2017 CIRP Freshman Survey
CIRP Construct Reports
First-time, Full-time Freshmen

Miami University-Oxford

Comparison group 1: Public Universities - high
Comparison group 2: Public Universities
CIRP Constructs are designed to capture the experiences and outcomes of students across various institutions, often in a complex and multifaceted manner. To measure these experiences more accurately, we use Item Response Theory (IRT) to combine individual survey items into global measures that capture these experiences. CIRP Constructs are more than a simple summation of related items; IRT uses response patterns to derive construct score estimates while simultaneously giving greater weight in the estimation process to survey items that tap into the construct more directly. This results in more accurate construct scores. Constructs are particularly useful for benchmarking. They allow you to determine if your institution's experiences and outcomes differ from those of a comparison group. Two reports are generated for each CIRP Construct. The Mean Score Report shows comparative information based on the mean score of a construct. The Percentage Report shows comparative information based on the percentage of students who score in the high, average, and low score groups of a construct. We suggest you use the report that best fits your needs as an institution. Both CIRP Construct reports are generated for first-time, full-time freshmen, which we define as those respondents who first entered college in 2014 and are currently enrolled full-time.

For more information about IRT and the CIRP Construct development process, see the CIRP Constructs Technical Report at www.heri.ucla.edu

How to Read the CIRP Construct Percentage Report

Survey Items and Estimation "Weights" – The survey items used in the creation of the CIRP Construct are presented in the order in which they contribute to the construct along with the estimation weights generated in IRT. Items that tap into a trait more effectively are given greater weight in the estimation process.

Charts – CIRP Constructs are scored on a z-score metric and rescaled for a mean of approximately 50 and standard deviation of 10. The Low, Average, and High construct score group percentages are reported here. The "Low" score group represents students who are one-half standard deviation below the mean. The "Average" score group represents students whose scores are within one-half standard deviation of the mean. The "High" score group represents students who are one-half standard deviation or more above the mean.

Survey Items and Estimation "Weights"

Rate yourself on each of the following traits as compared with the average person your age:

* Academic ability (3.52)
* Self-confidence - Intellectual (1.22)
* Drive to achieve (0.95)
* Mathematical ability (1.32)

CIRP Construct Definition – Summarizes the theoretical rationale for creating the construct.

Comp 1 – The first comparison group is based on your institution’s type, control, and selectivity.

Comp 2 – The second comparison group is based on your institution’s type and control.

Statistical Significance – uses a proportional difference test to examine the difference between the percentage of students in the high score group for your institution and the percentage of students in the high score group in the comparison group. Differences larger than what would be expected by chance are noted with one, two, or three stars, which correspond to the three standard levels of significance (*p<.05, **p<.01, ***p<.001). Statistical significance measures the extent to which a difference is occurring by chance, not the extent to which a difference is practically important. Large sample sizes (like those in the comparison groups) tend to generate statistical significance even though the magnitude of the difference might be small and not practically important. Unlike the means scores report, in this case there are no effect size calculations to guide you in determining practical importance when comparing proportional differences.
Habits of Mind - is a unified measure of the behaviors and traits associated with academic success. These learning behaviors are seen as the foundation for lifelong learning.

Survey items and estimation "weights":

How often in the past year did you:

- Seek solutions to problems and explain them to others (1.99)
- Support your opinions with a logical argument (1.74)
- Seek alternative solutions to a problem (1.61)
- Evaluate the quality or reliability of information you received (1.58)
- Explore topics on your own, even though it was not required for a class (1.27)
- Seek feedback on your academic work (1.24)
- Ask questions in class (1.20)
- Look up scientific research articles and resources (1.05)
- Revise your papers to improve your writing (1.04)
- Take a risk because you feel you have more to gain (1.03)
- Accept mistakes as part of the learning process (0.95)
2017 CIRP Freshman Survey
First-time, Full-time Freshmen

Academic Self-Concept

CIRP Construct Percentage Report

**Academic Self-Concept** - is a unified measure of students’ beliefs about their abilities and confidence in academic environments.

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<thead>
<tr>
<th>Miami University-Oxford</th>
<th>Total (n)</th>
<th>Men</th>
<th>Women</th>
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<tbody>
<tr>
<td></td>
<td>Your Inst</td>
<td>Comp 1</td>
<td>Comp 2</td>
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<tr>
<td>Total</td>
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<tr>
<td>High Academic Self-Concept</td>
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<td>Average Academic Self-Concept</td>
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<tr>
<td>Low Academic Self-Concept</td>
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Significance (based on High score group)

Note: Significance * p<.05, ** p<.01, *** p<.001

Survey items and estimation "weights":

Rate yourself on each of the following traits as compared with the average person your age:

* Academic ability (3.52)
* Mathematical ability (1.32)
* Self-confidence - intellectual (1.22)
* Drive to achieve (0.95)
Social Self-Concept - is a unified measure of students' beliefs about their abilities and confidence in social situations.

Survey items and estimation *weights*:
Rate yourself on each of the following traits as compared with the average person your age:
* Self-confidence - social (2.33)
* Leadership ability (1.96)
* Public speaking ability (1.68)
**Pluralistic Orientation** - measures skills and dispositions appropriate for living and working in a diverse society.

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<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>Your Inst</td>
<td>Comp 1</td>
<td>Comp 2</td>
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<tr>
<td>Total (n)</td>
<td>2,328</td>
<td>18,542</td>
<td>40,591</td>
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<tr>
<td>High Pluralistic Orientation</td>
<td>26.4%</td>
<td>31.5%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Average Pluralistic Orientation</td>
<td>48.3%</td>
<td>46.6%</td>
<td>44.1%</td>
</tr>
<tr>
<td>Low Pluralistic Orientation</td>
<td>25.3%</td>
<td>21.8%</td>
<td>22.6%</td>
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Significance (based on High score group):
- * p<.05, ** p<.01, *** p<.001

**Survey items and estimation "weights":**
- Rate yourself on each of the following traits as compared with the average person your age:
  - * Ability to work cooperatively with diverse people (2.39)
  - * Tolerance of others with different beliefs (2.35)
  - * Openness to having my own views challenged (2.13)
  - * Ability to discuss and negotiate controversial issues (2.03)
  - * Ability to see the world from someone else's perspective (1.78)
Social Agency - measures the extent to which students value political and social involvement as a personal goal.

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<td>Total (n)</td>
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<tr>
<td>High Social Agency</td>
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<td>Average Social Agency</td>
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<td>Low Social Agency</td>
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Significance (based on High score group)

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Survey items and estimation *weights*:

- Participating in a community action program (2.42)
- Helping to promote racial understanding (2.05)
- Becoming a community leader (2.01)
- Influencing social values (1.58)
- Helping others who are in difficulty (1.36)
- Keeping up to date with political affairs (1.35)
Civic Engagement - measures the extent to which students are motivated and involved in civic, electoral, and political activities.

Survey items and estimation "weights":
- Indicate activities you did in the past year:
  * Demonstrated for a cause (e.g., boycott, rally, protest) (1.46)
  * Publicly communicated my opinion about a cause (e.g., blog, email, petition) (1.35)
  * Helped raise money for a cause or campaign (1.11)
  * Performed volunteer work (0.80)

- Indicate the importance to you personally of each of the following:
  * Influencing social values (0.97)
  * Keeping up to date with political affairs (0.86)
### College Reputation Orientation

- **College Reputation Orientation** measures the degree to which students value academic reputation and future career potential as a reason for choosing this college.

#### Miami University-Oxford

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<td></td>
<td>Your Inst</td>
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<td>Comp 2</td>
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<tr>
<td>Total (n)</td>
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<tr>
<td>High College Reputation Orientation</td>
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<tr>
<td>Average College Reputation Orientation</td>
<td>40.0%</td>
<td>38.6%</td>
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<tr>
<td>Low College Reputation Orientation</td>
<td>20.4%</td>
<td>17.4%</td>
<td>30.3%</td>
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#### Significance (based on High score group)

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**Note:** Significance * p<.05, ** p<.01, *** p<.001

#### Survey items and estimation "weights":

- **How important was each reason in your decision to come here?**
  - * This college’s graduates get good jobs (6.11)
  - * This college’s graduates gain admission to top graduate/professional schools (2.50)
  - * This college has a very good academic reputation (1.54)
## 2017 CIRP Freshman Survey
First-time, Full-time Freshmen
Likelihood of College Involvement
CIRP Construct Percentage Report

### Likelihood of College Involvement
- is a unified measure of students' expectations about their involvement in college life generally.

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<tr>
<td></td>
<td>Your Inst</td>
<td>Comp 1</td>
<td>Comp 2</td>
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<tr>
<td>Total (n)</td>
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<td>15,262</td>
<td>33,012</td>
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<tr>
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<td>36.6%</td>
<td>41.2%</td>
<td>30.3%</td>
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<tr>
<td>Average Likelihood of College Involvement</td>
<td>44.5%</td>
<td>43.0%</td>
<td>42.5%</td>
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<tr>
<td>Low Likelihood of College Involvement</td>
<td>18.8%</td>
<td>15.7%</td>
<td>27.3%</td>
</tr>
</tbody>
</table>

**Significance (based on High score group)**
- - * ***

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Note: Significance * p<.05, ** p<.01, *** p<.001

### Survey items and estimation "weights":
What is your best guess as to the chances that you will:

* Participate in student clubs/groups (3.25)
* Participate in volunteer or community service work (1.58)
* Socialize with someone of another racial/ethnic group (1.28)
* Participate in a study abroad program (1.24)
* Participate in student government (0.96)
Science Self-Efficacy: A measure of students' confidence in their ability to conduct scientific research

### Miami University-Oxford

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<tbody>
<tr>
<td></td>
<td>2,222</td>
<td>17,960</td>
<td>39,374</td>
<td>1,084</td>
<td>8,176</td>
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<td>29.4%</td>
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<td>34.6%</td>
<td>31.1%</td>
<td>20.9%</td>
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<tr>
<td>Average Science Self-Efficacy</td>
<td>49.3%</td>
<td>48.7%</td>
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<td>52.7%</td>
<td>48.4%</td>
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<tr>
<td>Low Science Self-Efficacy</td>
<td>27.5%</td>
<td>21.9%</td>
<td>25.8%</td>
<td>21.8%</td>
<td>17.0%</td>
<td>20.9%</td>
<td>33.0%</td>
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Significance (based on High score group)

- ** * * * *

Note: Significance * p<.05, ** p<.01, *** p<.001

### Survey items and estimation "weights"

- **How confident are you that you can:**
  - Use technical science skills (use of tools, instruments, and/or techniques) (1.48)
  - Generate a research question (2.33)
  - Determine how to collect appropriate data (2.82)
  - Explain the results of a study (2.87)
  - Use scientific literature to guide research (2.70)
  - Integrate results from multiple studies (2.79)
  - Ask relevant questions (1.73)
  - Identify what is known and not known about a problem (1.95)
  - Understand scientific concepts (2.40)
  - See connections between different areas of science and mathematics (1.90)
### Science Identity: The extent to which students conceive of themselves as scientists

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<th>Comp 1</th>
<th>Comp 2</th>
<th>Your Inst</th>
<th>Comp 1</th>
<th>Comp 2</th>
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<tbody>
<tr>
<td>Total</td>
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<td>34,509</td>
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<td>827</td>
<td>7,242</td>
<td>15,482</td>
<td>889</td>
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<tr>
<td>High Science Identity</td>
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<td>45.4%</td>
<td>38.3%</td>
<td></td>
<td>22.6%</td>
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<td>41.6%</td>
<td>18.9%</td>
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<tr>
<td>Average Science Identity</td>
<td>39.6%</td>
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<td>39.3%</td>
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<tr>
<td>Low Science Identity</td>
<td>39.7%</td>
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<td>23.2%</td>
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<td>33.3%</td>
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<td>19.1%</td>
<td>45.8%</td>
<td>22.0%</td>
<td>26.9%</td>
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Significance (based on High score group)

- *** *** - *** *** - *** ***

Note: Significance * p<.05, ** p<.01, *** p<.001

#### Survey items and estimation "weights":

To what extent are the following statements true of you:

- I have a strong sense of belonging to the community of scientists (3.52)
- I derive great personal satisfaction from working on a team that is doing important research (1.78)
- I think of myself as a scientist (5.53)
- I feel like I belong in the field of science (4.43)