Assessment Basics
Our definition of CRITICAL THINKING for ThinkForward is the ability to conceptualize problems, gather pertinent information, interpret data, appraise evidence, distinguish diverse points of view, and articulate personal insights, in order to present reasonable and effective arguments, responses or conclusions.
Enhanced Critical Thinking

Our definition of CRITICAL THINKING for ThinkFORWARD is the ability to conceptualize problems, gather pertinent information, interpret data, appraise evidence, distinguish diverse points of view, and articulate personal insights, in order to present reasonable and effective arguments, responses or conclusions.

Cultivate and develop the ability of faculty to better foster critical thinking.

Create a more engaged student learning environment.
As critical thinkers, students will be able to:

1) **Conceptualize** complex issues or problems.

2) **Gather** pertinent facts or ideas to explore complex issues or problems.

3) **Interpret** data and appraise **evidence**.

4) **Distinguish, compare, or contrast** diverse points of view and/or alternative conclusions.

5) **Articulate** personal insights about complex issues or problems.

6) **Communicate** a reasonable and effective argument, response, or conclusion.

**Enhanced Critical Thinking**

Our definition of CRITICAL THINKING for **Think** **FORWARD** is the ability to conceptualize problems, gather pertinent information, interpret data, appraise evidence, distinguish diverse points of view, and articulate personal insights, in order to present reasonable and effective arguments, responses or conclusions.
QEP Assessment Overview
Guiding Assumptions

• Provide the ThinkFORWARD Team with a framework for assessment of:
  • Student Learning Outcomes
  • Goals
  • Actions

6) Communicate a reasonable and effective argument, response, or conclusion.

• Those closest to learning are in the best position to tailor assessment in ways that lead to actionable data.
Primary purposes

Gather information that allow faculty and staff:

1. To determine if students have met outcome(s)
2. To make improvements to student learning environment
University Wide Assessment of Student Learning

- **Direct**
  - UM Critical Thinking Skills Test
  - Some Nationally Normed Test
  - General Education Courses provide data

- **Indirect**
  - NSSE
  - Graduating Student Survey
  - Evaluations of Instruction
FACT & CTR awardees

- Will directly assess learning
- Have assessment training & support
- May use a variety of measures:
  - AAC&U VALUE Rubric
  - Critical Thinking @ UM Checklist
  - UM Critical Thinking Test
  - Embedded test items
  - Other rubrics
- Will use data to make improvements
CT Assessment in Courses
Example

Psychology 202
Statistics for Behavioral Sciences
Dr. Carrie V. Smith
Examine course student learning outcomes for overlap with the **ThinkFORWARD** critical thinking outcomes.
Step 1
Example

Be able to select the appropriate statistical test to answer research questions

Understand how to conduct z-tests, t-tests, ANOVAs, correlations, and chi squares both by hand and with SPSS.

Be able to interpret the findings of data analyses and be able to explain them in non-technical language
Step 1
Brief Think

What overlaps do you see?

Be able to select the appropriate statistical test to answer research questions.

Understand how to conduct z-tests, t-tests, ANOVAs, correlations, and chi squares both by hand and with SPSS.

Be able to interpret the findings of data analyses and be able to explain them in non-technical language.

Think FORWARD
QUALITY ENHANCEMENT PLAN
Step 1 Example

Be able to select the appropriate statistical test to answer research questions.

Understand how to conduct z-tests, t-tests, ANOVAs, correlations, and chi squares both by hand and with SPSS.

Be able to interpret the findings of data analyses and be able to explain them in non-technical language.
Step 2
CT outcomes

Pick 2-3 ThinkFORWARD critical thinking outcomes to teach and assess in the course
Step 2
Example

1) Conceptualize complex issues or problems.
2) Gather pertinent facts or ideas to explore complex issues or problems.
3) Interpret data and appraise evidence.
6) Communicate a reasonable and effective argument, response, or conclusion.
1) Conceptualize complex issues or problems.
2) Gather pertinent facts or ideas to explore complex issues or problems.
3) Interpret data and appraise evidence.
6) Communicate a reasonable and effective argument, response, or conclusion.
Step 3
Revise outcomes

Revise course learning outcomes as necessary to specifically include ThinkFORWARD CT outcomes.
Step 3
Brief Think

What is one revision you might make?

Be able to select the appropriate statistical test to answer research questions

Be able to interpret the findings of data analyses and be able to explain them in non-technical language
Step 3
Example

What is one revision you might make?

- Be able to select the appropriate statistical test to answer research questions
- Be able to interpret the findings of data analyses and be able to explain them in non-technical language
Step 3
Example

Be able to interpret the findings of data analyses (TF #3)

Be able to communicate a reasonable conclusion in non-technical language (TF #6)
Examine, revise, or devise learning activities that provide opportunities for students to acquire and practice those skills.
Step 4
Example

Previous activity:
Weekly homework with the same dataset

Revised activity:
Weekly homework assignments with data from on-going “real-life” issues students are likely to encounter
Step 4
Example

Previous activity:
Weekly homework with the same dataset
Calculate various stats
Answered basic conclusion questions
Feedback on correctness
Revised activity:
Weekly homework assignments with data from on-going “real-life” issues students are likely to encounter
Calculate various stats
Describe reasonable conclusions using non-technical language
Feedback on correctness AND degree to which meets expectation
Examples of answers meeting expectation available after grading
Step 5
Assessing

Design ways to assess student learning products to determine extent to which student can demonstrate the learning outcomes.
### Step 5

#### Example

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Levels of Achievement</th>
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<tbody>
<tr>
<td><strong>Reasonable Interpretation</strong></td>
<td><strong>Meets Expectation</strong></td>
</tr>
<tr>
<td><strong>Weight</strong> 50.00%</td>
<td>100.00 % Interpretation of results reasonably approximates expectation</td>
</tr>
<tr>
<td><strong>Approximates Expectation</strong></td>
<td>50.00 % Interpretation of results has some overlap with that of an expert</td>
</tr>
<tr>
<td><strong>Does not Met</strong></td>
<td>25.00 % Interpretation is not appropriate given data</td>
</tr>
<tr>
<td><strong>None</strong></td>
<td>0.00 % Not attempted</td>
</tr>
<tr>
<td><strong>Communicates Conclusion</strong></td>
<td><strong>Meets Expectation</strong></td>
</tr>
<tr>
<td><strong>Weight</strong> 50.00%</td>
<td>100.00 % Conclusions likely clear for non-technical audiences</td>
</tr>
<tr>
<td><strong>Approximates Expectation</strong></td>
<td>50.00 % Conclusions likely somewhat clear for non-technical audiences</td>
</tr>
<tr>
<td><strong>Does not Met</strong></td>
<td>25.00 % Conclusions unclear</td>
</tr>
<tr>
<td><strong>None</strong></td>
<td>0.00 % Not attempted</td>
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Consider designing ways to get student opinion on learning activities and their change in learning.
Step 6
Brief Think

What might you do?
Question on brief faculty developed course evaluation

The bonus critical thinking questions on the homework assignments encouraged me to think more deeply about statistics.
Step 7
Pre-test?

Consider a pre-learning activity assessment
Step 7
Brief Think

What would you do?
Step 7
Example

Week 1 homework
Step 8
Implement

Implement learning activities
Step 9
Post-Test & Survey

Assess student learning post-learning activity both directly and indirectly
Step 9
Example

Weekly homework assignments near end of the semester
Include a self-check about the learning activity implementation and impact on learning to help interpret assessment results.
Step 10
Brief Think

How might you do this?
Mid-term and End of Year Reflections

1. Were the activities available as planned?
2. Were feedback and opportunities to learn available as planned?
3. How are students doing on the activities?
4. What might improve student learning?
Step 11
Summarize data

Summarize data in ways that will let you see performance across students (we can help)
Step 11
Brief Think

What might you do?
Step 11
Example

<table>
<thead>
<tr>
<th>Week</th>
<th>% Approximates or Meets Expectation</th>
<th>% Meets Expectation</th>
<th>% Approximates or Meets Expectation</th>
<th>% Meets Expectation</th>
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<td>36.8%</td>
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<td>6</td>
<td>60.2%</td>
<td>44.4%</td>
<td>38.4%</td>
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<td>12</td>
<td>88.2%</td>
<td>65.7%</td>
<td>41.1%</td>
<td>35.2%</td>
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### Indirect feedback

**Step 11 Example**

#### Frequency of Student Responses

<table>
<thead>
<tr>
<th></th>
<th>Count</th>
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<tbody>
<tr>
<td>Strongly Agree</td>
<td>7</td>
</tr>
<tr>
<td>Agree</td>
<td>3</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>8</td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>1</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
</tr>
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</table>
Step 12
Use Results

Use the results to improve the activity for future classes or activities.
Step 12
Brief Think

Given the data and reflection – what might you do?
Reassess learning after revised activities are included in future classes
We’re here to help and more is to come ..... 

https://irep.olemiss.edu/ct-assessment/