Principles of Assessment

MUADP-4_Level 1 (2024)

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https://il.mahidol.ac.th

[Q1] Identify problems & Discuss

Outline

1. What is Evaluation & Assessment?

2. What, Where, When…

3. Good Assessors' Characteristics

4. Principles of Assessment

5. How can I use ChatGPT/Bard AI for evaluation?

Learning Outcome

- Be able to

1. Differentiate Evaluation & Assessment
2. Explain basic principle of assessment
3. Apply and design assessment
4. Be a good & ethical assessor

[Q2]

What is the difference between evaluation and assessment?
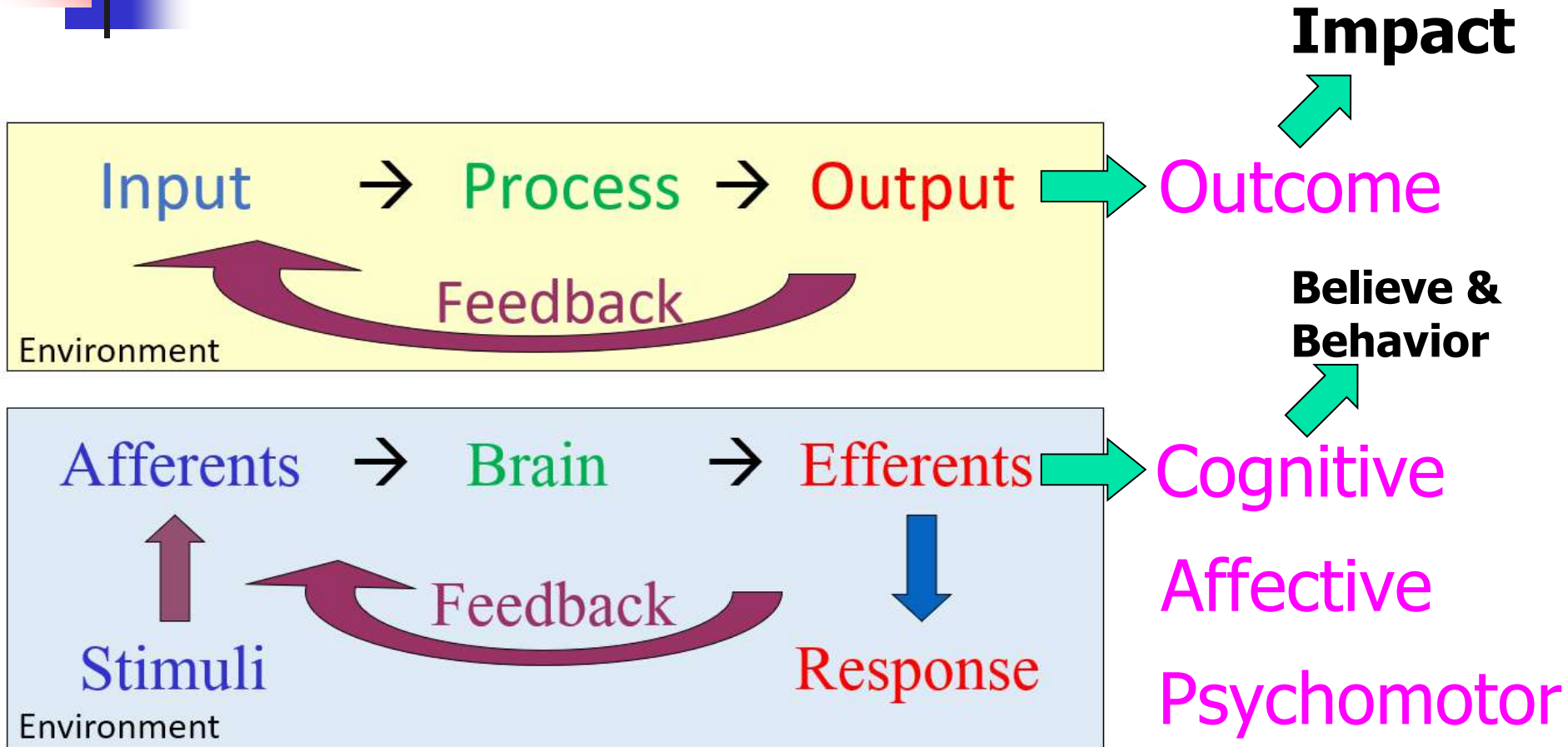
1.1 What is Evaluation?

- The process of measurement to quantify and compare to defined criteria (A, B, C, D, F; Stars 1-5)
- Evaluate for making decision
- Type of Evaluation
  - Objective Eval. – MCQ, T/F, Matching,…
  - Subjective Eval. – Modified Essay Question (MEQ), Oral exam, Practical Exam, …

1.2 What is Assessment?

- The process of documenting, usually in measurable terms, KSA, and beliefs
- Identify strength & weakness for further quality development
- Purpose: to promote student learning and development
- Evaluation method defines learning method

System Concept

Impact

Input → Process → Output ➡ Outcome

Feedback

Environment

Believe & Behavior

Afferents → Brain → Efferents ➡ Cognitive

Feedback

Stimuli   Response

Environment
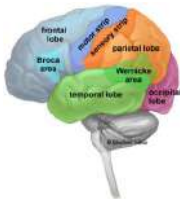
Affective

Psychomotor

Education Concept

1. Objective: Learning Outcome → CPA

2. Learning process: Teaching & Learning

3. Evaluation: **Formative, Summative**

Revised Bloom's Taxonomy: 3 Domains

1. Cognitive Domain (Knowledge) : Head

2. Psychomotor Domain (Skill) : Hand

3. Affective Domain (Attitude) : Heart

Cognitive Domain

Bloom's Taxonomy

สร้างสรรค์

ประเมินผล

วิเคราะห์

ใช้

เข้าใจ

จำ

create — Produce new or original work
Design, assemble, construct, conjecture, develop, formulate, author, investigate

evaluate — Justify a stand or decision
appraise, argue, defend, judge, select, support, value, critique, weigh

analyze — Draw connections among ideas
differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test

apply ing for — Use information in new situations
execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch

understand — Explain ideas or concepts
classify, describe, discuss, explain, identify, locate, recognize, report, select, translate

remember — Recall facts and basic concepts
define, duplicate, list, memorize, repeat, state

Vanderbilt University Center for Teaching

https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/

2.1 What outcomes to assess?

- **K**nowledge: MCQ → Item Analysis, Modified Essay Question (MEQ), Oral exam

- **S**kill: Rubric (Rating Scale), OSCE (Objective Structure Clinical Examination)

- **A**ttitude: Observation

2.2 When to assess?

1. Formative evaluation
   - During a class,
   - In-between a course
2. Summative evaluation
   - After a class
   - At the end of a course

2.3 Where to assess?

1. Social Context: Bedside, field work

2. Physical Context

3. Virtual Context

- Role of ICT on Education
- Online exam in a dedicated place
- How to identify identity?

2.4 How to evaluate/assess?

1. Objective evaluation

2. Subjective evaluation

3. Practical evaluation

4. Observation

3. Good Assessors' Characteristics

- Subject Matter Expert
- Assessment Knowledge
- Communication Skills
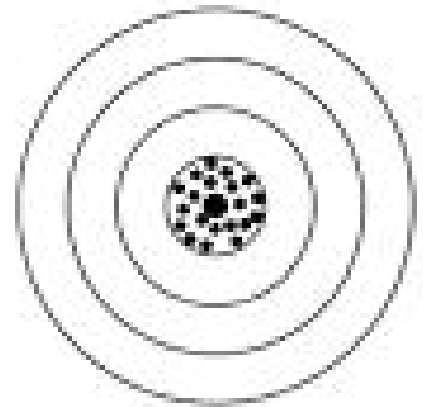- Great attitude

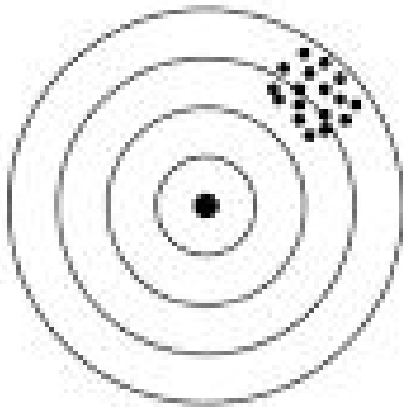# [Q3] Validity & Reliability

Which one(s) is Valid?
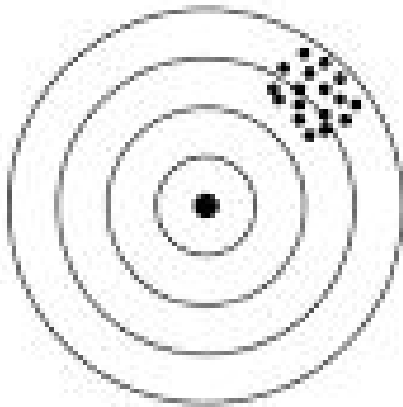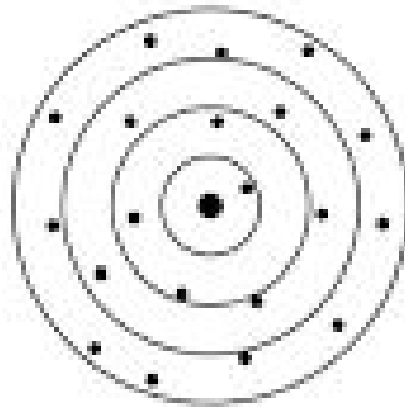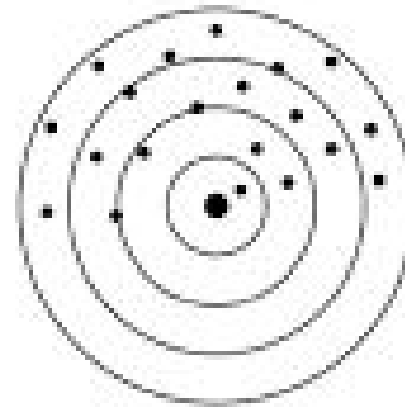
A   B   C   D
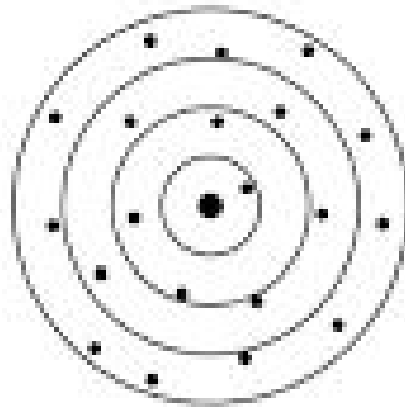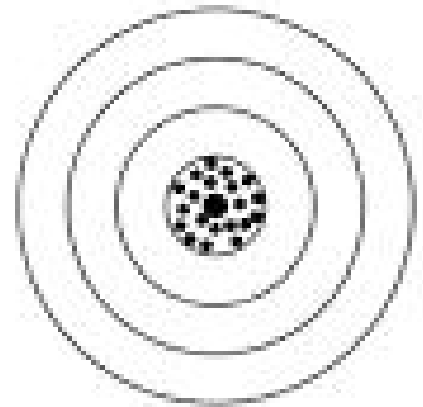
Which one(s) is Reliable?
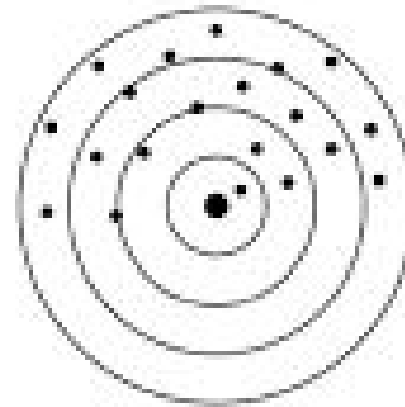
A   B   C   D

Validity & Reliability

by Experiment-Resources.com

https://explorable.com/images/validity-and-reliability.jpg

4. Principles of Assessment

1. Validity

2. Reliability

3. Fairness

4. Flexibility

5. Feasibility: Place, Time, Person

6. Up-to-date

7. Item Analysis → Quality, Purpose

"Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid." - Albert Einstein
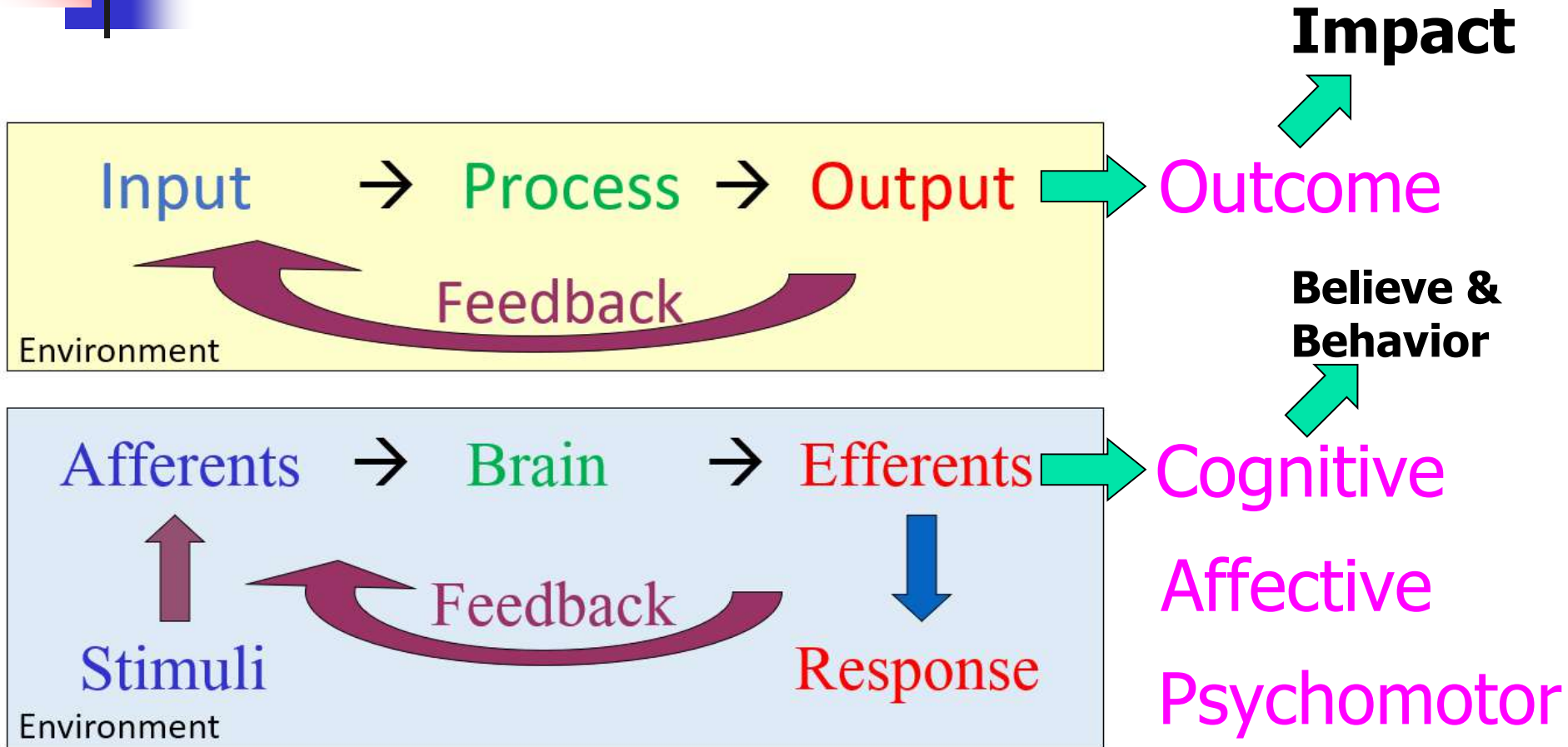

https://www.thelandscapeoflearning.com/2012/09/please-climb-that-tree.html
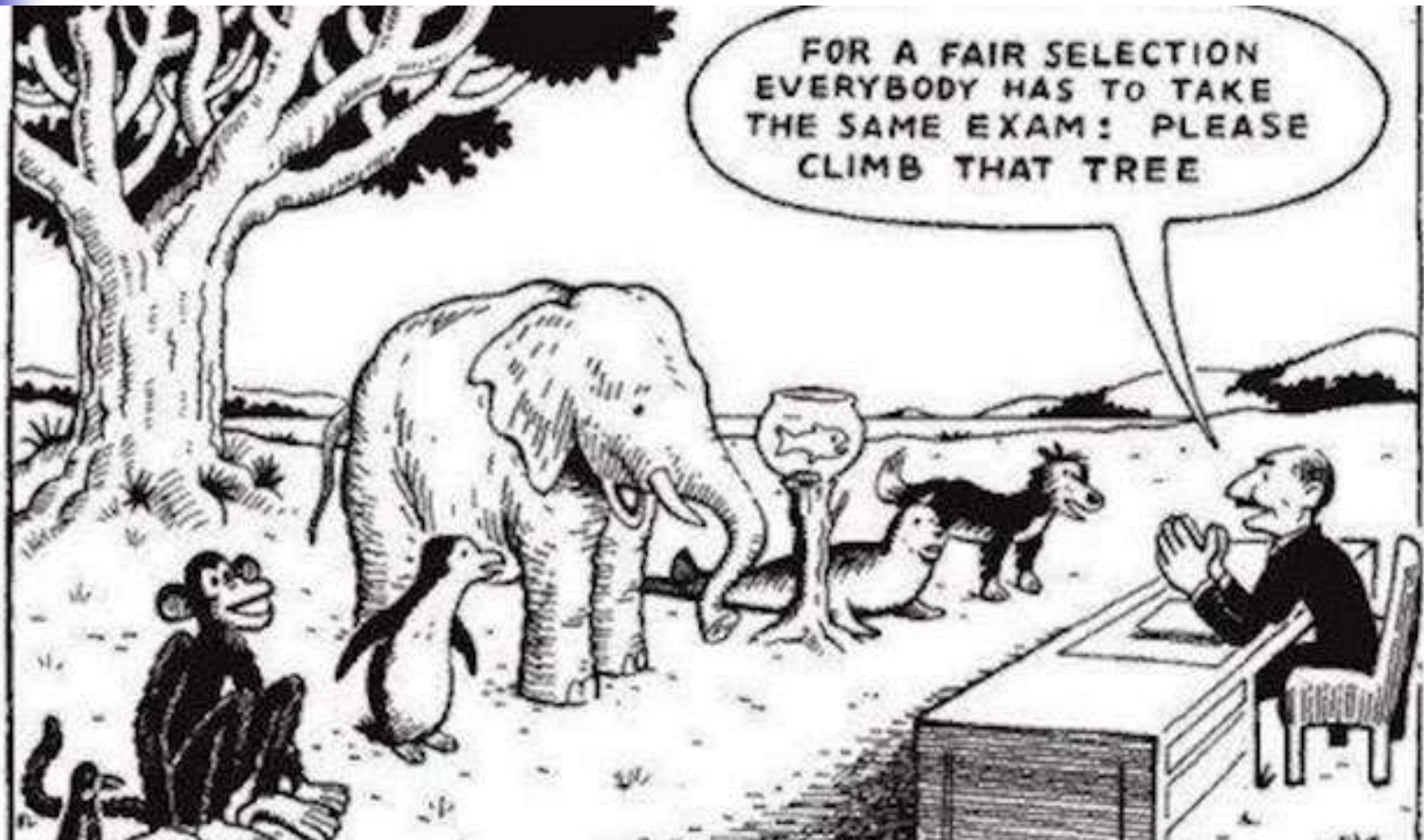
5. ChatGPT / Google Bard AI

- How can I use ChatGPT & Bard or Gemini for evaluation?

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