Multiple Intelligences, Multiple Pedagogies, Multiple Outcomes, and Emerging Policies of Accountability and Faculty Responsibility

A conversation with FACET
Why the interest in multiple anythings?

- Students are diverse in thinking, backgrounds, cultures, aptitudes.
- Fields are diverse in the outcomes they require and value.
- There are competing values and ideologies within and across fields.
- Increase inclusiveness, democratic participation, flexibility.

Teaching is building bridges between the diversity of students and the diversity of outcomes in an intellectually honest, morally responsible, and practically effective and flexible manner.
Bloom et al Taxonomies

<table>
<thead>
<tr>
<th>Cognitive</th>
<th>Affective</th>
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<tbody>
<tr>
<td>Knowledge</td>
<td>Receiving</td>
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<tr>
<td>Comprehension</td>
<td>Responding</td>
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<tr>
<td>Application</td>
<td>Valuing</td>
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<td>Analysis</td>
<td>Organizing</td>
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<td>Synthesis</td>
<td>Internalizing</td>
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<td>Evaluation</td>
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Three Apprenticeships

- Habits of mind
- Habits of practice (hand)
- Habits of the Heart
## A Table of Learning

### Primary Categories:
- Engagement
- Understanding
- Performance
- Reflection
- Design and Judgment
- Commitment
Shavelson and Huang’s Model of Ability and Achievement

General Ability (“Intelligence” or “G”)

Crystallized Intelligence
Fluid Intelligence

Verbal Reasoning  Quantitative Reasoning  Spatial Reasoning

Example Tests: GRE, Undergraduate Assessment Program (UAP)

Reasoning  Comprehending  Problem Solving  Decision Making
In And Across Broad Domains (Humanities, Social Sciences, Sciences)

Example Tests: CAAP, UAP

Knowledge
Declarative  Procedural  Schematic  Strategic

Acquired In A Domain (e.g., American Literature)

Example Tests: ETS’s Major Field Tests, University of Chicago General College Examinations

Abstract, Process-Oriented

Inheritance x Accumulated Experience

Concrete, Content-Oriented

Direct Experience
Signature Pedagogies:
What do students do?

- Routines, Habits, Practices
- Public performance (visibility)
- Accountable talk (active listening)
- Make judgements under uncertainty
- Critically analyze own performance
- Experience risk, anxiety, at-stakeness
- Develop values, identity, commitment
- Internalize new habits, practices, identity
Signature Performances: Integration and Public Performance

- Senior thesis (or dissertation)
- Senior recital or exhibition
- Senior sermon
- Design competition
- Clinical Assessments (Med/Nursing)
Academic Signature Performances? 
The New Accountability

- Comprehensive exams
- NSSE
- Collegiate Learning Assessment (CLA)
You are the assistant to Pat Williams, the president of DynaTech, a company that makes precision electronic instruments and navigational equipment. Sally Evans, a member of DynaTech's sales force, recommended that DynaTech buy a small private plane (a SwiftAir 235) that she and other members of the sales force could use to visit customers. Pat was about to approve the purchase when there was an accident involving a SwiftAir 235. You are provided with the following documentation:

1: Newspaper articles about the accident
2: Federal Accident Report on in-flight breakups in single engine planes
3: Pat's e-mail to you & Sally's e-mail to Pat
4: Charts on SwiftAir's performance characteristics
5: Amateur Pilot article comparing SwiftAir 235 to similar planes
6: Pictures and description of SwiftAir Models 180 and 235

Please prepare a memo that addresses several questions, including what data support or refute the claim that the type of wing on the SwiftAir 235 leads to more in-flight breakups, what other factors might have contributed to the accident and should be taken into account, and your overall recommendation about whether or not DynaTech should purchase the plane.
CLOSING OBSERVATIONS

Standards for Judging the Quality of Models of Teaching and Processes of Learning
Standards for Design in Architecture

- **Commodity**
  - *Is it useful?*

- **Firmness**
  - *Will it stand up?*

- **Delight**
  - *Does it please? Is it fun?*
Standards for Models in the Social Sciences (Charles Lave & Jim March)

- **Truth**
  - *Reason*
  - *Evidence*
  - *Being wrong*

- **Beauty**
  - *Fertility*
  - *Simplicity*
  - *Surprise*

- **Justice**
  - *Equality, Fairness, Humaneness*
Taken together, we should strive for both learning and teaching that exemplify...

- **Usefulness**
- **Warrant and Evidence**
- **Beauty and Joy**
- **Justice and Virtue**