



# How Writing Contributes to Learning and How Institutions Can Increase That Contribution

## Lessons from NSSE & FSSE

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# Writing's Place in Higher Education



- **Prominent component of liberal education**

# Writing's PLACES in Higher Education



- **Prominent component of liberal education**
- **Powerful aid to learning**

**Before we begin, please write . . .**



# Our Questions



- **Does writing really lead to learning?**
- **Are all ways of using writing equally effective at promoting learning?**

# Our Questions

- Does writing really lead to learning?
- Are all ways of using writing equally effective at promoting learning?

=====

- To what extent are faculty using the more effective ways?
- For institutional leaders: So what?
  - Institutional policy
  - Administrative action

# Resources

## □ Partners

- Council of Writing Program Administrative
- NSSE

## □ **27 writing questions for NSSE**

- Administered 2008, 2009: 151 schools, 60,104 respondents

## □ **Translate 27 writing questions for FSSE**

- Administered 2009: 46 schools, 2,995 respondents

# Acknowledgements



## Study Collaborators

- **Chris Anson**

- ▣ North Carolina State University

- **Charles Paine**

- ▣ University of New Mexico

# Findings from NSSE



# Data & Sample

- Students: 60,104 (41% first-year, 59% senior)

## All students

|                         |            |
|-------------------------|------------|
| <b>Female</b>           | <b>66%</b> |
| <b>Part-time</b>        | <b>10%</b> |
| <b>First-generation</b> | <b>43%</b> |
| <b>African American</b> | <b>8%</b>  |
| <b>Asian</b>            | <b>5%</b>  |
| <b>White</b>            | <b>70%</b> |
| <b>Hispanic/Latino</b>  | <b>8%</b>  |
| <b>Other</b>            | <b>10%</b> |

## Seniors only

|                              |            |
|------------------------------|------------|
| <b>Transfer</b>              | <b>39%</b> |
| <b>Arts &amp; Humanities</b> | <b>15%</b> |
| <b>Biological Sciences</b>   | <b>8%</b>  |
| <b>Business</b>              | <b>16%</b> |
| <b>Education</b>             | <b>10%</b> |
| <b>Engineering</b>           | <b>5%</b>  |
| <b>Physical Sciences</b>     | <b>4%</b>  |
| <b>Professional Fields</b>   | <b>10%</b> |
| <b>Social Sciences</b>       | <b>16%</b> |

# Data & Sample

- **Institutions: 151 from NSSE 2008 and 2009**

## Carnegie

|                    |            |
|--------------------|------------|
| <b>Doc RU-VH</b>   | <b>17%</b> |
| <b>Doc RU-H</b>    | <b>21%</b> |
| <b>Doc DRU</b>     | <b>3%</b>  |
| <b>Masters-L</b>   | <b>30%</b> |
| <b>Masters-M</b>   | <b>6%</b>  |
| <b>Masters-S</b>   | <b>6%</b>  |
| <b>Bac-AS</b>      | <b>9%</b>  |
| <b>Bac-Diverse</b> | <b>6%</b>  |

## Sector

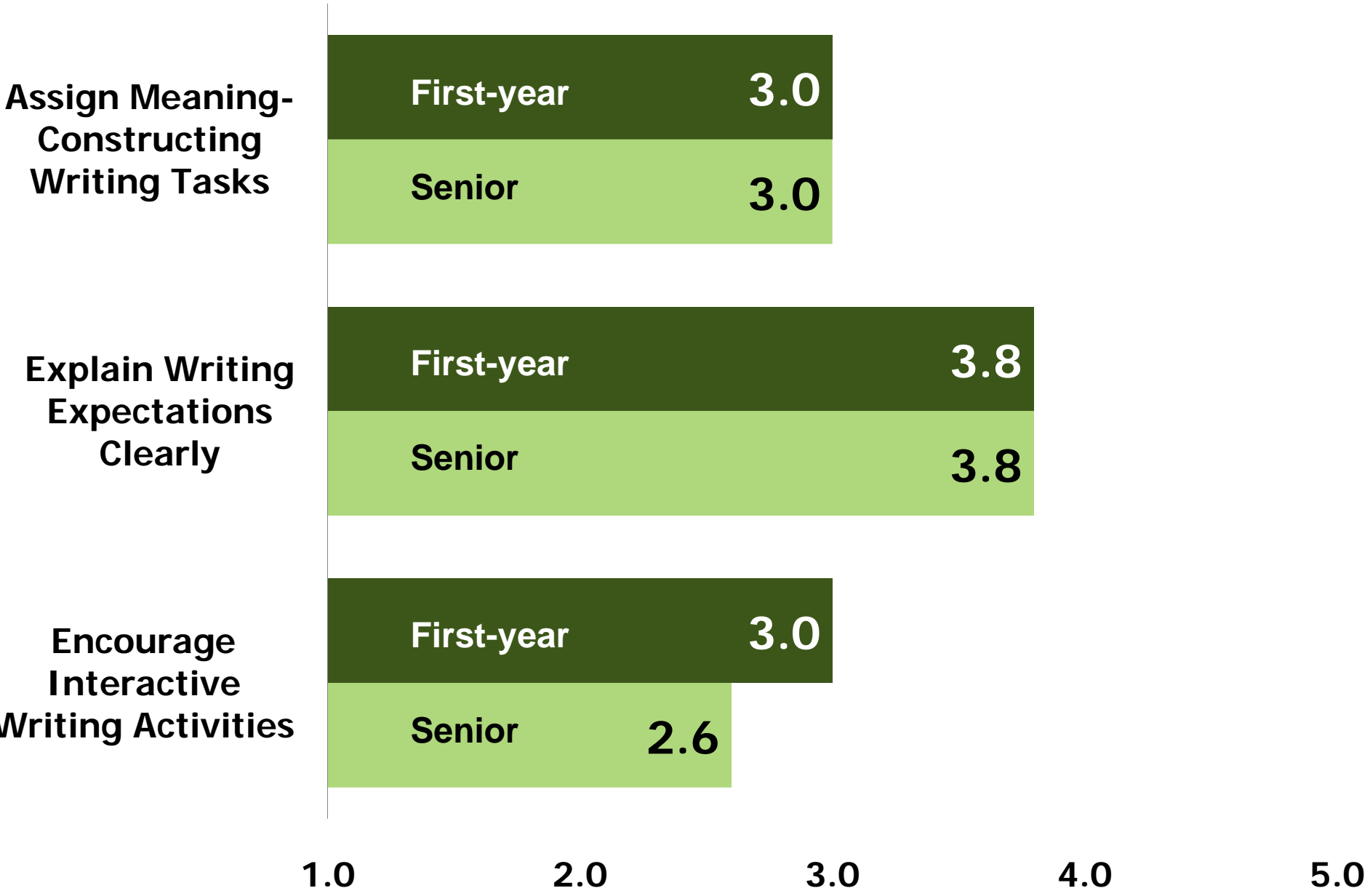
|                |            |
|----------------|------------|
| <b>Private</b> | <b>30%</b> |
| <b>Public</b>  | <b>70%</b> |

# Writing Practices

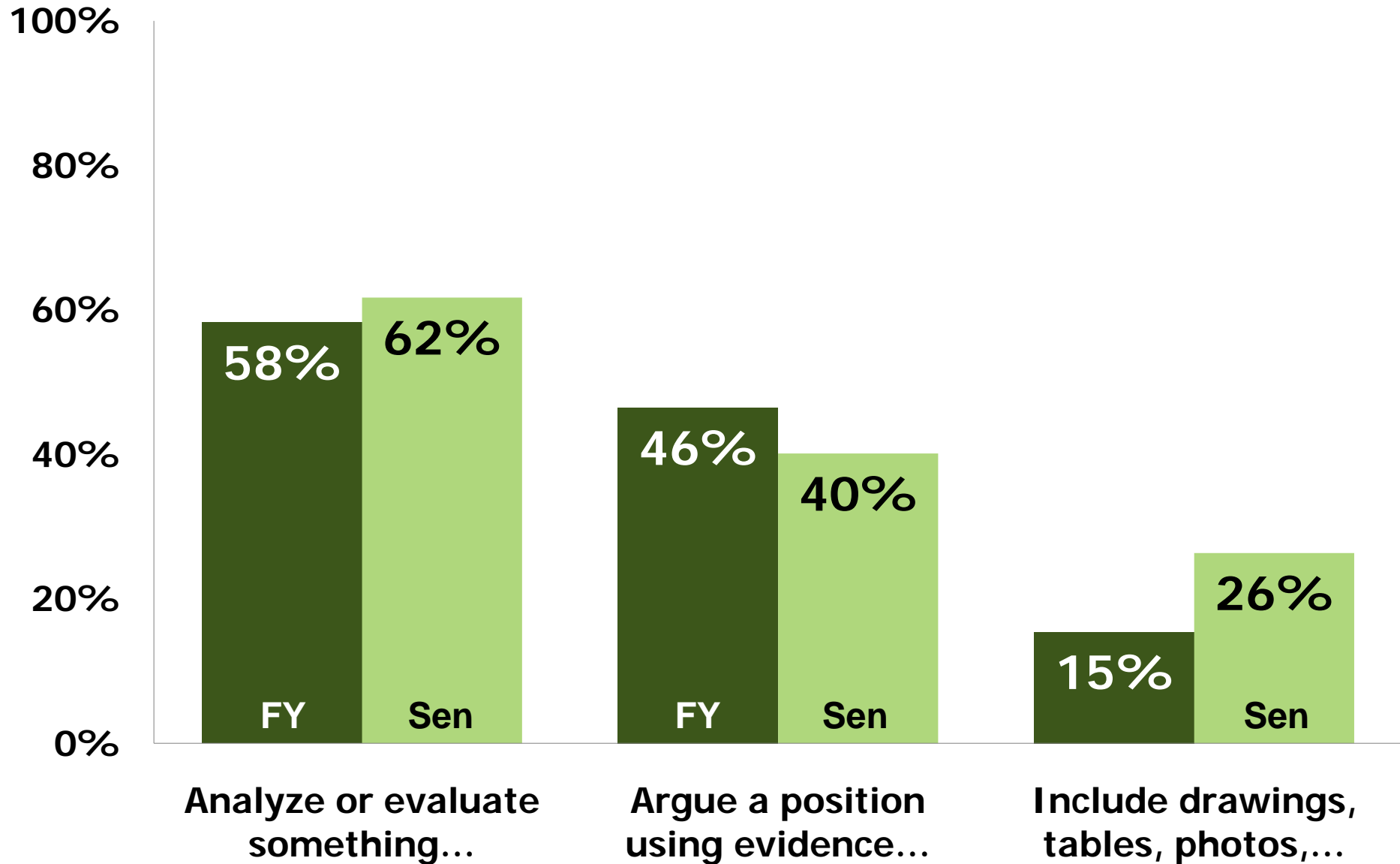
- **Assign Meaning-Constructing Writing Tasks**
  - ▣ 7-items;  $\alpha_{FY} = 0.80$ ,  $\alpha_{SEN} = 0.76$
- **Explain Writing Expectations**
  - ▣ 3-items;  $\alpha_{FY} = 0.83$ ,  $\alpha_{SEN} = 0.82$
- **Encourage Interactive Writing Activities**
  - ▣ 6-items;  $\alpha_{FY} = 0.82$ ,  $\alpha_{SEN} = 0.83$



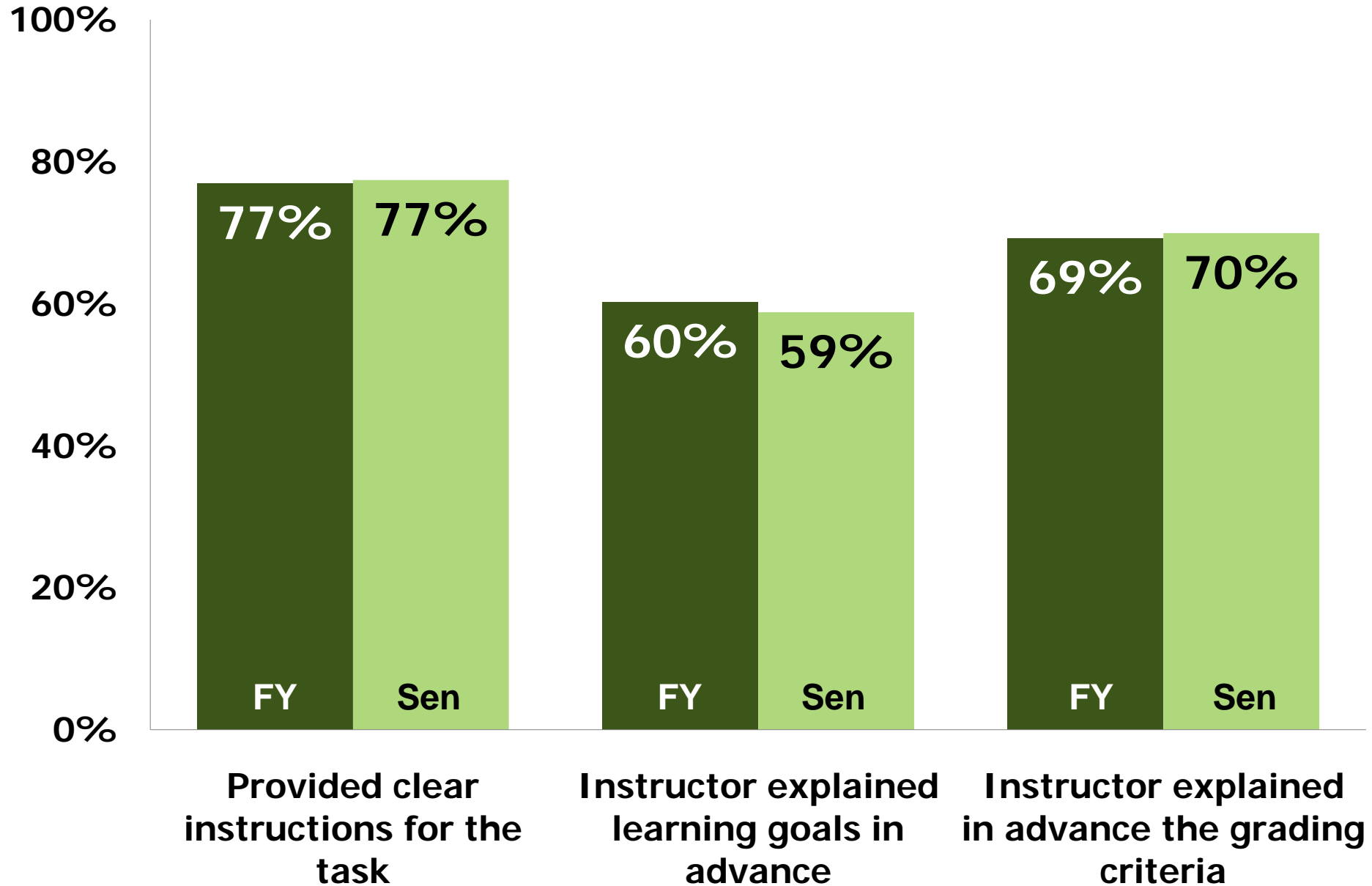
# Mean Values for Student Writing Scales



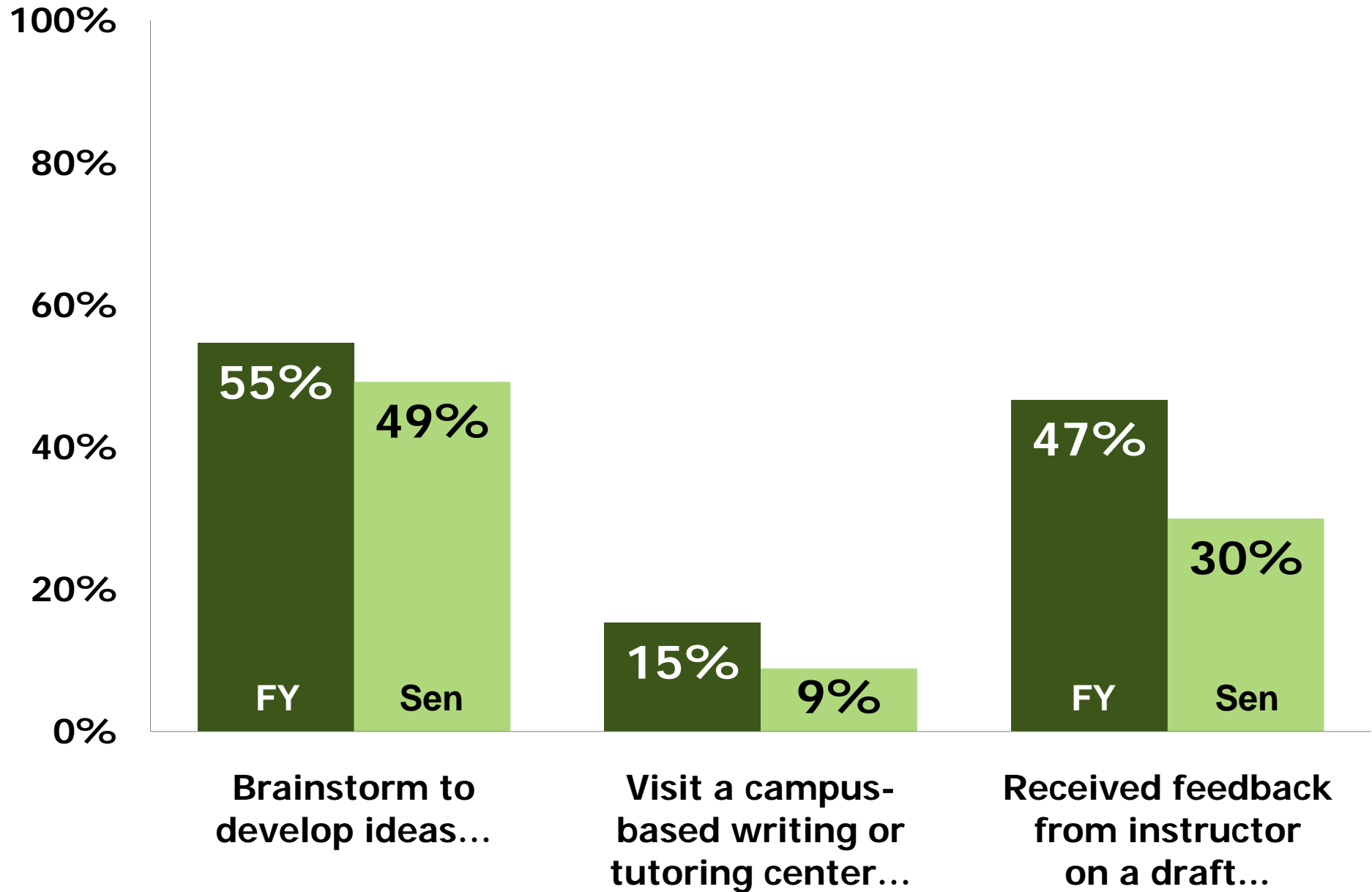
# Percentage of Students Who Indicated These for "Most" or "All" Assignments



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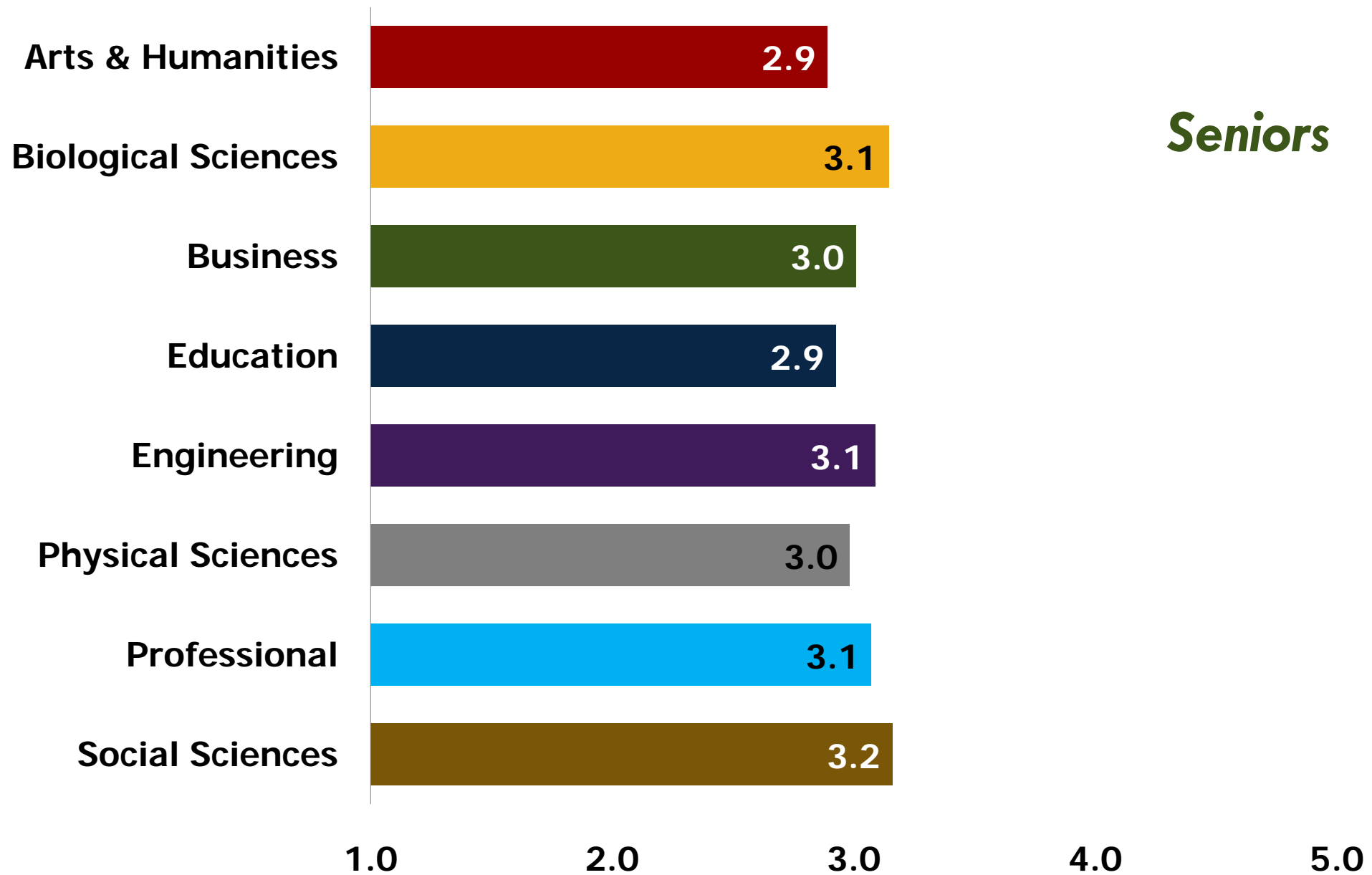


# Differences by Field



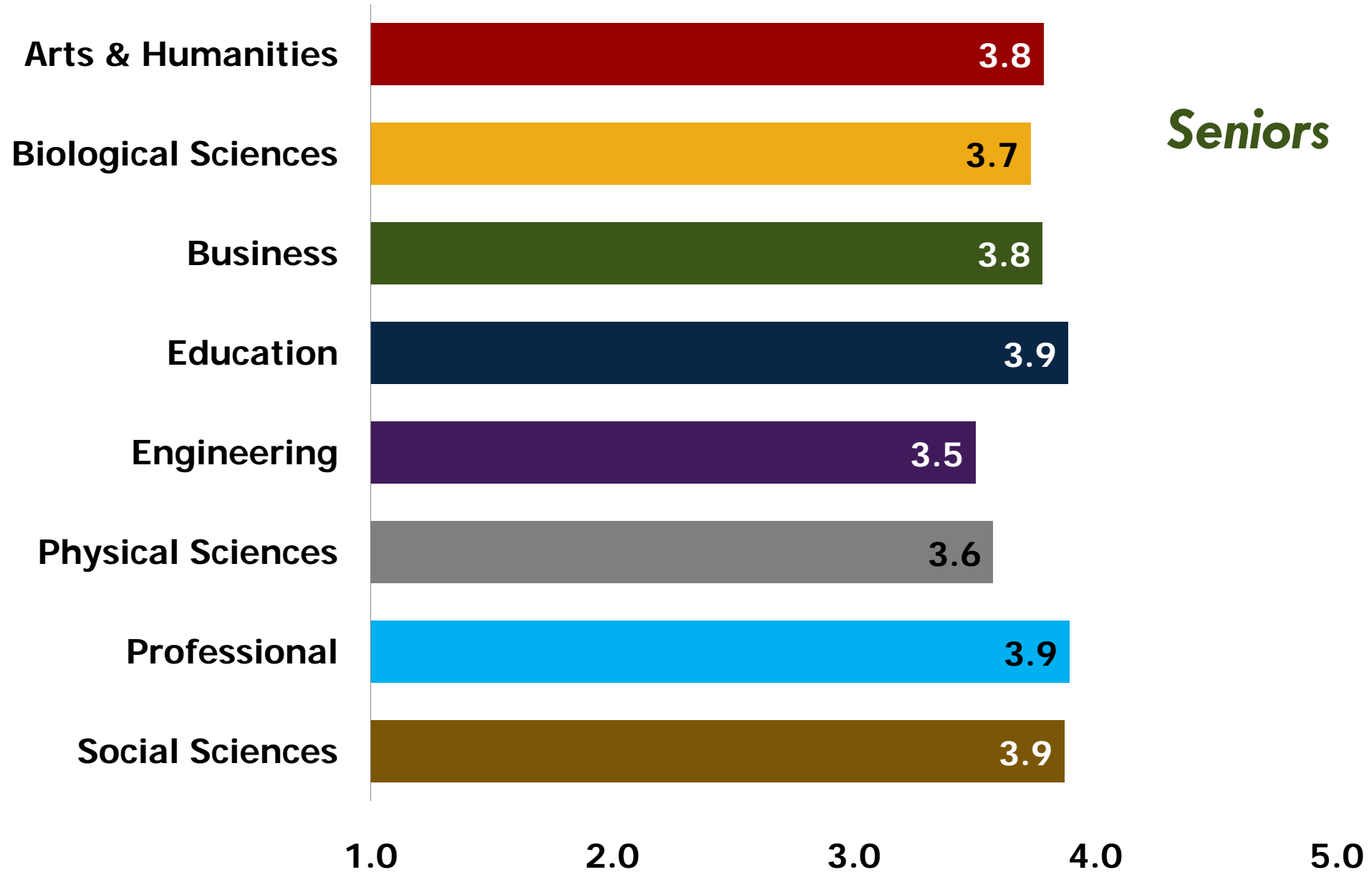
# Mean Differences in Assign Meaning-Constructing Writing Tasks

*Seniors*



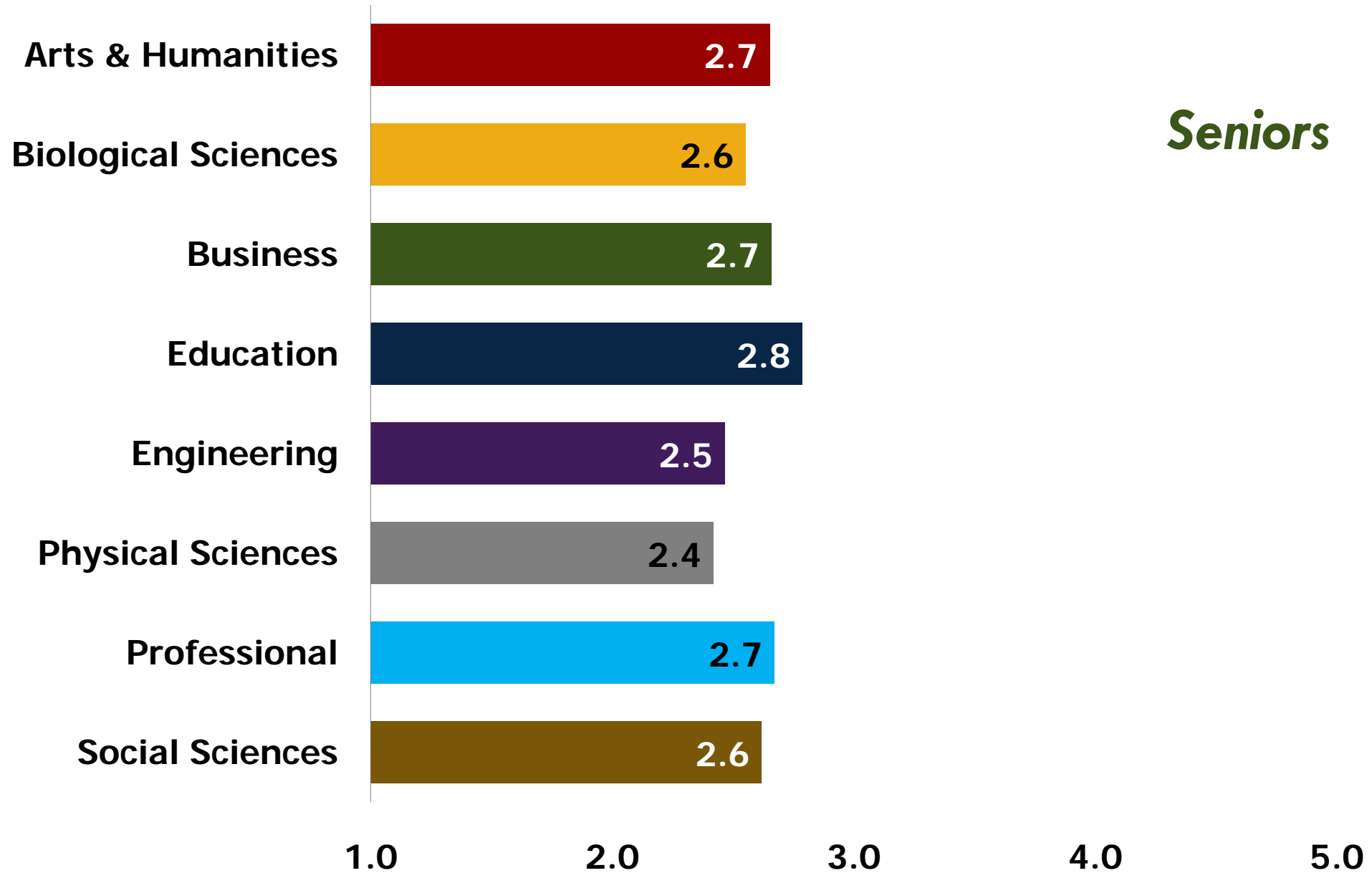
# Mean Differences in Explain Writing Expectations Clearly

*Seniors*



# Mean Differences in Encourage Interactive Writing Activities

*Seniors*



# The Relationship of Writing Practices to Deep Learning and Gains



# Deep Approaches to Learning

- **DAL Overall scale**  
(combination of 3 sub-scales)
- **Sub-Scales**
  - ▣ **Higher-order learning**
  - ▣ **Integrative learning**
  - ▣ **Reflective learning**

# Gains in Learning and Development



- **Practical Competencies**
- **Personal & Social Development**
- **General Education Learning**

# Writing and Deep Learning

## Results adjusting for student characteristics and writing amount

### *Dependent Variables*

**First-Year Students**

**Higher-Order  
Learning  
Activities**

**Integrative  
Learning  
Activities**

**Reflective  
Learning  
Activities**

### *Independent Variables*

**Encourage Interactive  
Writing Processes**

✓ ✓

✓ ✓ ✓

✓ ✓

**Assign Meaning-  
Constructing Writing Tasks**

✓ ✓ ✓

✓ ✓

✓ ✓

**Explain Writing  
Expectations Clearly**

✓ ✓

✓ ✓

✓ ✓

# Writing and Gains

**Results adjusting for student characteristics,  
writing amount, and deep learning**

*Dependent Variables*

**First-Year Students**

**Practical  
Competencies**

**Personal &  
Social**

**General  
Education**

*Independent Variables*

**Encourage Interactive  
Writing Processes**

✓ ✓

✓ ✓ ✓

✓ ✓

**Assign Meaning-  
Constructing Writing Tasks**

✓ ✓

✓ ✓

**Explain Writing  
Expectations Clearly**

✓ ✓

✓ ✓

✓ ✓ ✓

# Results Summary

- 1. Students experience writing to learn activities differently by major field.**
- 2. Best practices in using writing to learn are positively associated with deep learning approaches and reported gains in learning.**
- 3. These positive relationships exist above and beyond the *amount* of reading and writing students do.**

# Implications

- **First, note that our results all pertain to factors over which instructors have complete control**
  - ▣ Kind of projects they assign
  - ▣ Way they explain their assignments
  - ▣ Activities they require students to engage in while working on the assignments

# Implications

- You can tell faculty that they are more likely to achieve their goals if they do the following;
  - ▣ Assign meaning-making projects
  - ▣ Explain their expectations clearly
  - ▣ Include interactive activities in the writing process

*These practices are more effective when used in combination*

# Writing Opportunity B



- Write it as a statement you could present to your faculty in order to encourage them to take a practical action based on the finding.

# Example

- **Note to yourself**

**Mozart's music promotes recall; exams**

- **Statement to your faculty**

**You can help your students perform better on in-class exams by playing Mozart on a boom box while they are taking the exam. Research shows that Mozart's music promotes recall.**

# Share with one person



- **Read your statement aloud to him or her**
- **Listen while he or she reads to you**
- **After you have both read, suggest a way that your partner might increase the likelihood that faculty will act on the statement.**

# Findings from FSSE



# Goals

- Determine how much faculty emphasize good writing practices
- Find out which types of faculty emphasize good writing practices more
- Examining NSSE and FSSE together



# Data & Sample

- 46 institutions from FSSE 2009
- 2,995 faculty with writing assignments

- 51% Women
- 79% White faculty
- 70% With doctorate
- 13% PT Lect/Instr
- 11% FT Lect/Instr
- 76% Tenure track
- Average course load = 6

- 29% Arts & Humanities
- 6% Biological Sciences
- 9% Business
- 8% Education
- 3% Engineering
- 8% Physical Sciences
- 8% Professional Fields
- 16% Social Sciences
- 13% Other Fields

# Definition given to faculty

- **A writing assignment is...**
  - ▣ Collected from students to give a grade or feedback
  - ▣ Includes not only written papers, but also...
    - lab reports
    - posters
    - multimedia projects
    - PowerPoint presentations
    - web pages
    - and so on



## % Faculty WITHOUT Writing Assignments

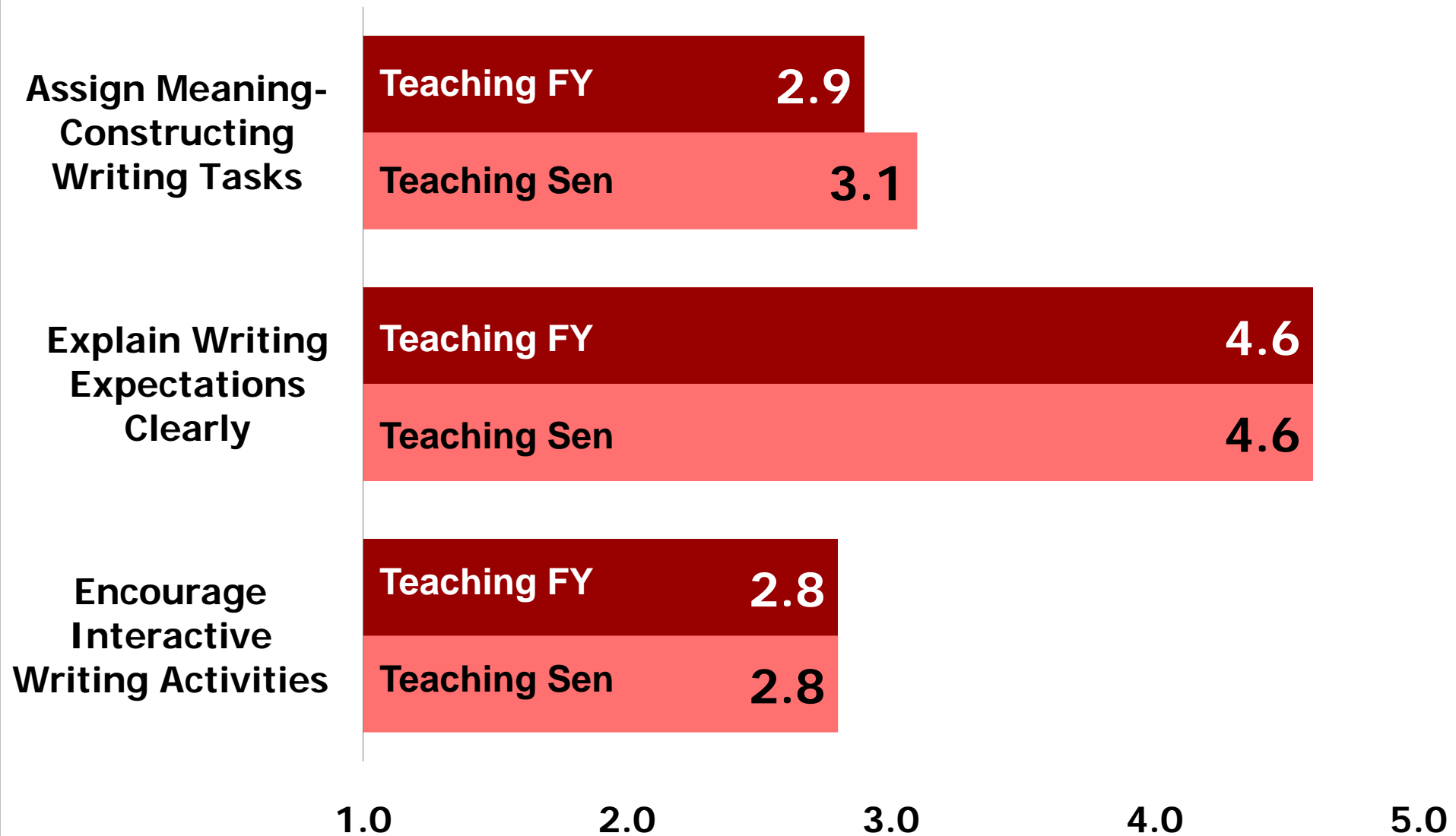
| <b>Disciplinary Area</b>     | <b>Teaching FY</b> | <b>Teaching Sen</b> |
|------------------------------|--------------------|---------------------|
| <b>Education</b>             | <b>4%</b>          | <b>2%</b>           |
| <b>Professional Fields</b>   | <b>6%</b>          | <b>8%</b>           |
| <b>Arts &amp; Humanities</b> | <b>10%</b>         | <b>6%</b>           |
| <b>Other Fields</b>          | <b>14%</b>         | <b>8%</b>           |
| <b>Business</b>              | <b>15%</b>         | <b>10%</b>          |
| <b>Social Sciences</b>       | <b>16%</b>         | <b>7%</b>           |
| <b>Biological Sciences</b>   | <b>18%</b>         | <b>14%</b>          |
| <b>Engineering</b>           | <b>27%</b>         | <b>22%</b>          |
| <b>Physical Sciences</b>     | <b>42%</b>         | <b>32%</b>          |

# Encouraging Good Writing

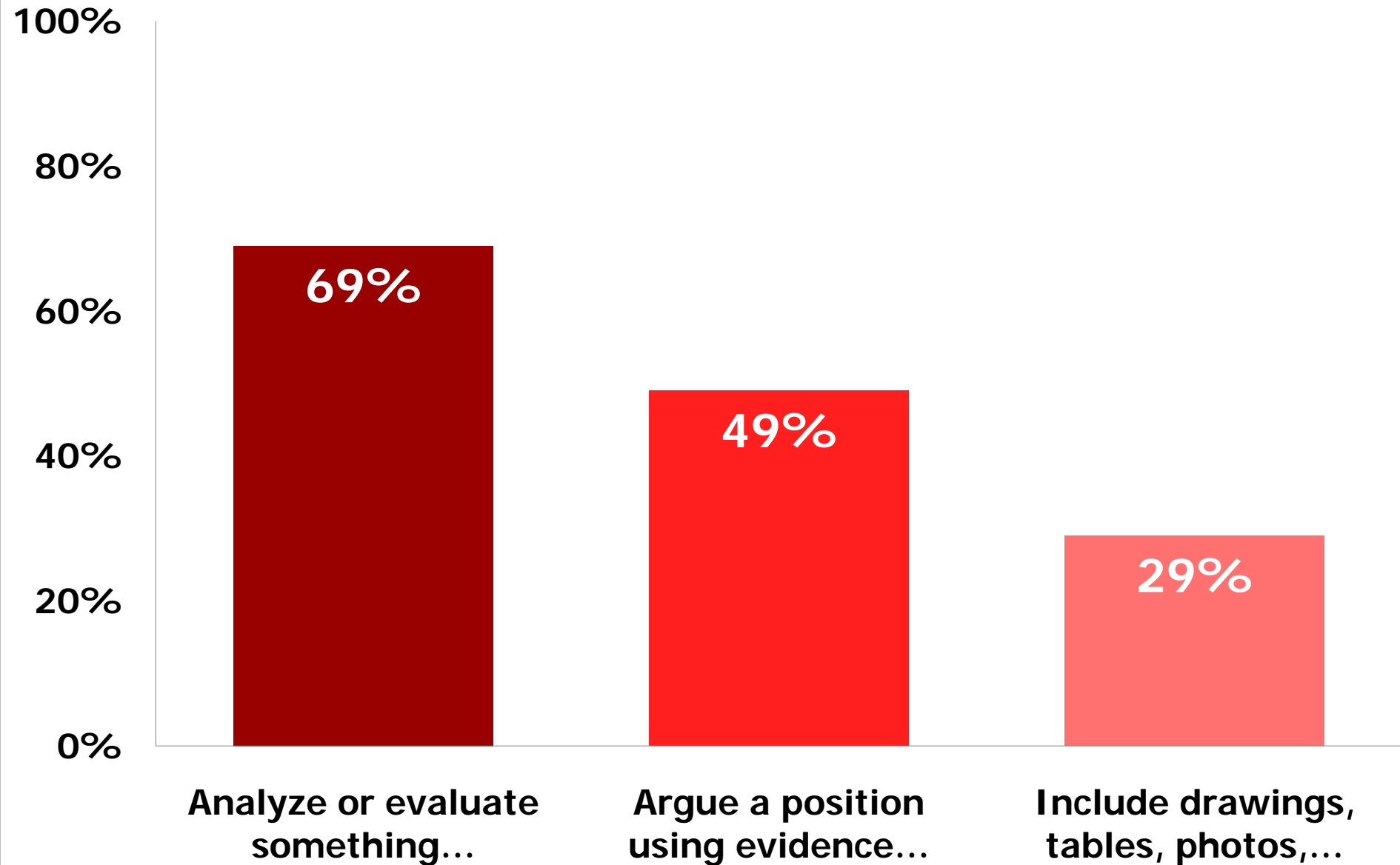
- **Assign Meaning-Constructing Writing Tasks**
  - ▣ 7-items;  $\alpha_{\text{FSSE}} = 0.68$
- **Explain Writing Expectations**
  - ▣ 3-items;  $\alpha_{\text{FSSE}} = 0.72$
- **Encourage Interactive Writing Activities**
  - ▣ 6-items;  $\alpha_{\text{FSSE}} = 0.79$



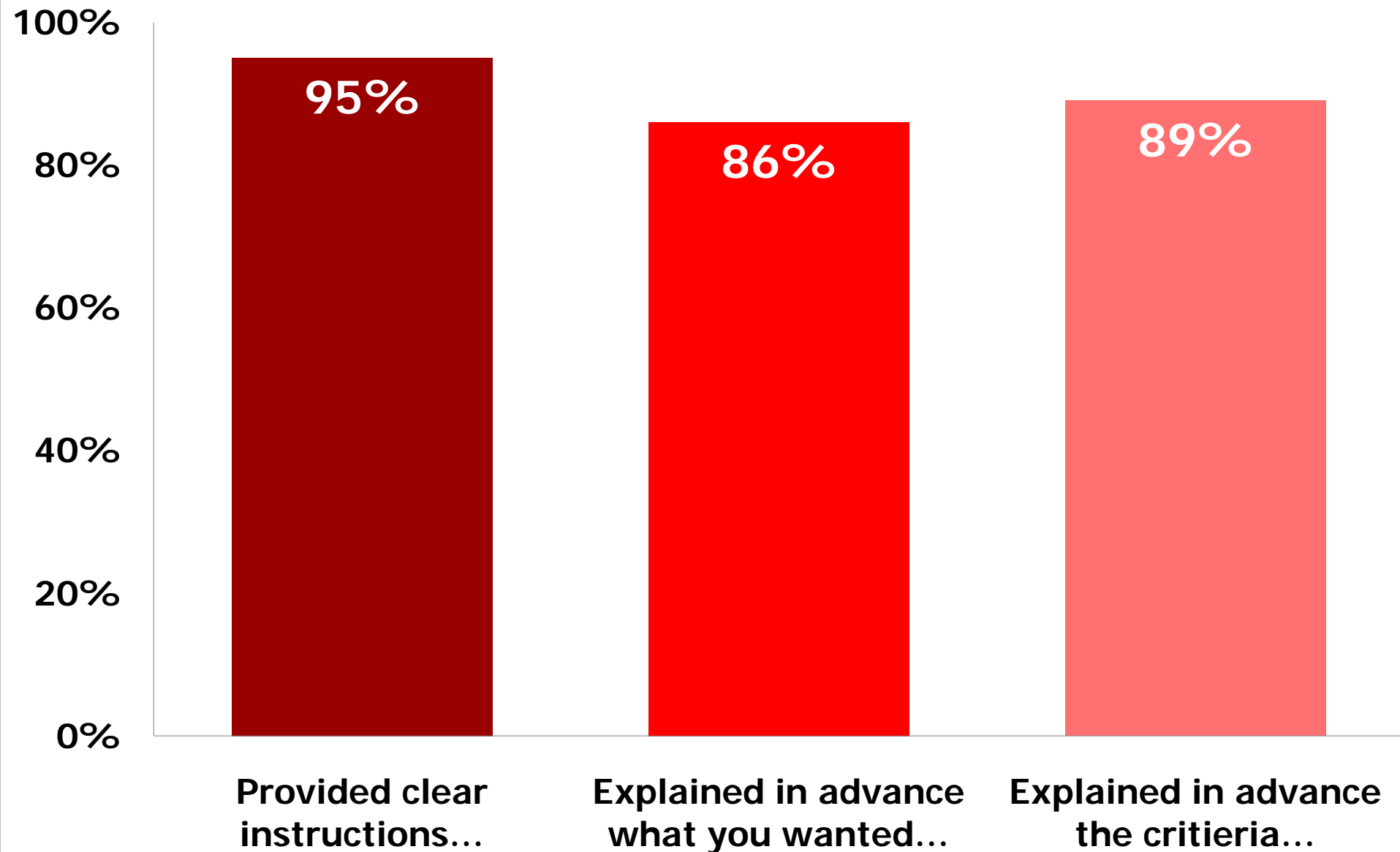
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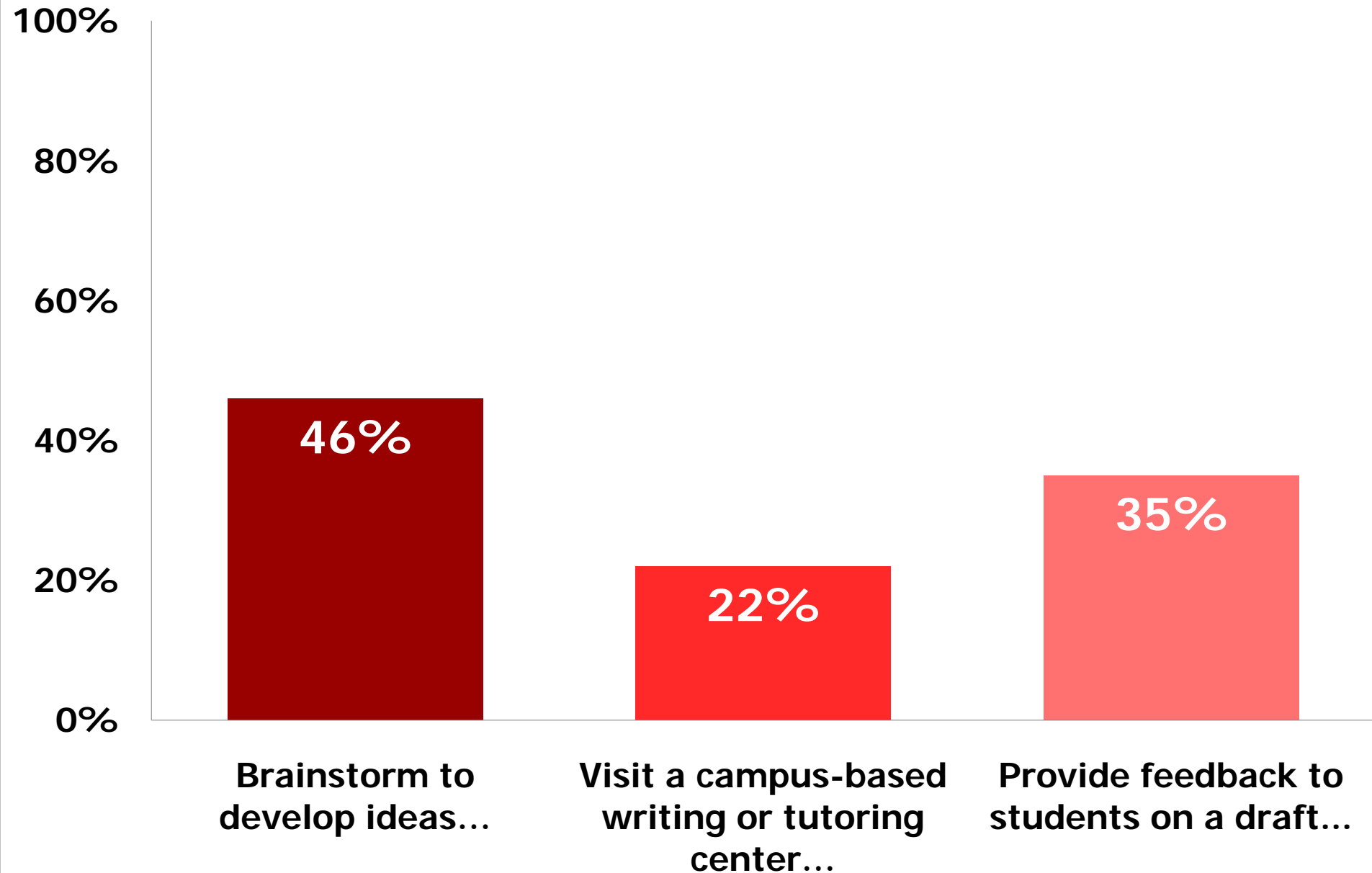
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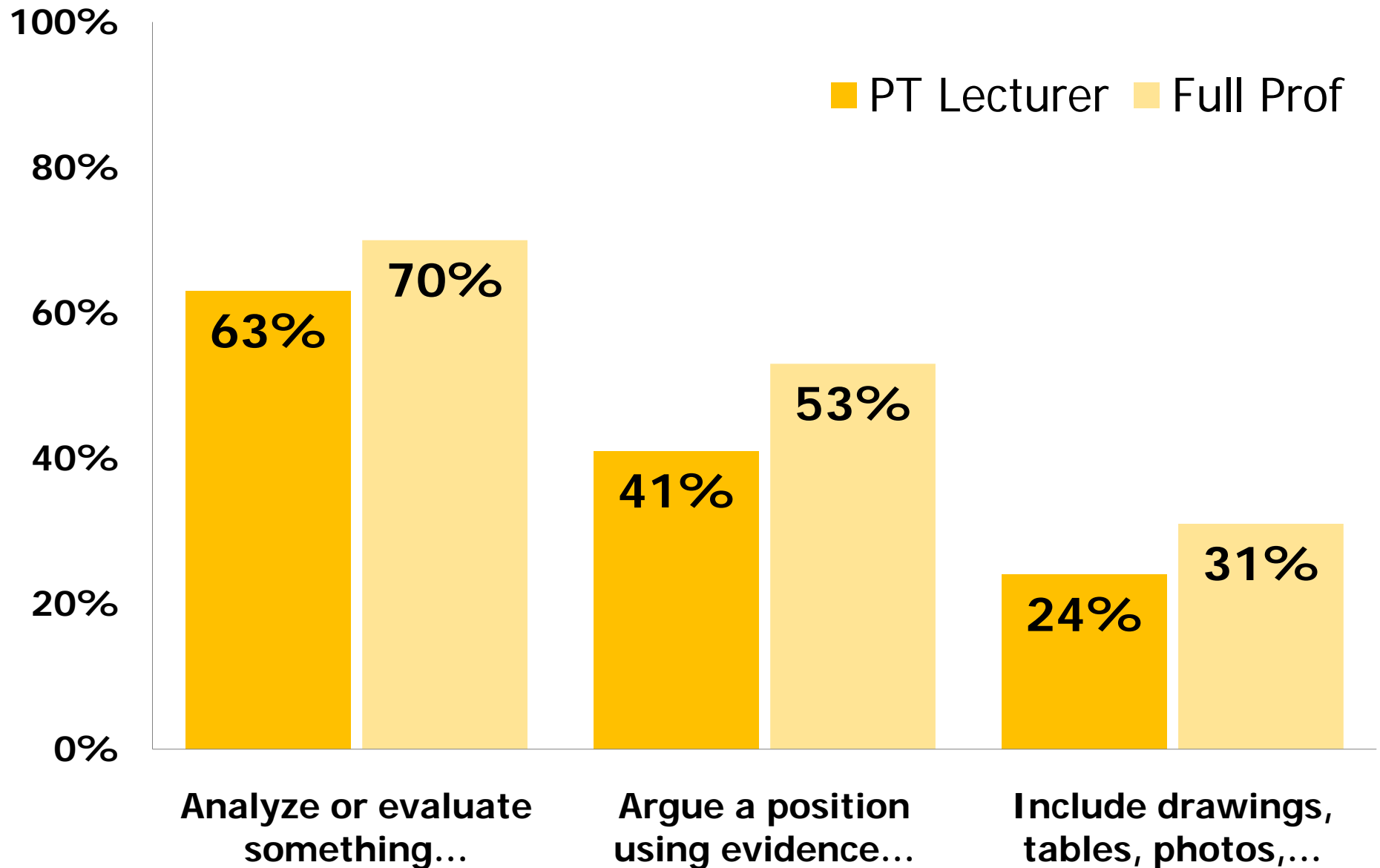
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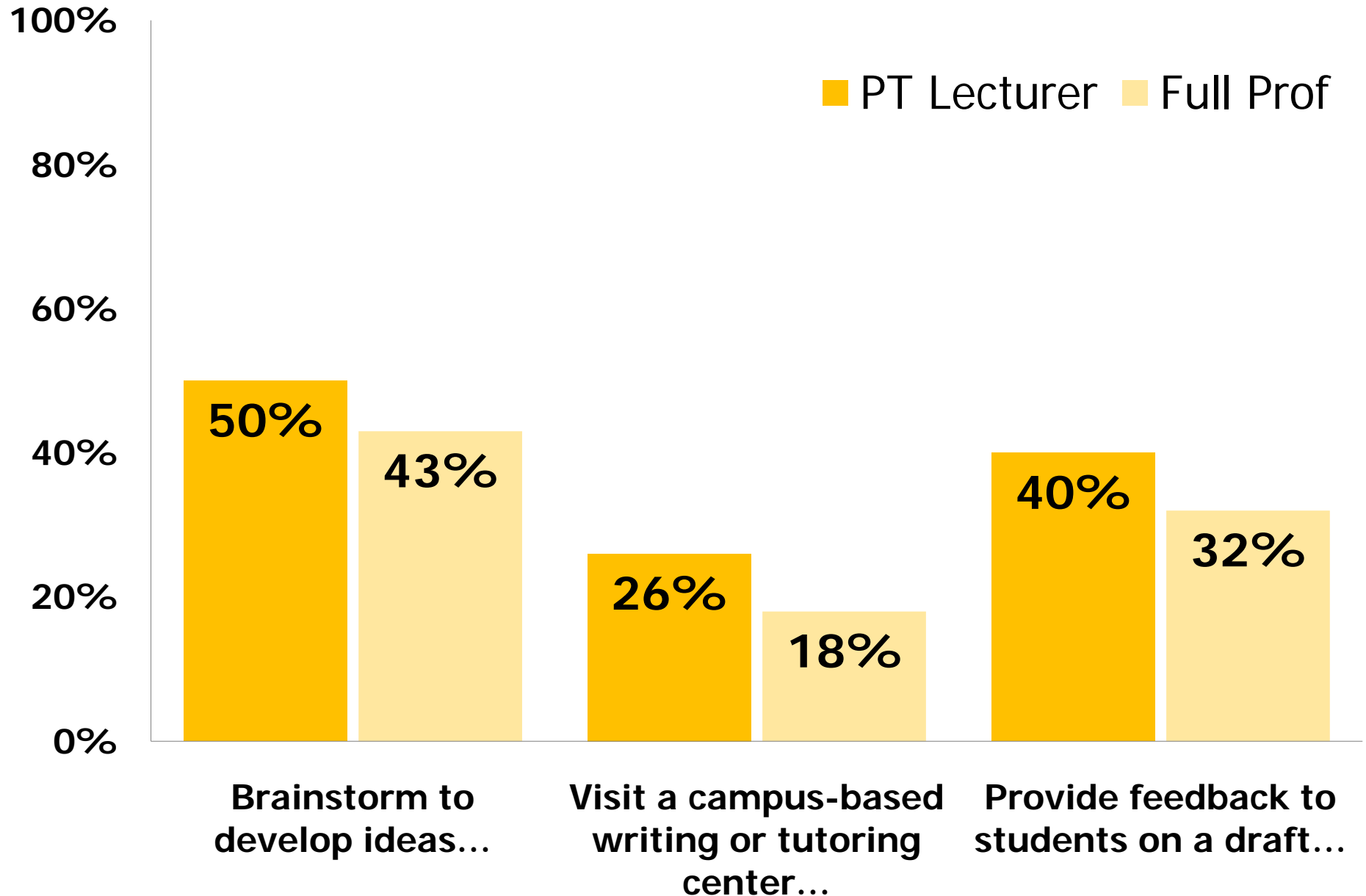
# Differences by Gender, Rank/Employment Status, and Field



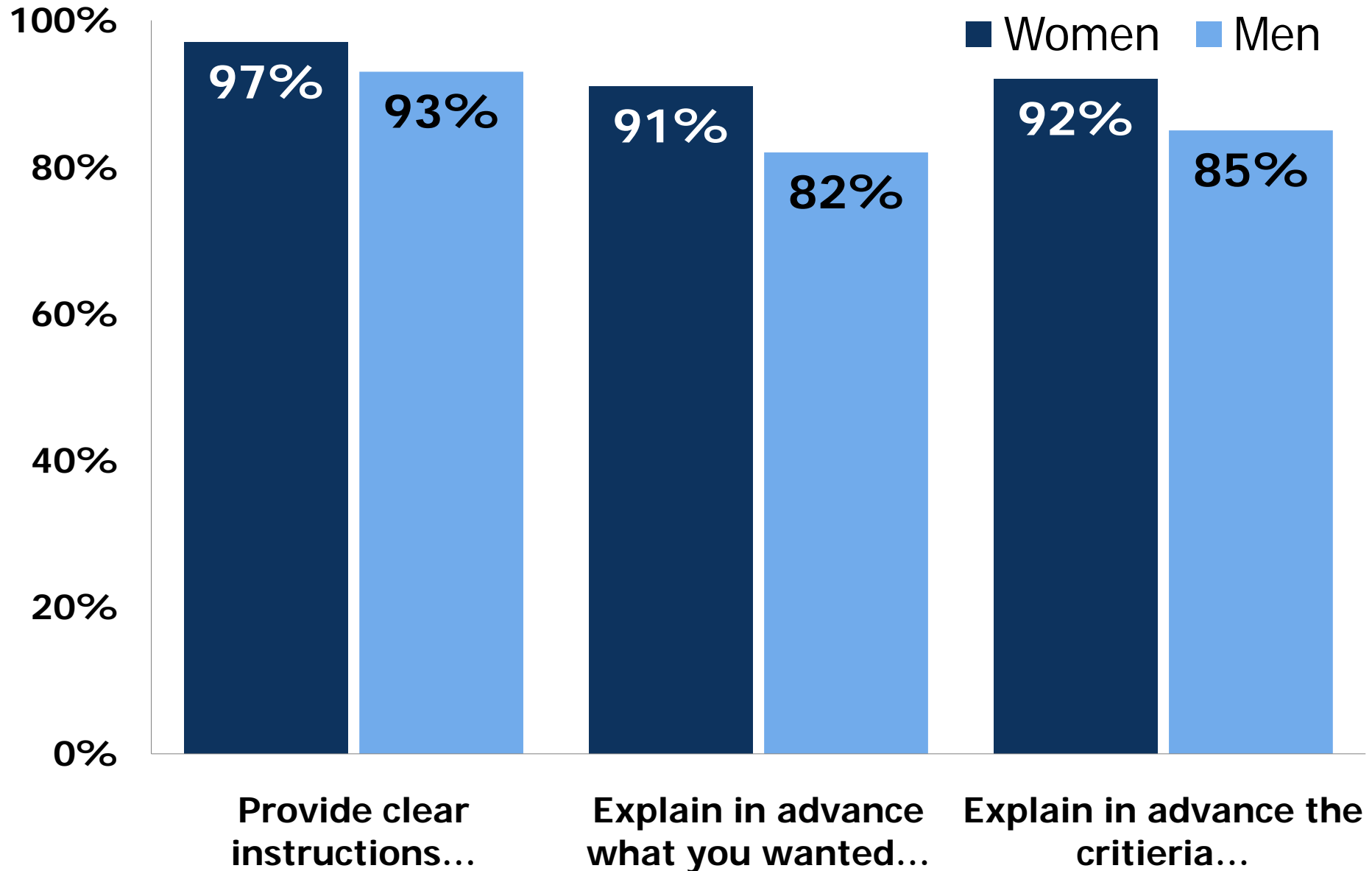
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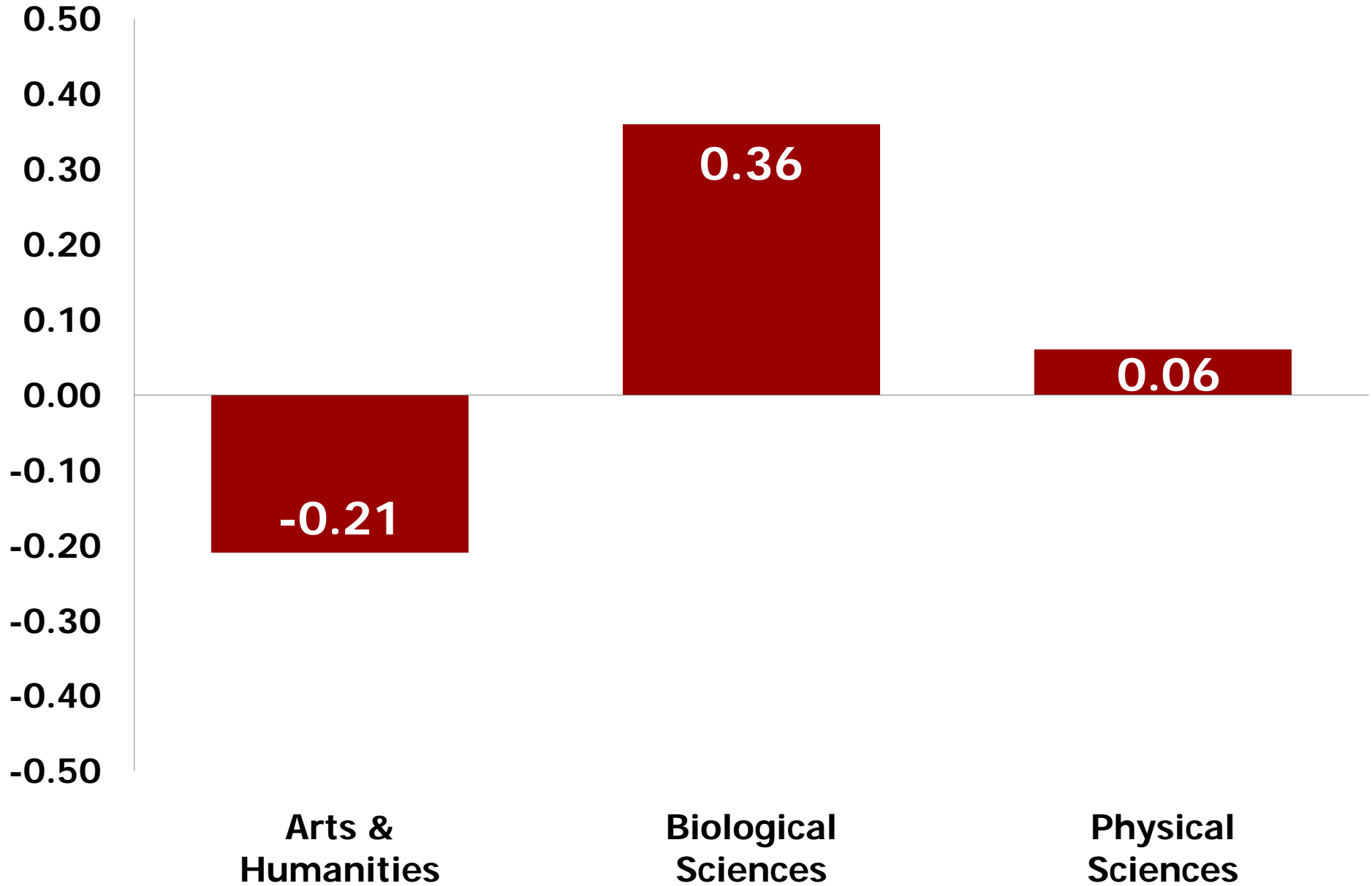
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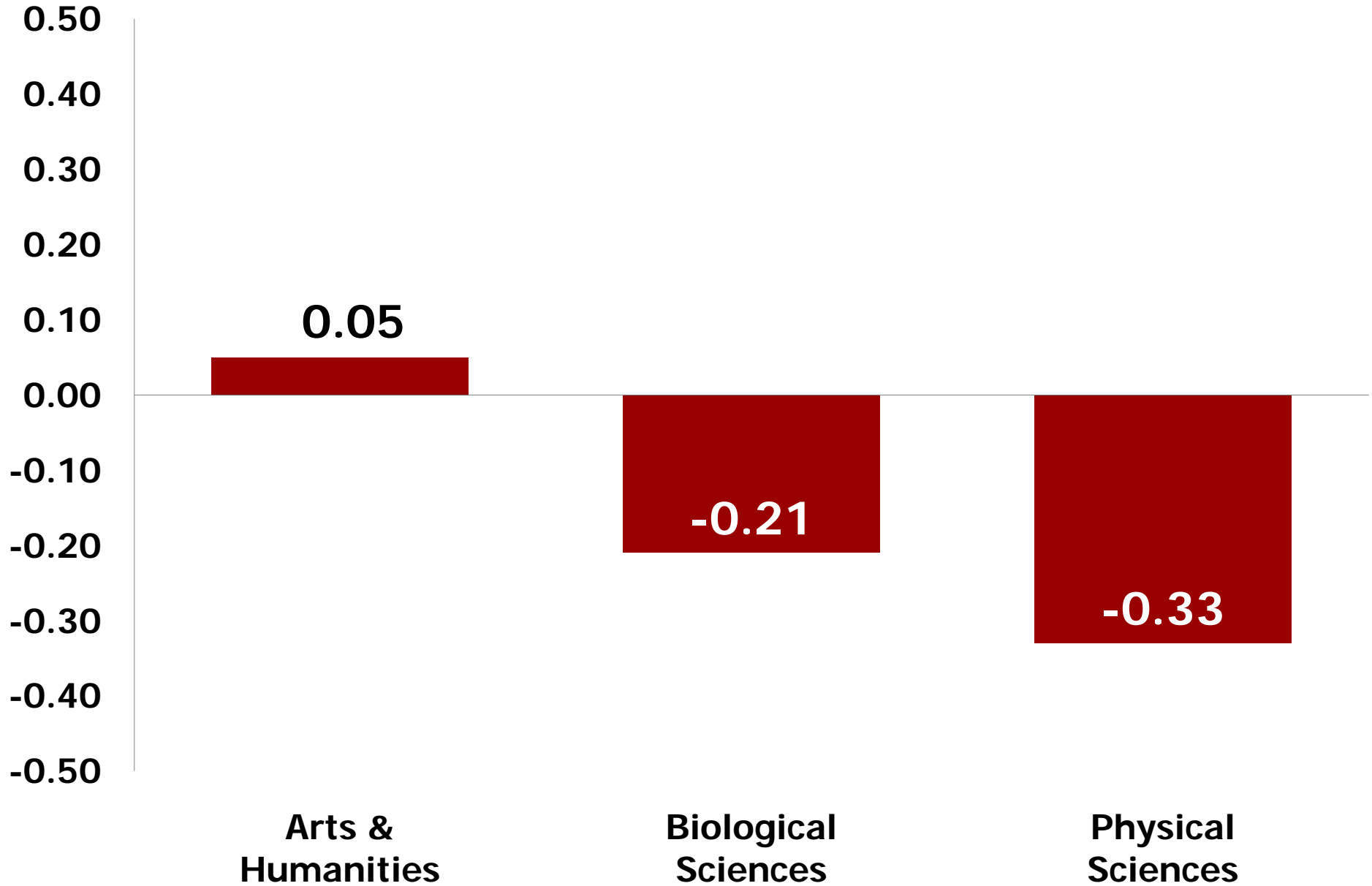
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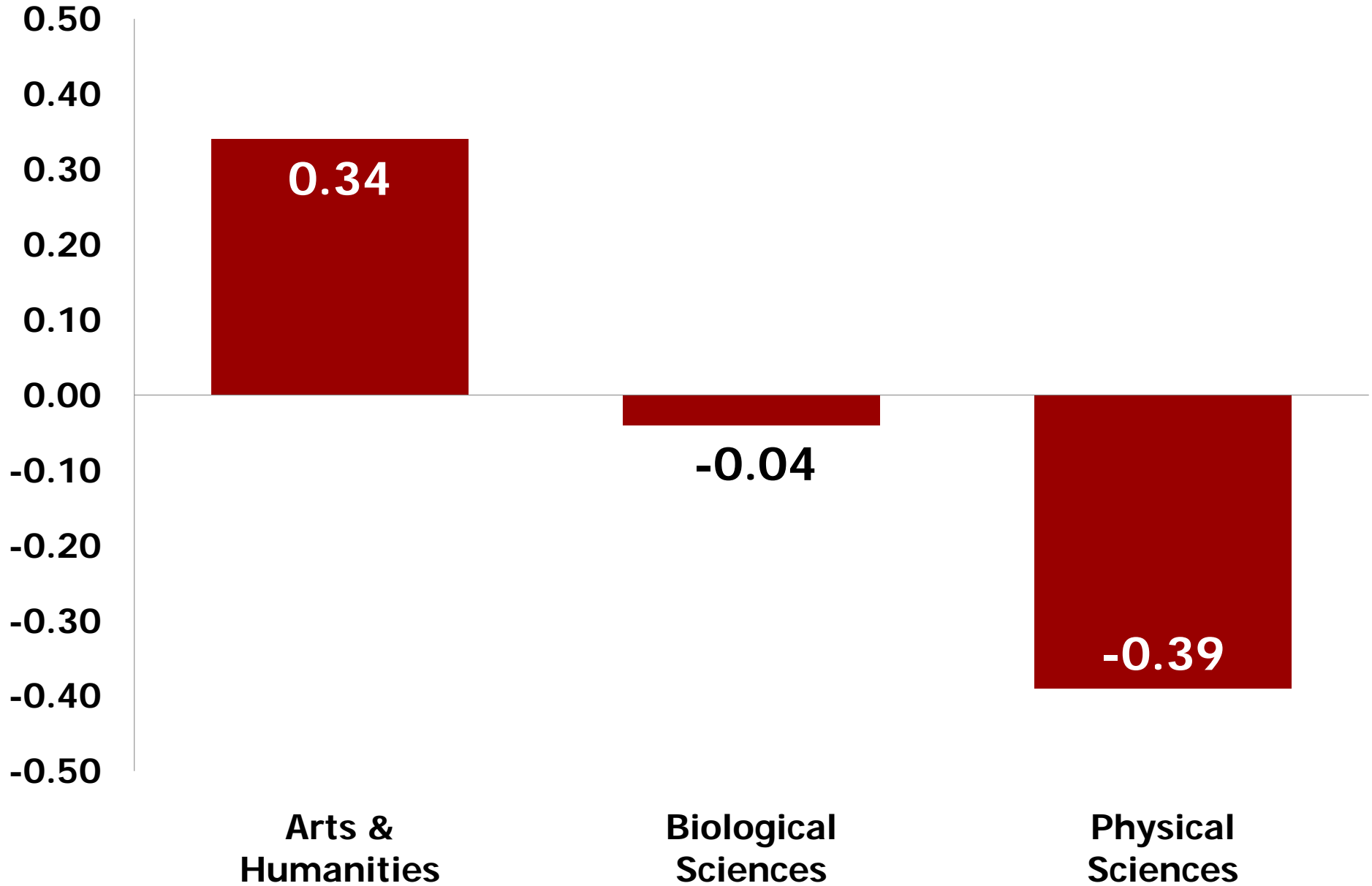
# Mean Differences in Assign Meaning-Constructing Writing Tasks



# Mean Differences in Explain Writing Expectations Clearly



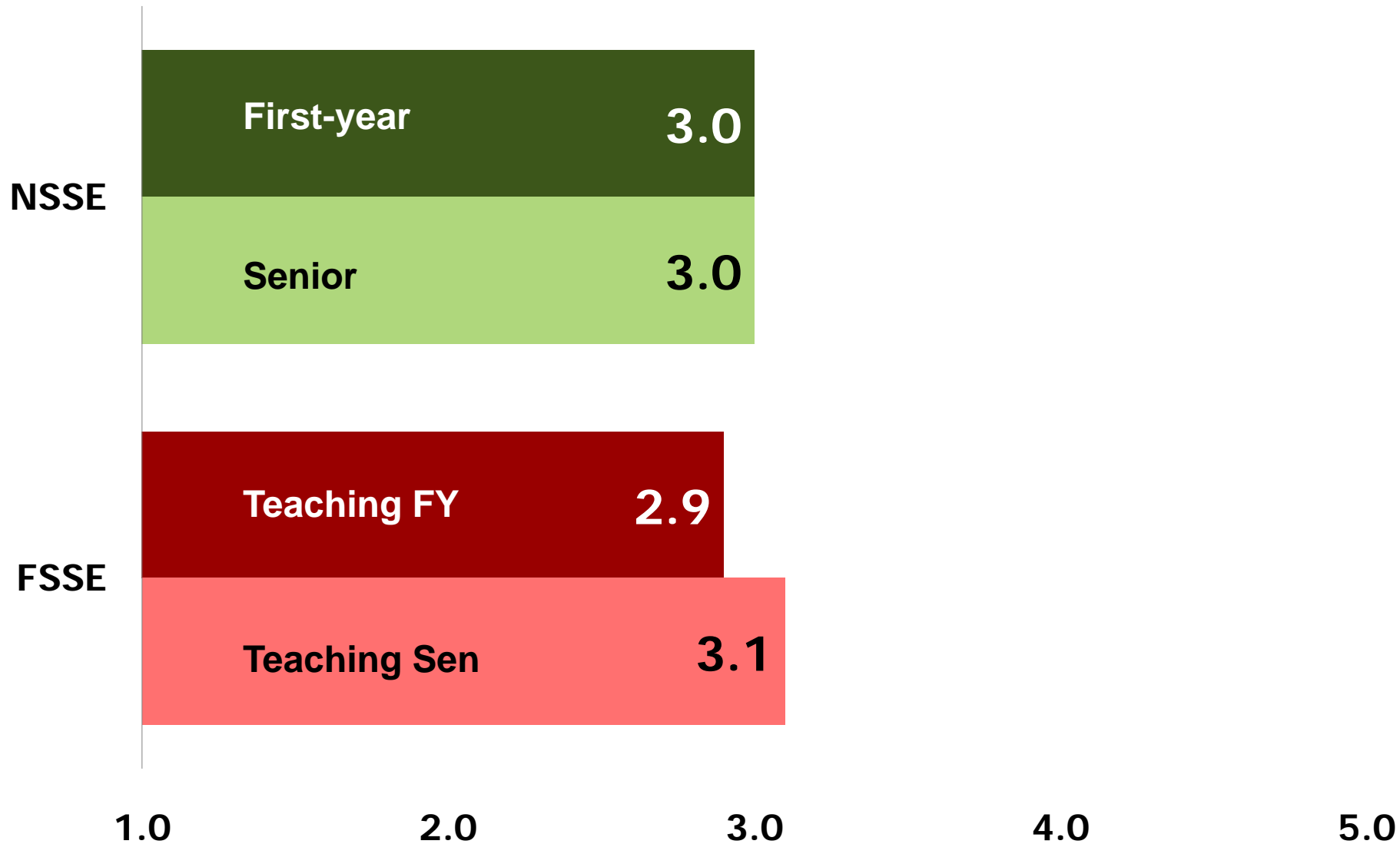
# Mean Differences in Encourage Interactive Writing Activities



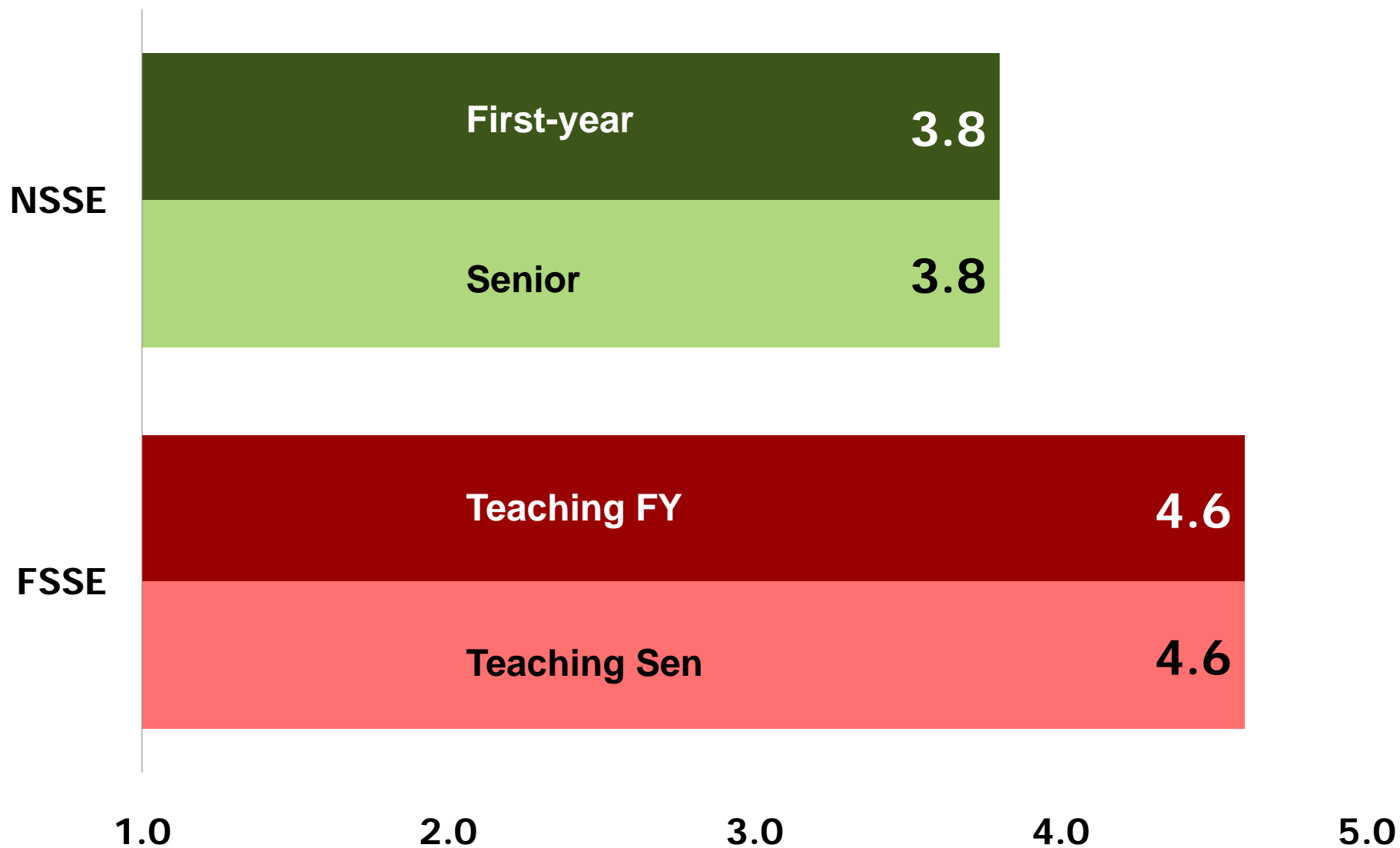
# Looking at students and faculty together



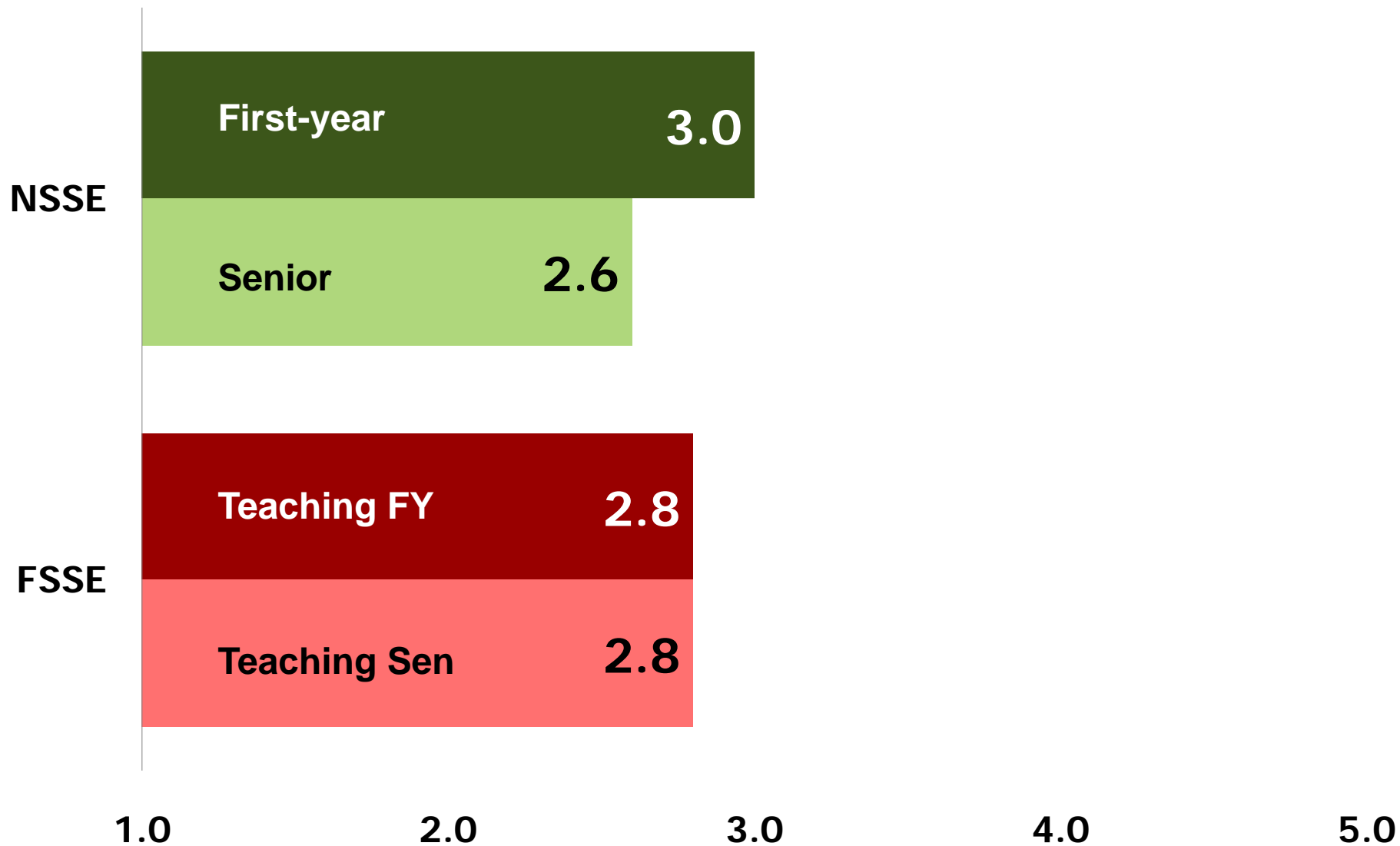
# Mean Values for Assign Meaning-Constructing Writing Tasks



# Mean Values for Explain Writing Expectations Clearly



# Mean Values for Encourage Interactive Writing Activities



# How institutional leaders can use these findings



# Actionable conclusions



- **Increase student learning through writing**
- **Realize greatest gains with more use of . . .**
  - ▣ Meaning-constructing assignments
  - ▣ Interactive writing processes

# Actions you can take

- **Reposition writing**
- **Refocus from amount of writing to kind**
- **Encourage more writing**
- **Target efforts on certain disciplines**
- **Focus on writing in the majors**
  - Advanced writing as a transition
  - Writing outcomes for programs
  - Develop a progressive approach to writing

# Keeping costs low



- **Motivating**
  - Shift rationale
  - Use local data
- **Use existing resources**
- **Faculty development resources**
  - Person down the hall
  - Willing first adopters
  - Encourage local studies
- **Offer low-cost incentives**

# Obtaining Money



- **Gifts**
- **Grants**

Please write . . .



# Thank you

- **Bob Gonyea & Tom Nelson Laird**
  - ▣ Indiana University Center for Postsecondary Research
  - ▣ [www.nsse.iub.edu](http://www.nsse.iub.edu)
  - ▣ [nsse@indiana.edu](mailto:nsse@indiana.edu)
- **Paul Anderson**
  - ▣ Howe Center for Writing Excellence
  - ▣ Miami University, Ohio
  - ▣ [anderspv@muohio.edu](mailto:anderspv@muohio.edu)