

From Data to Wisdom – Using Evaluation for Learning Improvement

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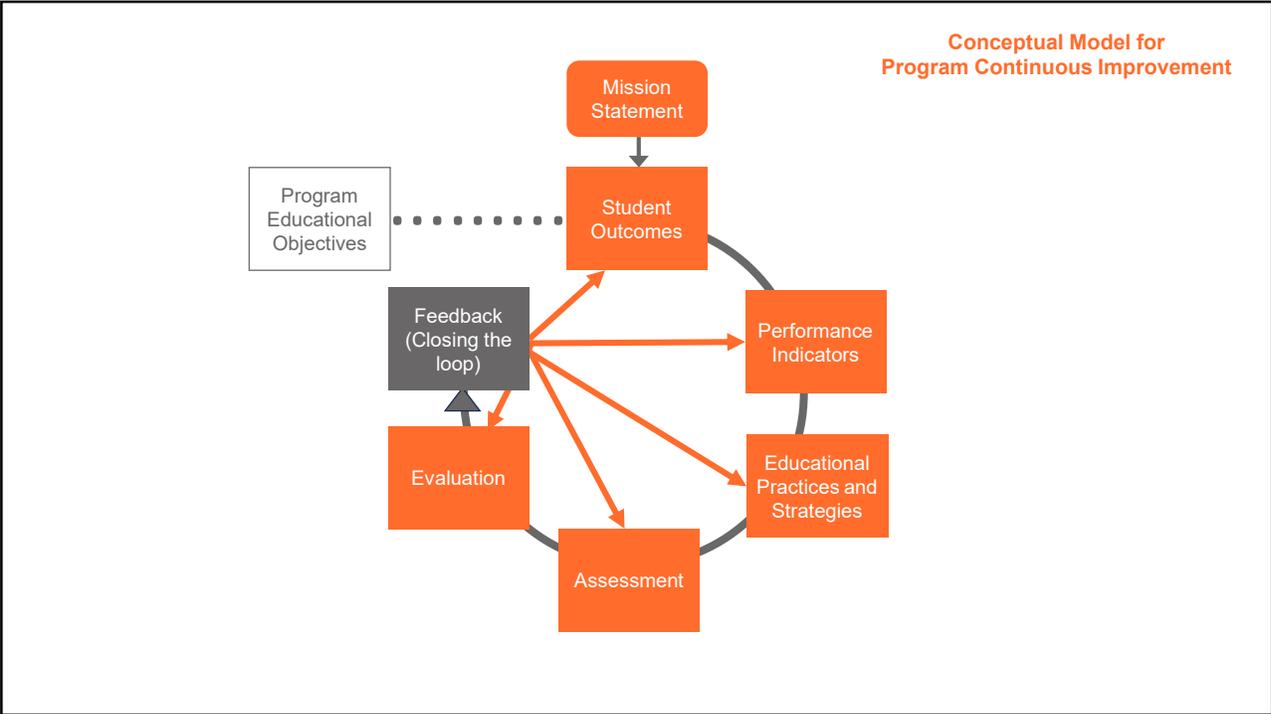
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2023 Assessment Institute



Overview

- Context for evaluation
- Faculty engagement in the process
- From data to wisdom
- Evaluation process
- From data to considering action
- Improvement of student learning
- Focus on continuous improvement



Evaluation

Evaluation is a *data-informed*, not data-driven, process

Data are necessary but not sufficient

Engagement in evaluation process

- ✓ Who evaluates the data?
- ✓ Who makes the recommendations for improvement (both process and learning)?
- ✓ Who implements changes?
- ✓ Widen circle of active participants with a clear, shared purpose

Evaluation should be done by those who can do something about the results.

Hierarchy of Review Actions

Review/
Action 1

“Owner” of the summative data – Evaluate results to determine actions to be taken in the course

Review/
Action 2

All faculty who integrated the outcome in their course – Evaluate all data related to the outcome (e.g., summative/formative data, survey results, anecdotal and other data from formative courses) to determine action to be taken

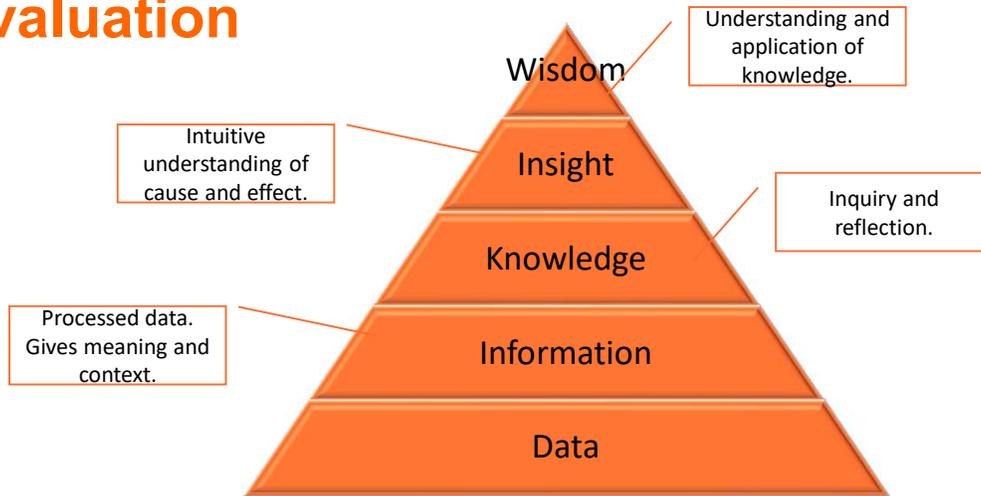
Review/
Action 3

Outcome faculty - Report findings and recommended actions to all Program faculty for approval

Review/
Action 4

Program affirms findings, actions, results

Evaluation



Evaluation

Why are there holes in the data?

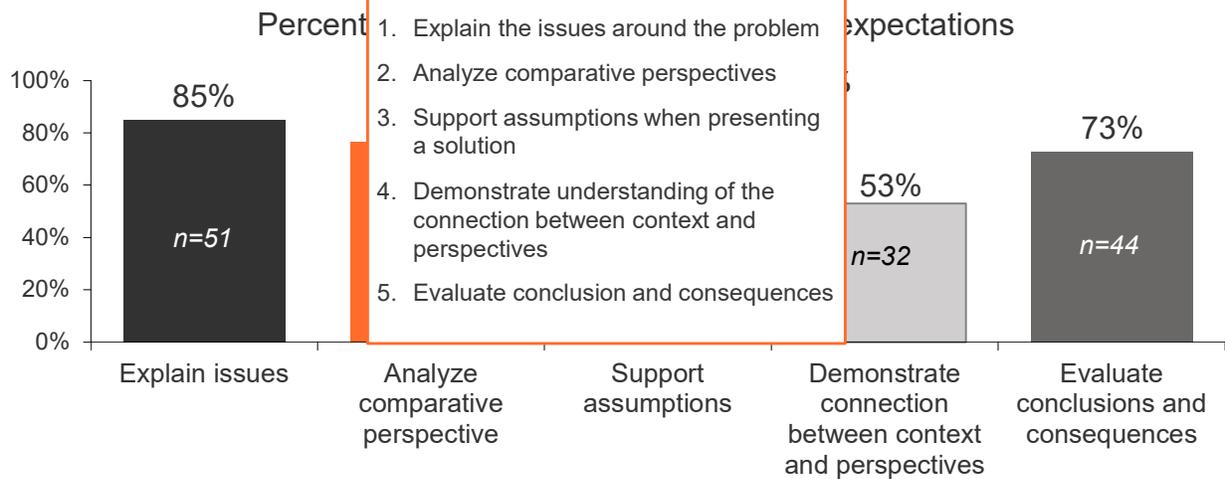
- ✓ No common definition of learning outcomes
- ✓ Outcomes assessment data averaged over time
- ✓ Data are not reliable (lack of consistency in scoring student learning)
- ✓ Assessment methods and/or measures are not appropriate to anticipated level of attainment
- ✓ Averaging data across disparate courses (average of averages)



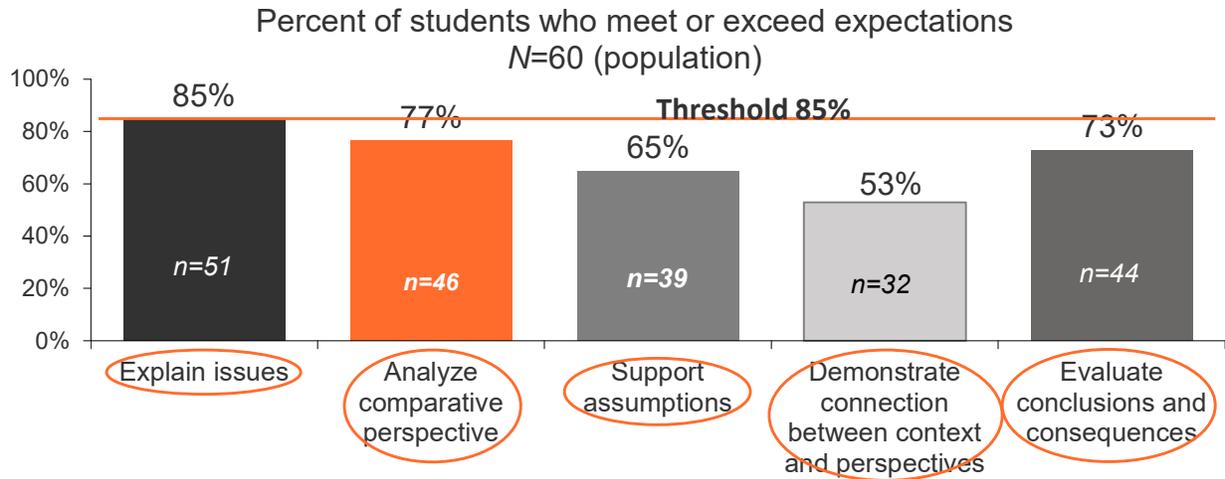
Evaluation process

Data

Student Outcome: Students will demonstrate critical thinking skills



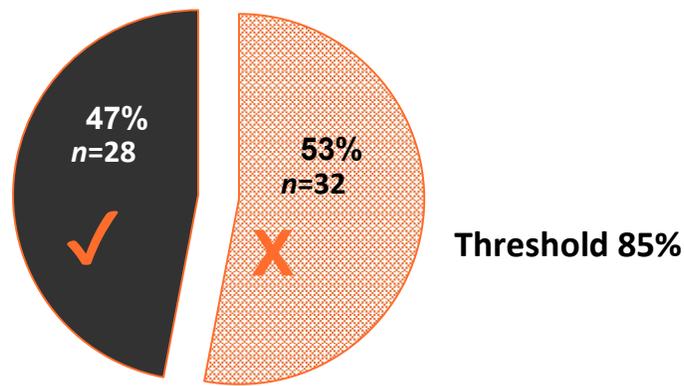
Critical Thinking Skills - Summative



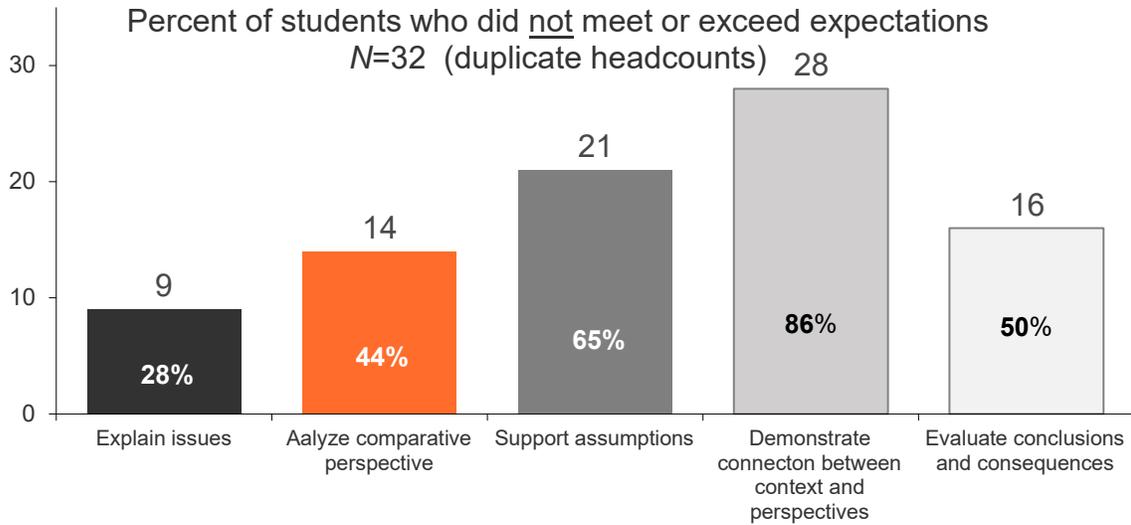
Critical Thinking Skills - Summative

Students who met or exceeded expectations on ALL performance indicators

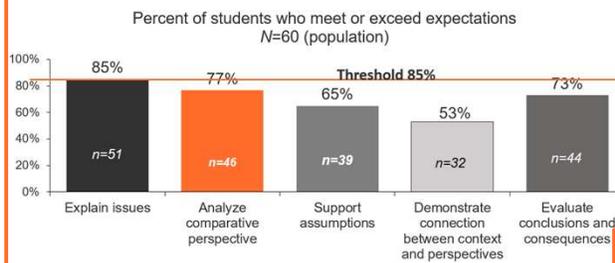
N=60 (population)



Critical Thinking Skills



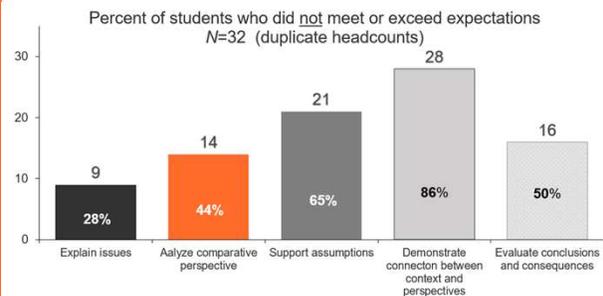
Critical Thinking Skills - Summative



Focuses on what we need to improve

Focuses on what we are doing well

Critical Thinking Skills



Purpose of thresholds



Enables evaluation of the EXTENT to which student outcomes are being attained.



In continuous improvement process, when threshold is met, threshold can be increased.

Realistic thresholds

It is recommended that you do NOT set thresholds until after the first cycle of data collection.

- ✓ Many factors can affect your results (including immature assessment processes).
- ✓ Review your results and identify areas needed for improvement. Set a threshold that is realistic for your program.

Consider the context of your program.

- ✓ Inputs and outputs, Program Educational Objectives, type of institution will affect your expectations for the level of learning for your students and the thresholds for your various performance indicators.

Realistic thresholds

Expectations for performance will vary depending upon:

- ✓ The complexity of the task required for performance



Realistic thresholds

Expectations for performance will vary depending upon:

- ✓ The complexity of the task required for performance
- ✓ The cognitive level of the performance indicator
- ✓ The degree to which the curriculum supports student learning for the performance indicator

Examples of Input to evaluation process

Formative

Direct assessments:

- ✓ Faculty evaluations
- ✓ Peer evaluations

Indirect data:

- ✓ Student exit questionnaire
- ✓ Self-evaluations (rubric)

Summative

Direct assessments:

- ✓ Faculty evaluations
- ✓ Peer evaluations
- ✓ External evaluations

Indirect assessments:

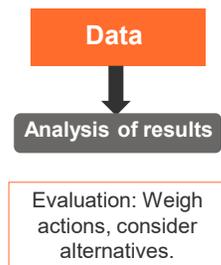
- ✓ Student exit questionnaire
- ✓ Self-evaluations (rubric)

Other:

Trend data
Curriculum Map
Faculty experience/wisdom

AN EXAMPLE

Evaluation process



Evaluation: Weigh actions, consider alternatives.

Consider actions

Focus on:

- ✓ Students – diversity of pedagogy, feedback

What do we know about student learning?

Purpose of assessment is to understand student knowledge, skills, behaviors and attitudes

In and of itself, assessment does not produce learning

It enables faculty to identify the extent to which students learning has taken place

What do we know about how we can promote student learning?

Research on the principles of student learning is in and the evaluation of the data collected (assessment) should help us to understand how we can utilize the principles of learning to improve student performance.

Research results - students learn best when:

1. We build on what students already know.
2. They are actively engaged in their own learning.
3. Expectations for their learning are clear.
4. They get timely and relevant feedback on their performance.
5. They can see the relevance for their careers or personal lives.
6. They feel that their voices are understood and being heard

Shared knowledge and collective responsibility

Faculty:

- In addition to, “What I DO”
- To engaging in conversations with colleagues about what students know and how to improve the learning environment

Students:

- From listing courses that they have taken
- To describing the knowledge/skills that they have achieved

Consider Actions

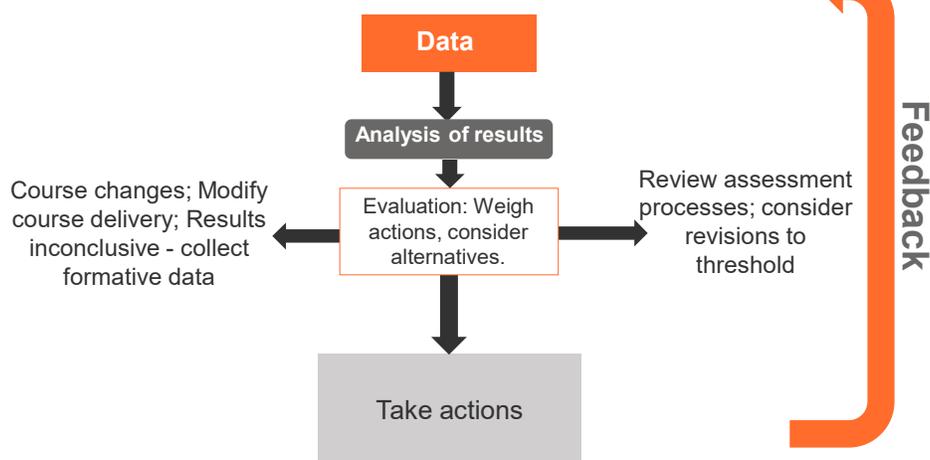
Evaluation: Weigh actions, consider alternatives.

Focus on:

- Students – diversity of pedagogy, feedback
- Faculty – professional development in integration of outcomes
- Course – integrate changes in topics/structure
- Curriculum – modifications to course sequence, add modules
- Assessment Processes – modify assessments process; methods and/or context

Evaluation process

AN EXAMPLE



Continuous improvement

- Focus on continuous improvement
- Use of trend data



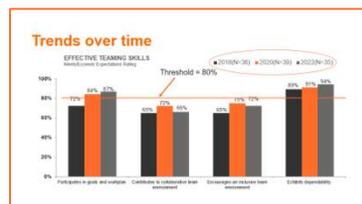
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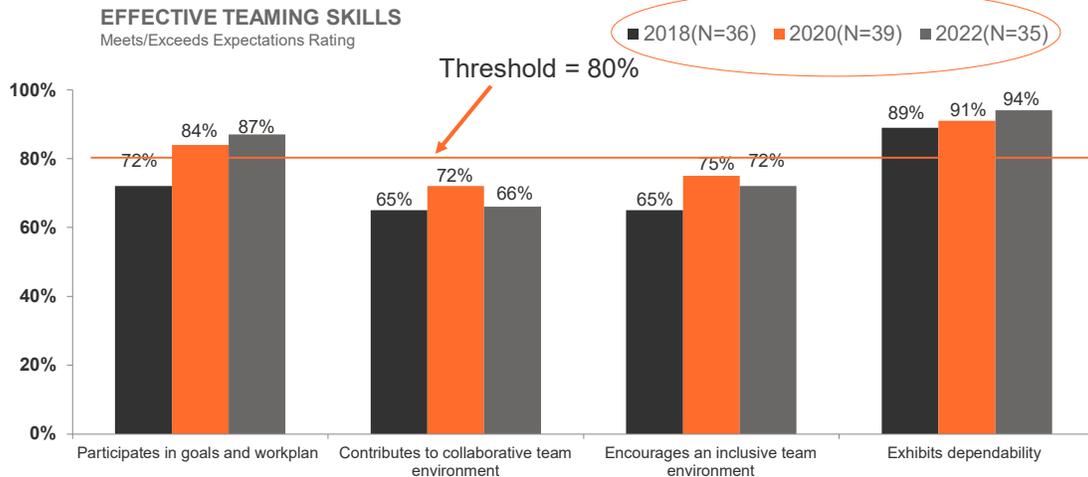
**Continuous
Improvement**

Trend data

- Report trend data for the continuous improvement of student performance
- Trend data should be reviewed during the evaluation process
- Many factors impact the results and substantive drops in results; causes should be reported (e.g., changes in process, changes in student demographics, curriculum changes, etc.).



Trends over time



Summary

The evaluation process

- Ties the assessment processes together to determine the extent to which students are attaining desired learning outcomes
- Engages faculty in collaborative decision making
- Results in improvements in assessment processes and student learning

Evaluation Checklist

Gloria Rogers and Robyn Hall, ABET Professional Offerings

	Continue what we are doing	Modify what we are doing	Stop what we are doing	Need to begin doing
Faculty who contribute to the learning outcome are involved in the evaluation and action plans related to the outcome				
Data are analyzed at the performance indicator level				
Data available for review are:				
Formative data				
Summative data				
Trend data				
Curriculum map				
Other:				
Actions considered:	Yes	No		
Student learning principles				
Faculty support/development				
Course modification				
Curriculum modifications				
Pedagogy/Andragogy				
Assessment processes				

Based on your responses above use the template below to draft a list of action items.

PRIORITY #	What to accomplish	Tasks	Person Responsible	Due Date