

Beyond Bloom's

Revising an Evidence of Learning Assessment Framework using a Delphi Method



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Oregon Health & Science University
IUPUI Assessment Institute, October 2022



Purpose of this Workshop:

To guide you through a simulated Delphi study with an assessment framework we developed.

Purpose of Delphi Method

To generate a reliable and confidential consensus opinion of a group of experts on an innovation.

This consensus is derived from iteratively sharing our innovation, requesting feedback on innovation from experts using a survey, and using that feedback to make changes over several rounds.

Nasa, P et. Al Delphi Methodology

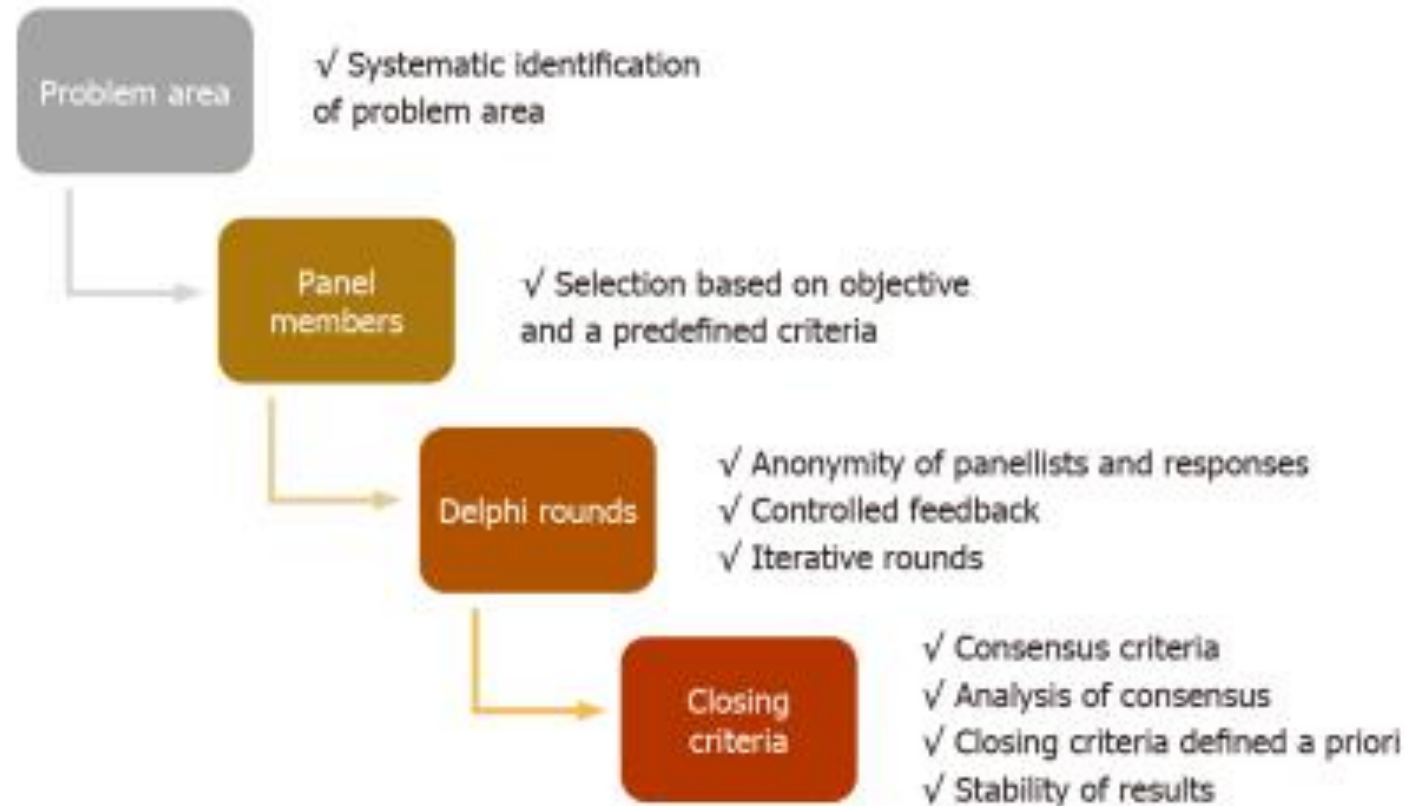


Figure 1 Stepwise quality assessment of Delphi studies.

Panel Members



DIVERSE PANEL



SUBJECT MATTER
EXPERTS



SIZE

Delphi Rounds



Round 1: Likert scale questions to consider recommendations



Round 2: Feedback is used to improve recommendations and panelists are asked to re-rate



Round 3: Feedback is incorporated and panelist are asked to assess using a closing audit

Closing Criteria

- Consensus
- Closing Criteria
- Stability

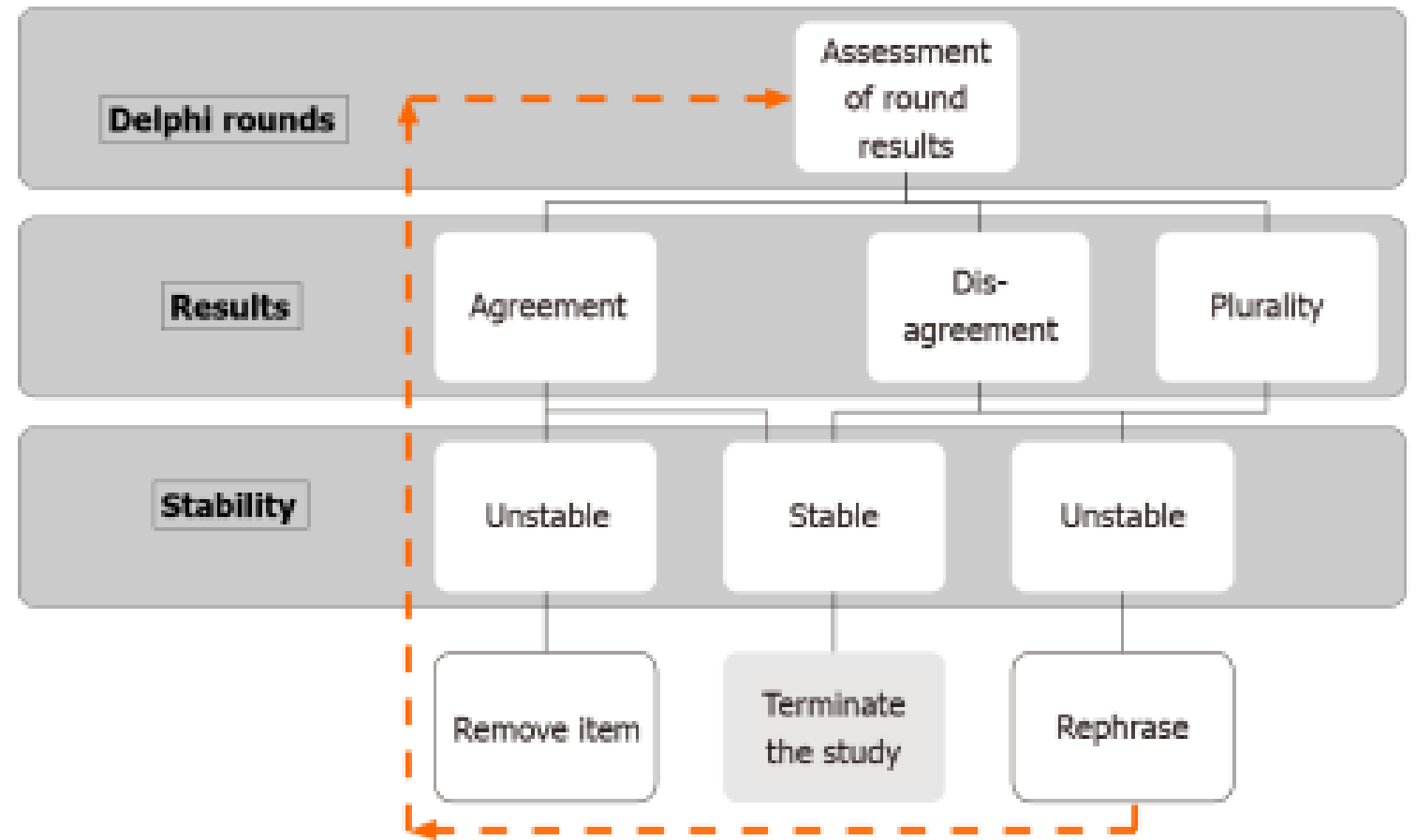


Figure 2 Stability assessment for Delphi rounds.



Delphi Process in Assessment

- Disrupt existing assessment frameworks by including diverse ways of knowing
- Propose an assessment framework that could apply to a wide variety of schools and programs (med ed. career technical, community college, etc.)
- Stimulate discussion beyond the practical daily use of assessment outcomes framework but also the scholarly value of the framework and Delphi method to future assessment scholarship

Why Assessment Matters:



Documents quality



Reinforces equitable student experiences and outcomes (i.e., identifies gaps)

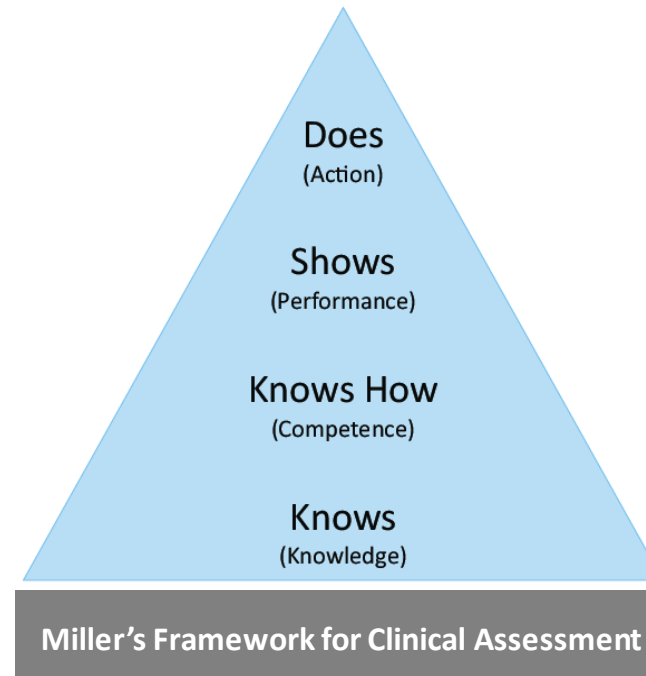
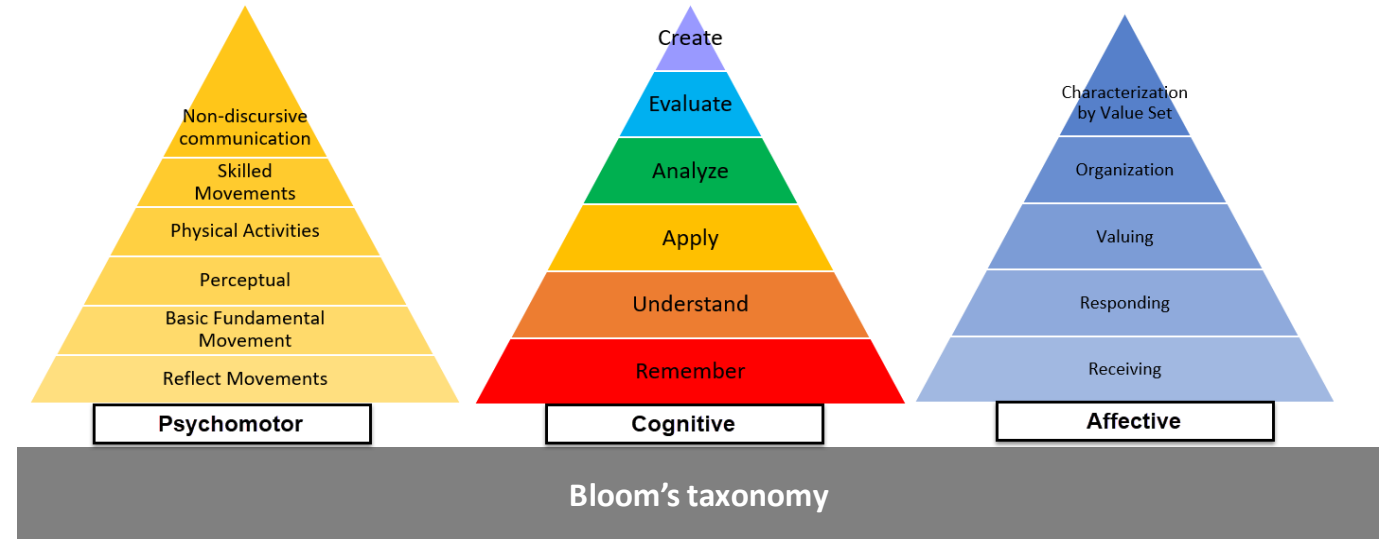


Ensures alignment



Allows us to differentiate ourselves locally, regionally, nationally, and internationally.

Background:
What
frameworks
we started
with
at OHSU



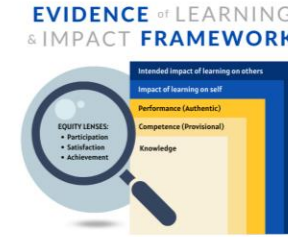
Why previous frameworks did not work

- Bloom's taxonomy works well for knowledge, but is limited
- Moore's CME outcomes were not good for our non-clinical programs
- Most frameworks did not make space for spiritual or emotional ways of knowing
- Affect and reflection were not explicitly emphasized



Examples using Evidence of Learning and Impact Framework

Topic of Examples: Teaching and Assessing "The Scientific Method" on different levels



Knowledge

Framing Question

How do learners demonstrate **knowledge gained** from educational activities in a didactic or simulated educational setting?

Example

Learner describes steps of scientific method and importance of each step in a short essay quiz.

Competence

Framing Question

How do learners demonstrate **application of knowledge** to a task, practiced in a didactic or simulated educational setting?

Example

Learner fills out lab notebook in intro bio lab, following the prescribed steps of the scientific method during the guided experiment.

Performance

Framing Question

How do learners demonstrate, in an authentic educational or training environment, what they should **be able to do** in their future practice/career?

Example

Learner proposes experiment, or revision to existing method, to lab advisor as part of their undergraduate research project, drawing on nuances of the scientific method in their proposal.

Impact on Self

Framing Question

How do learners **reflect** on the impact and value of learning on their wellbeing and identity development?
How do learners demonstrate **awareness of their whole selves** and their purpose?

Example

Learner completes pre- and post- self-reflection on their development as a scientist over the course of their program, comparing their early assumptions of what a scientist is and does, through their externship, where they independently run experiments in a marine biology research center.

Impact on Others

Framing Question

How do learners **move valued knowledge into practice**, by changing systems, procedures, or policies **in ways that impact the community**, institution, and/or beyond? (Implied impact is acceptable.)

Example

Learner completes capstone project which is a set of science communications posters for the local science museum, which posts them in an exhibit intended to educate the general population about local examples of the scientific method in practice.

Framing Questions to help define our Evidence Framework Levels as presented in Round 1

Calculating concordance

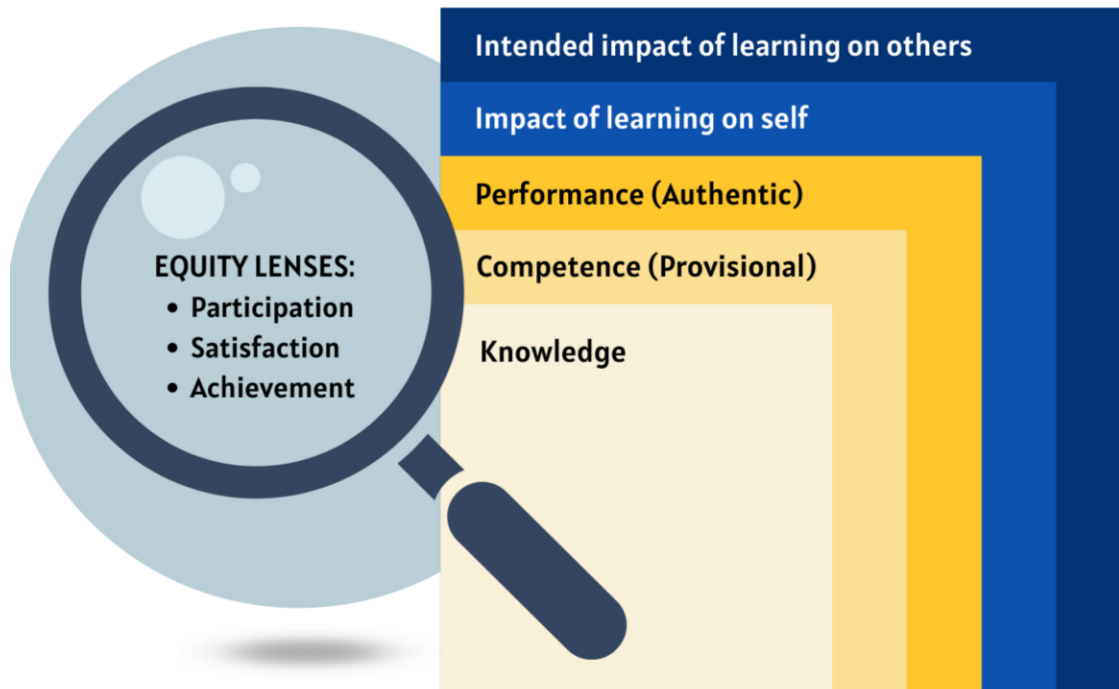
- Consensus
- Closing Criteria
- Stability

	Rate the following statements based on just the Knowledge level of the framework from strongly agree to strongly disagree. - This framing questions helped me understand this level
Count Strongly agree	17
Count Agree	11
Count Somewhat agree	6
Count Somewhat disagree	1
Count Disagree	0
Count Strongly disagree	0
SUM Total responses	35
Percentage High agreement =(#strongly agree + # Agree) / Total responses	80.00%

Interactive Delphi Simulation

ROUND ONE – 10 minutes

EVIDENCE of LEARNING & IMPACT FRAMEWORK



Knowledge

Framing Question

How do learners demonstrate **knowledge gained** from educational activities in a didactic or simulated educational setting?

Competence

Framing Question

How do learners demonstrate **application of knowledge** to a task, practiced in a didactic or simulated educational setting?

Performance

Framing Question

How do learners demonstrate, in an authentic educational or training environment, what they should **be able to do** in their future practice/career?

Impact on Self

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Impact on Others

Framing Question

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Reflection and Discussion

Recommended Resources and References

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