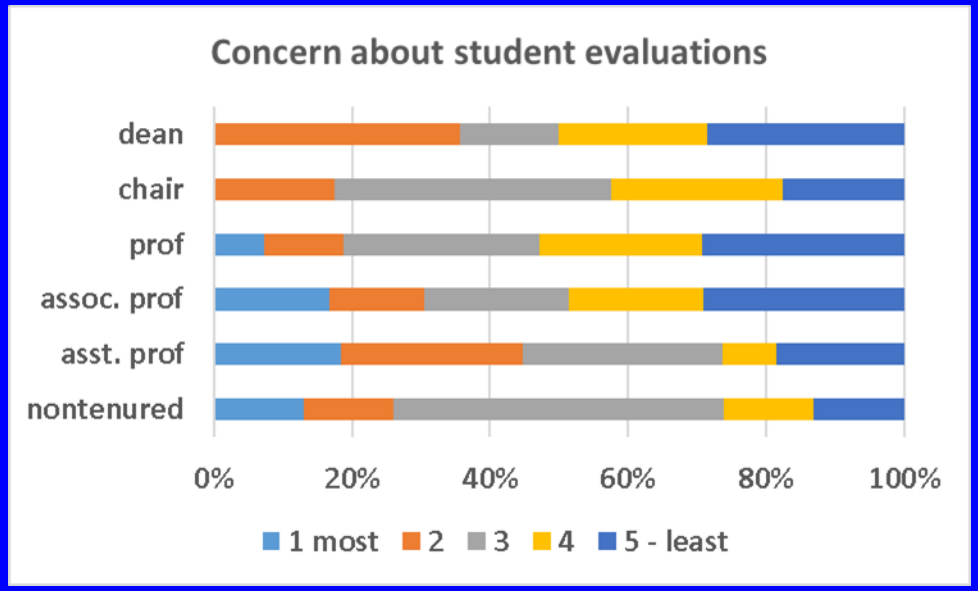




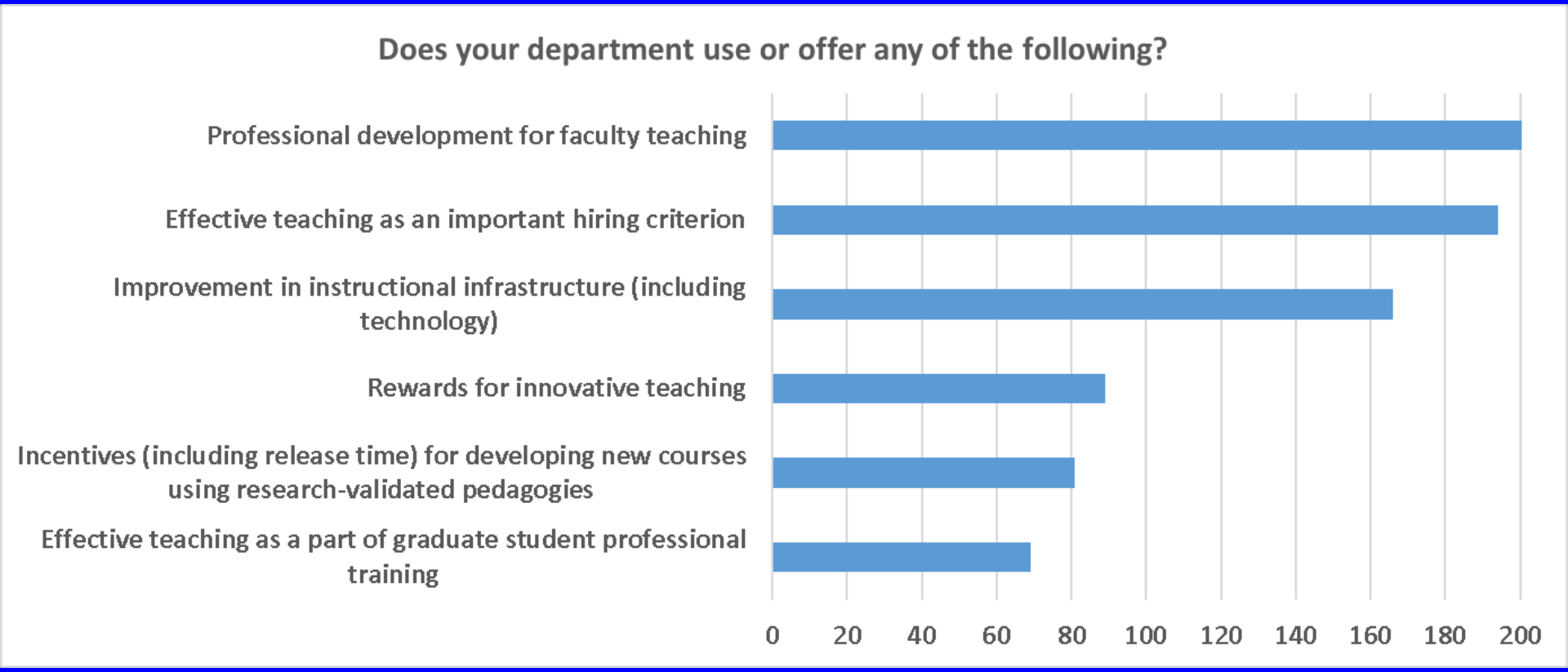
Obstacles/barriers identified by Summit to implementing research-validated pedagogies and uses of technology







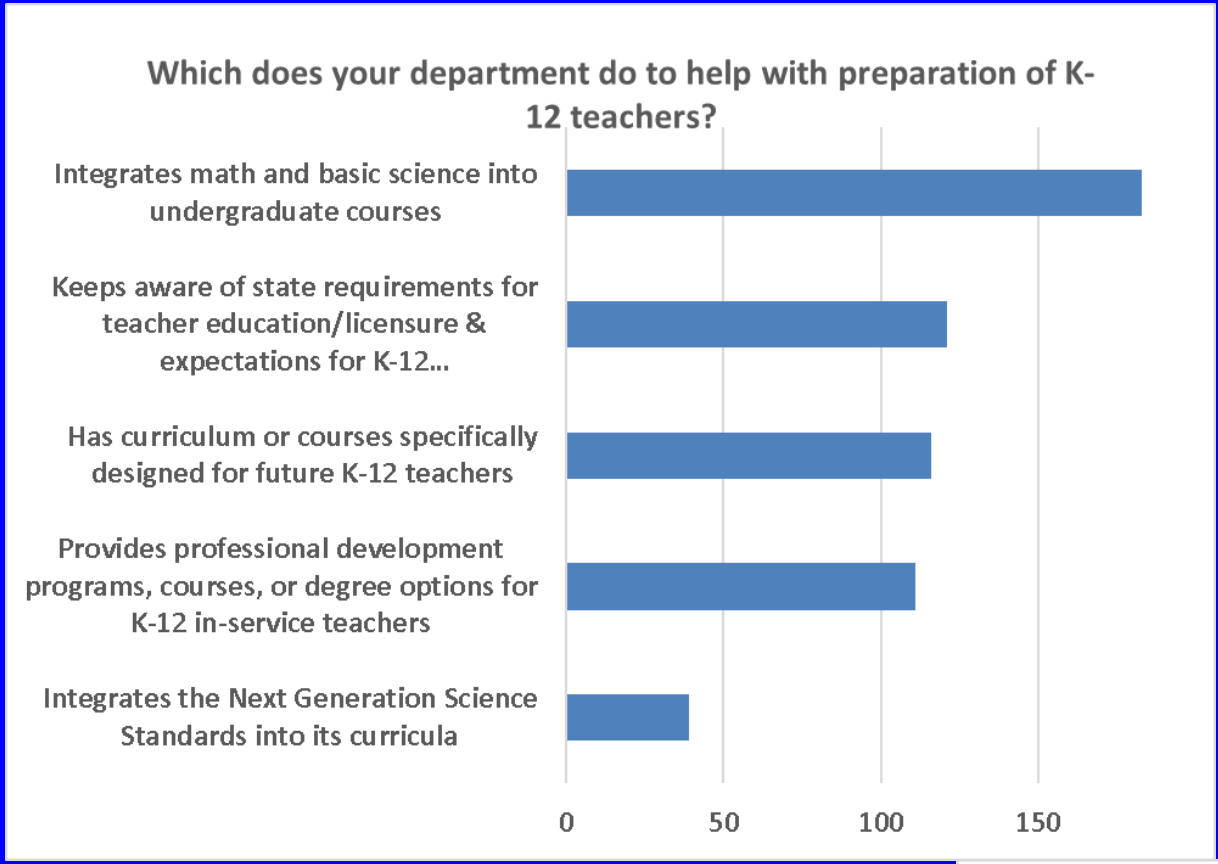
Proposed Incentives

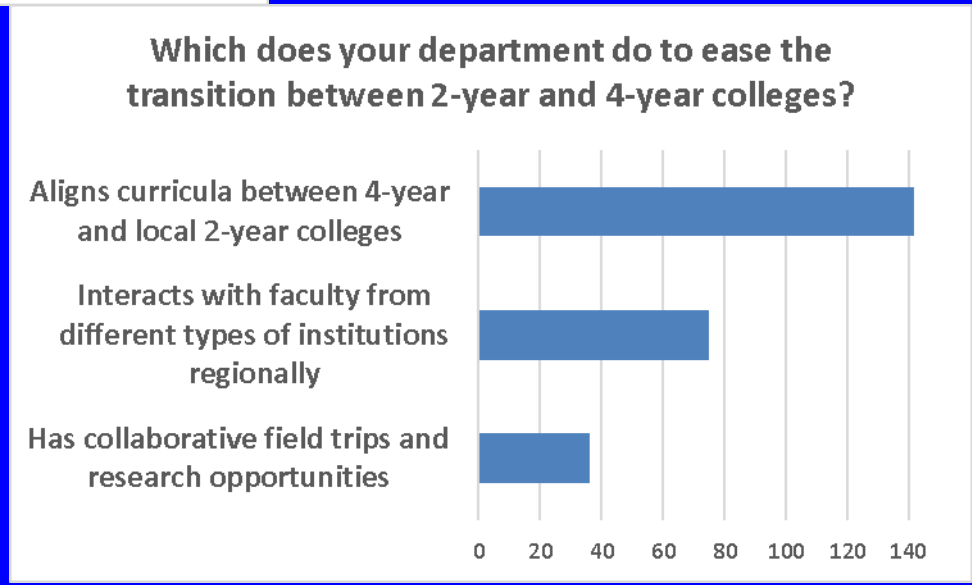


Out of 354 departments

Preparation of Future K-12 Teachers

- Integrate Next Generation Science Standards into undergraduate curricula
  - Prepare future teachers to do the same
- Integrate math & basic sciences into course content
  - Provide geologic examples that can be used in teaching those subjects
- Encourage collaborations with K-12 in-service teachers and improvements in pre-service programs
  - Can use to address "Broader Impacts" research grant objectives
- Be aware of state teacher education & licensure requirements, local K-12 instruction requirements & content assessment
- Build collaborations between Y4C & Y2C faculty


Which does your department do to help with preparation of K-12 teachers?
Integrates math and basic science into undergraduate courses
Keeps aware of state requirements for teacher education/licensure & expectations for K-12...
Has curriculum or courses specifically designed for future K-12 teachers
Provides professional development programs, courses, or degree options for K-12 in-service teachers
Integrates the Next Generation Science Standards into its curricula
0
50
100
150


Which does your department do to ease the transition between 2-year and 4-year colleges?
Aligns curricula between 4-year and local 2-year colleges
Interacts with faculty from different types of institutions regionally
Has collaborative field trips and research opportunities
0
20
40
60
80
100
120
140

Broadening Participation of Under-represented Groups

- Emulate & develop successful recruiting programs
  - Provide financial support
  - Reach out to students in their communities
  - Involve members of the community (families, high school teachers, guidance counselors)
  - Incorporate role models
  - Include mentoring
- Collaboration among Y4C, 2YC, Hispanic Serving Institutions (HIS), Historically Black Colleges and Universities (HBCU's) faculty
  - Provides pathways for successfully transfer to Y4C
  - REUs to recruit and provide opportunities for 2YC, HBCU and HIS students
- Develop or collaborate with STEM programs for minority students at pre-high school and high school levels
- Address geosciences image
  - Emphasize societal relevance & career prospects
  - Earth is Calling video, posters/brochures

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