Critical Thinking Skills Among Hope College Students

Frost Center Friday
March 10, 2023
Agenda

● What is critical thinking?
● Why measure critical thinking?
● How we measure critical thinking
● Results
  ○ Heighten Critical Thinking Assessment
  ○ National Survey of Student Engagement (NSSE)
● Next Steps with current results
● Discussion, conversation, questions
What is Critical Thinking?

Making reasoned judgements and arguments

**Analysis:** examine - understand - explain

**Synthesis:** compare - contrast - classify - divide
Why do we measure critical thinking?

Anchor Plan Learning Outcome 5:
Analyze evidence or data to solve problems, reach informed conclusions or make sound judgments

Program Learning Outcomes:
Critical thinking within academic disciplines
Common Learning Outcome 1:
Think critically and communicate clearly

Common Learning Outcome 4:
Integrate knowledge, experience, and purpose

Our Mission:
. . . to educate students for lives of leadership and service in a global society through academic and co-curricular programs of recognized excellence in the liberal arts and in the context of the historic Christian faith.
STUDENT LEARNING OUTCOMES

The mission of Hope College is to educate students for lives of leadership and service in a global society through academic and cocurricular programs of recognized excellence in the liberal arts and in the context of the historic Christian faith.

COMMON LEARNING OUTCOMES

- Think critically and communicate clearly
- Approach knowledge with a liberal arts foundation
- Engage in intensive study
- Integrate knowledge, experience, and purpose
- Demonstrate cultural awareness and competency

ANCHOR PLAN

Examine fundamental or emerging questions about humanity, the natural world, or God by seeking answers through different modes of inquiry

Reflect on the diverse perspectives, cultures and historical experiences of people in the United States and the world

Practice Hope College’s Virtues of Public Discourse: humility to listen, hospitality to welcome, patience to understand, courage to challenge, honesty to speak the truth in love

Demonstrate an ability to communicate to a specific audience by employing multiple approaches media or languages

Analyze evidence or data to solve problems, reach informed conclusions or make sound judgements

Understand key tenets of the historic Christian faith

Explain their own values, commitments and convictions

ACADEMIC PROGRAMS

Program Learning Outcomes

Course Learning Outcomes

COCURRICULAR PROGRAMS

Program Learning Outcomes

Learn more about Hope student learning outcomes at hope.edu/assessment
# How Hope measures critical thinking

<table>
<thead>
<tr>
<th><strong>Approach</strong></th>
<th><strong>Measure</strong></th>
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<tbody>
<tr>
<td><strong>Formative</strong> (how)</td>
<td><strong>Direct</strong> (test/student work)</td>
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<tr>
<td>Heighten Critical Thinking Assessment</td>
<td>Heighten Critical Thinking Assessment</td>
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<tr>
<td><strong>Summative</strong> (how much)</td>
<td><strong>Indirect</strong> (survey)</td>
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<tr>
<td>Heighten Critical Thinking Assessment</td>
<td>National Survey of Student Engagement (NSSE)</td>
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<td>National Survey of Student Engagement (NSSE)</td>
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Critical Thinking - Measurements

Heighten Critical Thinking Assessment

- Overall critical thinking score
- Analytic and synthetic skills scores
Heighten Critical Thinking

Overall Scaled

![Bar Chart](2022 and 2023 comparison)

- **2022**: Hope College (Orange) & Comparison (Dark Blue)
- **2023**: Hope College (Orange) & Comparison (Dark Blue)

*Preliminary Data
Heighten Critical Thinking

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
<th>2023*</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Hope College</td>
<td>Comparison</td>
</tr>
<tr>
<td>Advanced</td>
<td>33%</td>
<td>20%</td>
</tr>
<tr>
<td>Proficient</td>
<td>46%</td>
<td>54%</td>
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<tr>
<td>Developing</td>
<td>12%</td>
<td>43%</td>
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*Preliminary Data
Heighten Critical Thinking

Analytic

![Bar chart showing comparison between Hope College and Comparison in Analytic category for the years 2022 and 2023.]

Synthetic

![Bar chart showing comparison between Hope College and Comparison in Synthetic category for the years 2022 and 2023.]

*Preliminary Data
Critical Thinking - Heighten

Hope Senior Strengths (2022)

- 79% were either advanced or proficient
  - Benchmark group: 55% (12% and 43%)

- 21% were developing
  - Benchmark group: 44%

- Institutional mean higher (above the middle 80%) than all participating institutions

- Sub scores above 80% of comparison group
Sample Major Distribution - Heighten

Major Distribution - 2023*

- Arts & Humanities - All: 46%
- NAS - Other: 7%
- Engineering: 29%
- Accounting: 11%
- Business: 5%
- Social Science - Other: 2%

*Preliminary Data
Critical Thinking Cohort Assessment - Case Study Engineering

Cohort size: 32

Difference = +2.34
Increase as a percentage = 7.8%

Engineering
Critical Thinking - Measurements

National Survey of Student Engagement (NSSE)

- Higher Order Learning
- Reflective and Integrative Learning
- Quantitative Reasoning

Hope College Seniors

<table>
<thead>
<tr>
<th>Year</th>
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<tbody>
<tr>
<td>2018</td>
<td>282</td>
</tr>
<tr>
<td>2019</td>
<td>324</td>
</tr>
<tr>
<td>2020</td>
<td>305</td>
</tr>
<tr>
<td>2022</td>
<td>307</td>
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Critical Thinking (Seniors) - NSSE

Higher-Order Learning

<table>
<thead>
<tr>
<th>Year</th>
<th>Hope College</th>
<th>Great Lakes Private</th>
<th>Carnegie Class</th>
<th>All NSSE - 2 yrs</th>
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<tbody>
<tr>
<td>2018</td>
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<td>2019</td>
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<td>2020</td>
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<tr>
<td>2022</td>
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Critical Thinking (Seniors) - NSSE

Quantitative Reasoning

- Hope College
- Great Lakes Private
- Carnegie Class
- All NSSE - 2 yrs

2018 2019 2020 2022
Critical Thinking (Seniors) - NSSE

Reflective & Integrative Learning

- 2018
- 2019
- 2020
- 2022

- Hope College
- Great Lakes Private
- Carnegie Class
- All NSSE - 2 yrs
Recommendations to Support Critical Thinking among Hope Students*

Faculty and Staff

- Normalize being comfortable with difference in interpretation
- Model tolerance of ambiguity
- Take into account sources that are in disagreement
- Force critical thinking skills vs. providing the “right answers”

Administration support for broader assessment of critical thinking and professional development for instructors

* Assessment Committee, August 2022 assessment of Common Learning Outcome 1

https://drive.google.com/file/d/1ExqD5QOJO853y_fcrBdQpPmqlZ31pvAg/view?usp=sharing
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https://drive.google.com/file/d/1ExqD5QOJO853y_fcrBdQpPmqlZ31pvAg/view?usp=sharing

hope.edu/assessment
Discussion, Conversation, Questions

• Who at Hope College (positions or departments) would benefit from the information shared today?

• Thinking about your own work at Hope, how might you use what you’ve learned today?

• How might Hope’s critical thinking assessment data continuously inform decisions for the benefit of our students?