

# *Assessing Student Learning*

## Lessons Learned from the Wabash National Study

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## *Wabash National Study*

- 49 institutions
- More than 17,000 students to date
- Longitudinal
- Purpose – identify high-impact practices that promote liberal education

# *What do students bring into their science courses?*

- **Tuning courses/programs for where your students start**
  - What are your students' incoming
    - ▶ *Study skills?*
    - ▶ *Preparation?*
    - ▶ *Engagement in previous classes?*
    - ▶ *Resilience - Tools for dealing with challenges?*
  
- **Selection effects**
  - To what extent does your students' performance reflect what they brought into the course rather than their effort and growth in your course?

## *Of 17,500 entering students*

- 23% report that contributing to science is important
- Of that 23%
  - 34% intend to earn an MS/MA, and 49% intend to earn a PhD
  - 10% are African American, 6% Latino/Latina
  - 52% are women
  - 30% intend to major in science
    - ▶ *About the same at the end of the first year*
  - 3% intend to major in math/statistics

# *Measure good practices*

- **NSSE, CSEQ, HERI**
  - Students' self-reports on good practices predict their growth on outcomes, GPA, and credits completed
    - ▶ *Disaggregate survey results at the department level*
- **Survey at the classroom level**
  - CLASSE, IDEA
- **“Appropriate” questions from surveys for your class**
  - e.g., Are you participating in study groups for this class?
- **Ask student-led student interviews and focus groups**

*What experiences improved student  
interest in contributing to the sciences?*

## *NSSE Active & Collaborative Learning*

- Asked questions in class or contributed to class discussions
- Made a class presentation
- Worked with other students on projects during class
- Worked with classmates outside of class to prepare class assignments
- Tutored or taught other students (paid or voluntary)
- Participated in a community-based project (e.g., service learning) as part of a regular course
- Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

## *NSSE Student-Faculty Interaction*

- Discussed grades or assignments with an instructor
- Talked about career plans with a faculty member or advisor
- Discussed ideas from your readings or classes with faculty members outside of class
- Worked with faculty members on activities other than coursework (committees, orientation, student-life activities, etc.)
- Received prompt written or oral feedback from faculty on your academic performance
- Worked on a research project with a faculty member outside of course or program requirements

## *Cooperative learning*

- Students teaching each other in addition to faculty teaching
- Faculty encouraging students to form study groups
- Students participating in study groups
- Working with classmates to prepare class assignments or projects

*Active and  
Collaborative Learning*

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Critical Thinking	✓
Contribution to the Arts	✓
Political/Social Involvement	✓
Leadership	✓
Academic Motivation	✓
Well-Being	✓
Literacy	✓
Diversity/Challenge	✓
Moral Reasoning	✓
Need for Cognition	✓
Universality/Diversity	✓

## *Explore variability*

*What do students in the 1<sup>st</sup> and 4<sup>th</sup> quartiles tell you about how things are going?*

