

มหาวิทยาลัยมหิดล Mahidol University เป<sub>ิเล</sub>โอม ฟู the Lond

## **Affective Domain**

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MUADP Level 1 22 May 2025

Boonsiri Room, AIHD

Presentation adapted with permission from Dr. Suthiporn Sajjapanroj, (2024)

## **Three Domains of Learning**

#### Cognitive

focuses on developing the mental skills and the acquisition of knowledge of the individual

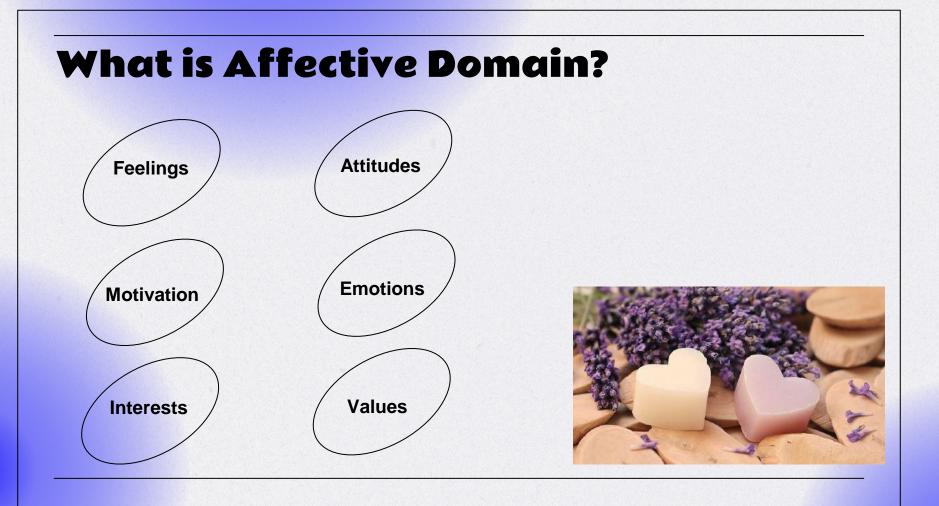
#### Psychomotor

includes utilizing motor skills and the ability to coordinate them

#### Affective

focuses on the attitudes, values, interests, and appreciation of learners

https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/planning-courses-and-assignments/course-design/blooms-taxonomy



### Agenda The Idea of Construct 01 What is construct? How is it related to affective domain? **Attributes of Affective Characteristics** 07 Target, Direction, Intensity **Case studies** 03 How to enhance affective domain learning

"Constructs cannot be defined only in terms of operational definitions, <u>but also</u> must demonstrate relationships (or lack thereof) with other constructs and observable phenomena"

(Raykov and Marcoulides 2011, p. 8).

### "Constructs"

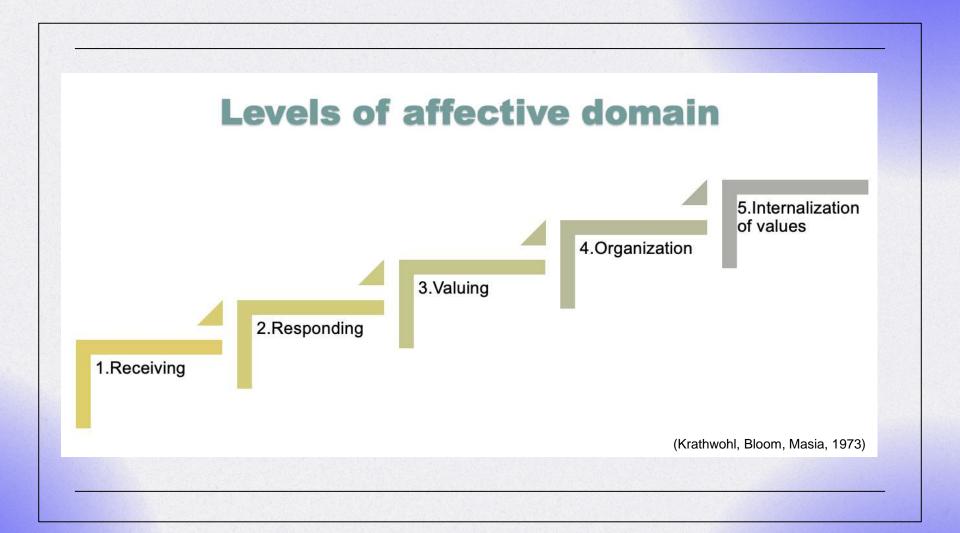


- Board concepts
- Theoretical terms
  - Proposed attributes that often cannot be measured directly

## Affective domain constructs

- Impossible to examine strict uni-dimensionality
- Complex, multidimensional
- Correlations among items
- Better understood as the measurement of a

"dominant component or factor"



## **1. Receiving**

#### Willingness

#### **Awareness**

- Captures the main concept.
- Remembers the name of a new friend.

- Acknowledges the existence of certain ideas, material, or phenomena.
- Understands and follow rules.

Levels	Definition	Examples
<mark>eceiving</mark>	Paying attention to phenomena or something (instruction, activities, etc.)	Student can <i>describe</i> the sustainability concept.

Levels	Definition	Action verbs
eceiving	Paying attention to phenomena or something (instruction, activities, etc.)	Asks, chooses, describes, follows, gives holds, identifies, locates, names, points to, selects, replies, uses

## 2. Responding

#### Willingness to respond

#### **Active participation**

Gives presentations.
Follows the safety rules and practices them.

Questions new ideas, concepts, etc. in order to fully understand them.
Participates in class discussions.

Levels	Definition	Examples
Receiving	Paying attention to phenomena or something (instruction, activities, etc.)	Student can <i>describe</i> the sustainability concept.
<mark>Responding</mark>	Taking action, giving feedback, obtaining satisfaction to the phenomena	Student <i>presents</i> the ideas how to take steps towards sustainability.

Levels	Definition	Action verbs
Receiving	Paying attention to phenomena or something (instruction, activities, etc.)	Asks, chooses, describes, follows, gives holds, identifies, locates, names, points to, selects, replies, uses
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## **3. Valuing**

#### **Simple acceptance**

Shows appreciation. Respects individual and cultural differences.

#### Complex state of commitment

- Demonstrates beliefs in the democratic process.
- Proposes a plan to social improvement and follow through with commitment.

Action Verbs for Affective Domain		
Levels	Definition	Examples
Receiving	Paying attention to phenomena or something (instruction, activities, etc.)	Student can <i>describe</i> the sustainability concept.
Responding	Taking action, giving feedback, obtaining satisfaction to the phenomena	Student <i>presents</i> the ideas how to take steps towards sustainability.
Valuing	Acceptance, appreciation, preference, commitment to something because of its perceived value.	Student <i>demonstrates</i> their commitment to making the campus more sustainable

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## 4. Organizing

## Contrasting different values

- Recognizes the need for balance between freedom and responsibility.
- Prioritizes time effectively to meet the needs of the organization, family and self.

#### **Synthesizing values**

standards.Creates a life plan in harmony with

Accept professional ethical

abilities, interests, and beliefs.

Level	Definition	Examples
<b>Organization</b>	Adding new value or belief to your own value system. Starting to organize your daily life around a set of value	Student <u>can make conscious</u> <u>choices</u> to support local businesses, which often prioritize sustainability in their production processes.

#### Level

## Definition

#### Action verbs

#### **Organization**

Adding new value or belief to your own value system. Starting to organize your daily life around a set of value Adheres, alters, arranges, combines, compares, completes, defends, explains, generalizes, identifies, integrates, modifies, organizes, prepares, relates, synthesizes

## **5. Internalization of values**

#### Value system

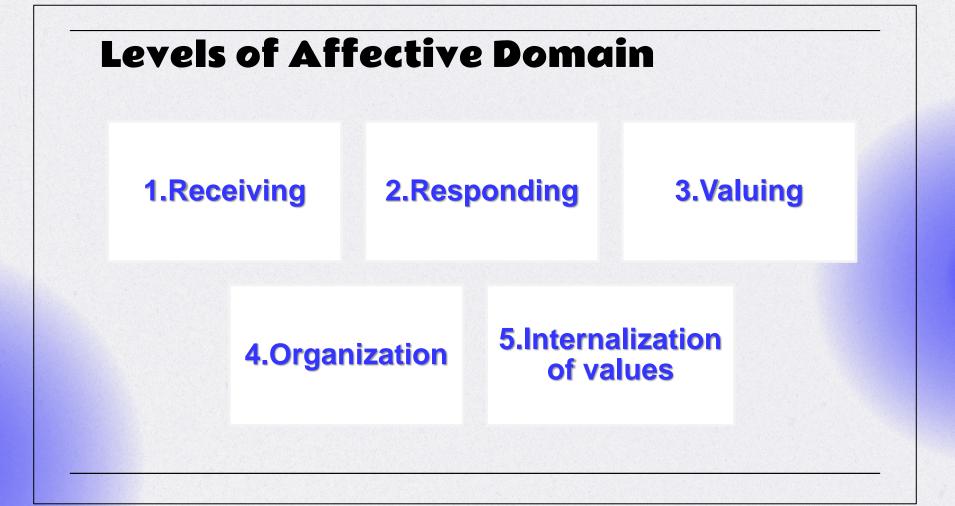
- Shows self-reliance even when working independently.
  - Displays a professional commitment to ethical practice on a daily basis.

#### **Instructional objectives**

- Uses an objective approach in problem solving.
- Revises judgments and change behavior in lite of new evidence.

Level	Definition	Examples
Organization	Adding new value or belief to your own value system. Starting to organize your daily life around a set of value	Student <u>can make conscious</u> <u>choices</u> to support local businesses, which often prioritize sustainability in their production processes.
<b>Characterization</b>	The <i>integration of value into</i> <i>your life style</i> . Start to live it naturally. It becomes a part of your life.	Student <i>inspires</i> others to follow suit and create a culture of sustainability within their communities.

Level	Definition	Action verbs
Organization	Adding new value or belief to your own value system. Starting to organize your daily life around a set of value	Adheres, alters, arranges, combines, compares, completes, defends, explains, generalizes, identifies, integrates, modifies, organizes, prepares, relates, synthesizes
<b>Characterization</b>	The <i>integration of value into</i> <i>your life style</i> . Start to live it naturally. It becomes a part of your life.	Acts, discriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, serves, solves, uses, verifies



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#### Greta Thunberg FRSGS



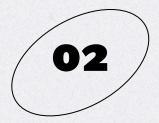
- First heard about climate change in 2011, at 8 years old
- In August 2018, she began the school climate strikes and public speeches.
- Became depressed, stop talking and eating, eventually diagnosed with Asperger syndrome, obsessive-compulsive disorder (OCD), and selective mutism.
- She challenged her parents to lower the family's carbon footprint and impact on the environment by becoming vegan, upcycling, and giving up flying.

Thunberg in 2023

In August 2019, she sailed across the Atlantic Ocean from England to New York City, in the racing yacht equipped with solar panels and underwater turbines. The voyage took 15 days. She tried to send a message to the world that there is no real sustainable option to travel across the oceans.

•

- She has been nominated for the Nobel Peace Prize every year between 2019 and 2023.
- In 2019, she became the youngestever Time Person of the Year.

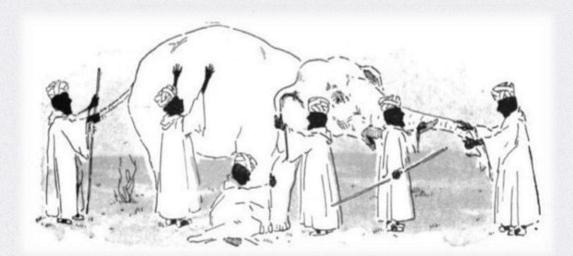


## Attributes of Affective Characteristics

Target, Direction, Intensity

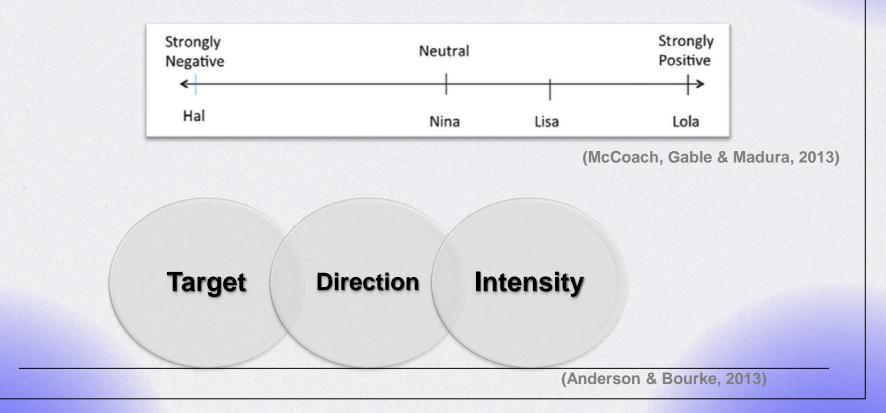
Measuring the affective domain is like.....

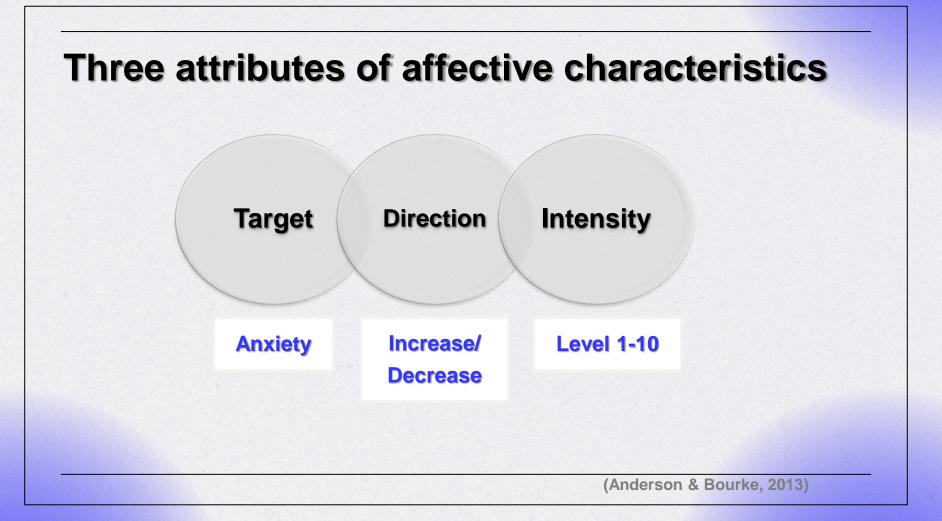
## The blind men and the elephant



(Herber Simon, 1981)

### Three attributes of affective characteristics





## Affective construct

- Impossible to examine strict uni-dimensionality
- Complex, multidimensional
- Correlations among items
- Better understood as the measurement of a "dominant component or factor"

## Four Types of Validity

The extent to which a measurement tool can measure what we want to measure

**Face validity** 

Observable behavior

#### **Criterion-related validity**

Indicators of specific trait or behavior

#### Content validity All facets of the concept

**Construct validity** 

**Clinical observation** 

## **Content Validity**

- **Domain definition:** The conceptual and operational definitions of the construct
- **Domain representation:** How well the instrument <u>as a whole</u> matches the domain definition
- Domain relevance: <u>How relevant</u> the elements of the instrument are to the content domain

### **Concerns for Content Validity**

- Experts usually place an item in a category other than the one that the developer had intended.
- Poorly defined and undifferentiated definition will restrict the content validity of the instrument.
- The initial development of an instrument aims to minimize potential error variance (underrepresentation, overrepresentation, misrepresentation) associated with the instrument and to increase the likelihood of <u>gathering supportive construct validity evidence in later studies</u> (Haynes et al., <u>1995</u>).

## **Three Criteria of Reliability**

#### 1. Test-Retest

- Are you hungry?
- Are you hungry?
- Are you hungry?

#### 2. Inter-Item

- Are you dizzy?
- Do you feel like you have enough energy to work?
- Is your stomach screaming?

#### 3. Inter-Observer

- Asked by instructor asks
- Asked by friends
- Asked by other people

Evaluating reliability can be done by ensuring that it satisfies <u>three reliability criteria</u>. Measures demonstrating **high reliability** should meet **all three criteria**.



## **Case studies**



## Motivational Interviewing in Health Profession Education



- Nurse Professional Development
- Promoting change in personal health behaviors
- Determine reasons for ambivalence regarding changing behavior, work with that individual to facilitate change

facilitate change

http://tiny\_cc\_sltjxz

### **Motivational Interviewing**

Stoffers, P. J., & Hatler, C. (2017). Increasing nurse confidence in patient teaching using motivational interviewing. *Journal for nurses in professional development*, *33*(4), 189-195.

#### TABLE 1 Content for Educational Workshop

- Review of the evidence-based education information including diabetes education patient handouts
- Review and demonstration of how to access the evidence-based education information in both paper and electronic versions
- Documentation expectations in electronic health record regarding diabetes education
- Discussion of barriers to learning and different learning styles
- Motivational interviewing described with examples
- · Role-play and demonstration
- · Debriefing and sharing of examples

- Examine examples, case studies
- Discuss, role-play, demonstrate
- Debriefed, shared difficult situations Examined possible examples of how to handle those difficult situations.

#### Nurses' Confidence in Diabetes Education Survey

TABLE 2         Nurses' Confidence in Diabetes Education		
	Preimplementation, Mean ( <i>SD</i> )	Postim <sub>j</sub> M
Overall confidence	2.81 (0.693)	3.7
Areas of greatest improvement		
I am confident that I can develop creative ways to cope with system constraints (such as time and patient load) and continue to teach well.	3.88 (0.696)	4.8
I am confident with my ability to teach patients with diabetes about target ranges for A1C levels, glucose levels, blood pressure, lipid values, and kidney values.	3.76 (0.969)	4.€
I know that I can motivate my patients to participate in their own diabetes self-care.	3.82 (0.683)	4.€
I am confident that I am able to successfully	3.82 (0.769)	4.5

Combine...

- 1. Teacher Self-efficacy (Schwarzer et al., 1999)
- 2. Confidence in Teaching Diabetes Education Scale (five items including managing difficult patients, coping, managing problems, diet, and exercise) (Eaton-Spiva & Day, 2011)

### **Motivational Interviewing**

- Increase self-efficacy
- Develop effective communication skills
- Understand the patient perspective on certain issues
- Increase ability to engage patients in discussion on uncomfortable topics

Pena, A., Rangel, N., Munoz, M., Mejia, J., & Lara, G. (2016). Affective behavior and nonverbal interaction in collaborative virtual environments. *Journal of Educational Technology & Society*, *19*(2), 29-41.

Black, B., Lucarelli, J., Ingman, M., & Briskey, C. (2016). Changes in physical therapist students' self-efficacy for physical activity counseling following a motivational interviewing learning module. *Journal of Physical Therapy Education*, *30*(3), 28-32.
 Pignataro, R. M., & Huddleston, J. (2015). The use of motivational interviewing in physical therapy education and practice:

empowering patients through effective self-management. Journal of Physical Therapy Education, 29(2), 62-71.

## Case 2

# Entrepreneurship Education via Online course (MOOC)

Wu, W. H., Kao, H. Y., Wu, S. H., & Wei, C. W. (2019). Development and evaluation of affective domain using student's feedback in entrepreneurial Massive Open Online Courses. *Frontiers in psychology*, *10*, 1109.

## Case 2

# Entrepreneurship Education via Online course (MOOC)

- Entrepreneurship learning usually focus on functional tasks and operational tasks of business (e.g., risk planning; initiate, develop, and manage business; develop and operate businesses)
- Personal skills, behavior attributes and knowledge in a broader range of contexts (e.g., environmental protection, fair trade, health and human rights, etc.)

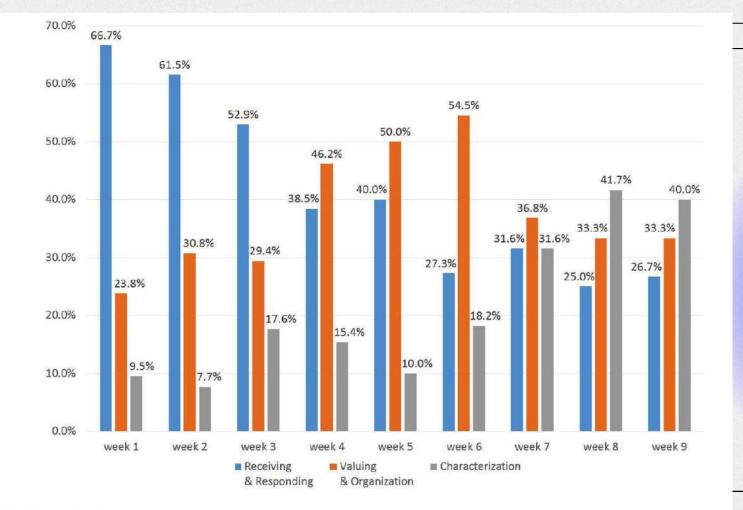
#### Or "Social Entrepreneurship"

Wu, W. H., Kao, H. Y., Wu, S. H., & Wei, C. W. (2019). Development and evaluation of affective domain using student's feedback in entrepreneurial Massive Open Online Courses. *Frontiers in psychology*, *10*, 1109.

#### TABLE 1 | Entrepreneurship course objectives.

Week	Affective level	Course objectives
1	Receiving and responding	Introduction to "social entrepreneurship"
2	Receiving and responding	Defines social entrepreneurship through a case study of Bangladesh's Grameen Bank. Students
	responding	are assigned to develop a proposal within the CBS Entrepreneurship Platform to attract external
		funding
3	Receiving and responding	Discuss the characteristics needed for successful social entrepreneurship
4	Valuing and	Identifying and developing opportunities:
	organization	identifying hidden ones, creating new ones,
		eliminating the need for one and creating demand
		for antagonistic assets

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	organization	identifying hidden ones, creating new ones,
		eliminating the need for one and creating demand
		for antagonistic assets
5	Valuing and	Distinguishing business models for specific
	organization	businesses in terms of scale model, role model,
		organism, recipes
6	Valuing and	Applying the "business model canvas" concept to
	organization	the real businesses
7	Characterization	Discussing and developing business proposals
8	Characterization	Optimizing organizational structures using
		examples from CIC and L3C. Identifying the pros
		and cons of different organization types
9	Characterization	Attracting external funding. Students share their
		experience of developing effective business plans
		for raising funds



Variation of affective goals.

