Affective Domain

Suthiporn Sajjapanroj, Ph.D.

Patcharapan Siriwat, Ph.D.

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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

What is Affective Domain?

Feelings

Attitudes

Motivation

Emotions

Interests

Values

Agenda

01 **The Idea of Construct**

What is construct? How is it related to affective domain?

02 **Attributes of Affective Characteristics**

Target, Direction, Intensity

03 **Case studies**

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"

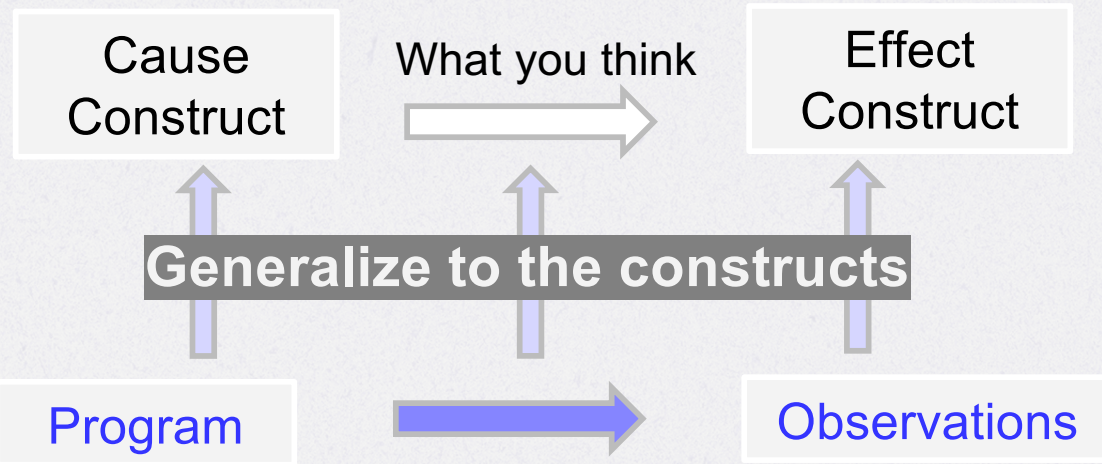- Board concepts
- Theoretical terms
- Proposed attributes that often *cannot be measured directly*

The Idea of Construct

Theory

Cause Construct → What you think → Effect Construct

Generalize to the constructs

Program → Observations

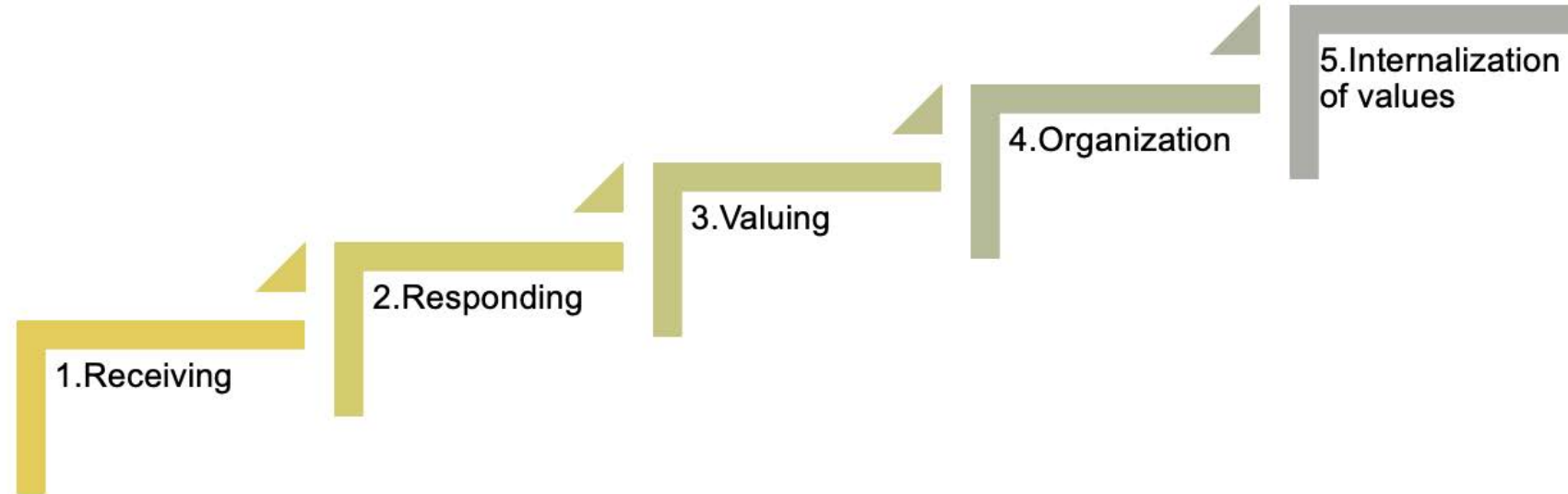What you do   What you see

Practice

(Trochim, W., 2020)

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**"

Levels of affective domain

1. Receiving
2. Responding
3. Valuing
4. Organization
5. Internalization of values

(Krathwohl, Bloom, Masia, 1973)

1. Receiving

Willingness

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

Awareness

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

Action Verbs for Affective Domain

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

2. Responding

Willingness to respond

- Gives presentations.
- Follows the safety rules and practices them.

Active participation

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

Action Verbs for Affective Domain

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
Responding	Taking action, giving feedback, obtaining satisfaction to the phenomena	Answers, assists, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes

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	Action verbs
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Responding	Taking action, giving feedback, obtaining satisfaction to the phenomena	**Answers, assists, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes**
Valuing	Acceptance, appreciation, preference, commitment to something because of its perceived value.	**Completes, describes, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, shares, studies, works**

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

- Accept professional ethical standards.
- Creates a life plan in harmony with abilities, interests, and beliefs.

Action Verbs for Affective Domain (cont.)

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.

Action Verbs for Affective Domain (cont.)

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**
Characterization	The ***integration of value into your life style**. 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**

Levels of Affective Domain

1.Receiving

2.Responding

3.Valuing

4.Organization

5.Internalization of values

Action Verbs for Affective Domain

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Greta Thunberg
FRSGS

Thunberg in 2023

- **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.**

- 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 youngest-ever Time Person of the Year**.

Source: Wikipedia

Attributes of Affective Characteristics

Target, Direction, Intensity

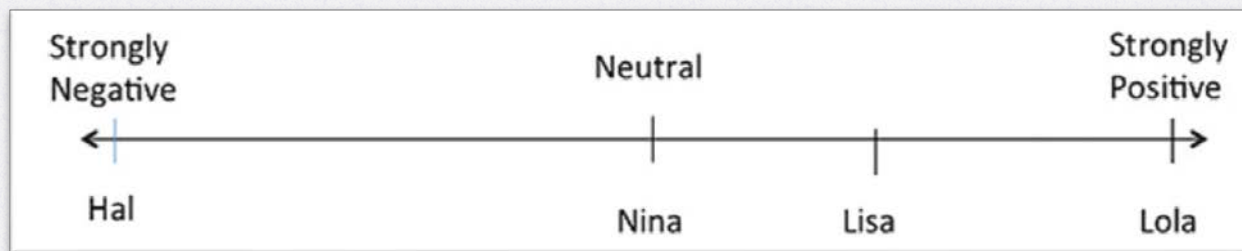Measuring the affective domain is like…..

The blind men and the elephant

(Herber Simon, 1981)

Three attributes of affective characteristics

Strongly Negative ← Neutral → Strongly Positive

Hal — Nina — Lisa — Lola

(McCoach, Gable & Madura, 2013)

Target **Direction** **Intensity**

(Anderson & Bourke, 2013)

Three attributes of affective characteristics

Target **Direction** Intensity

Anxiety **Increase/ Decrease** **Level 1-10**
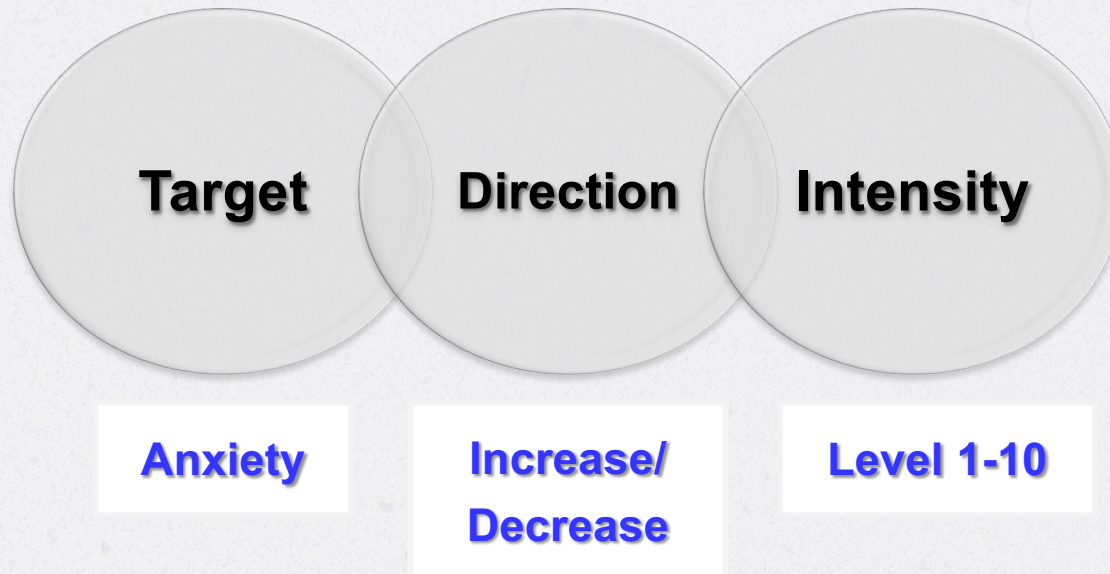
(Anderson & Bourke, 2013)

Affective construct

- Impossible to examine strict uni-dimensionality

- Complex, multidimensional

- Correlations among items

- Better understood as the measurement of a "**dominant component or factor**"

As a consequence of the factor analysis, the SDLSS was comprised of 9 factors and a total of 40 items with 8 negative items. Based on the data in the literature regarding the skills to be measured by each factor, the following factor names were given:

SLDSS (Self-directed learning skills scale)

- attitude towards learning (ATL),
- learning responsibility (LR),
- motivation and self-confidence (MS),
- ability to plan learning (PL),
- ability to use learning opportunities (ULO),
- ability to manage information (MI),
- ability to apply learning strategies (ALS),
- assessment of learning process (ALP),
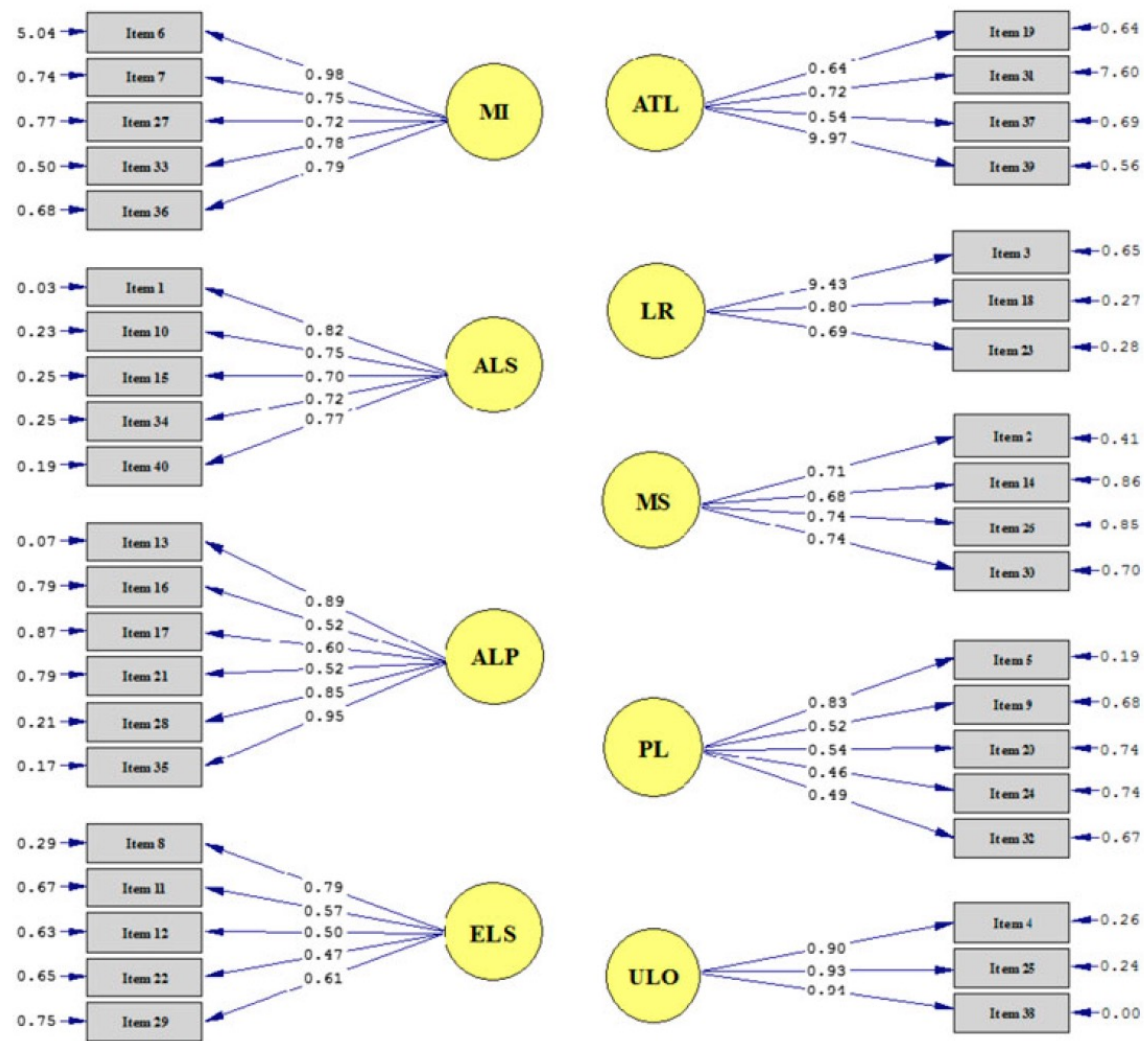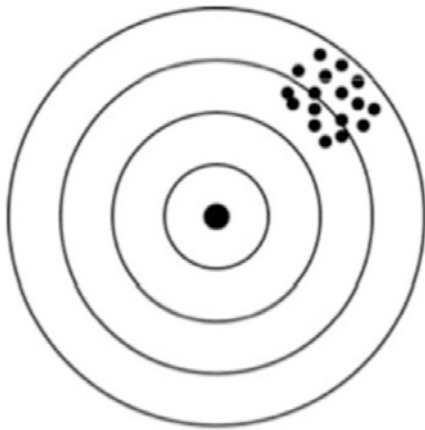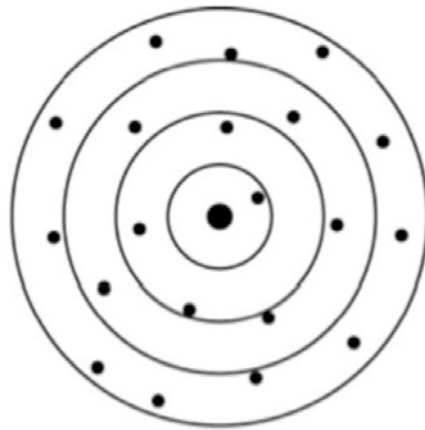- evaluation of learning success/results (ELS).

Scree plot of the exploratory factor analysis of the SDLSS
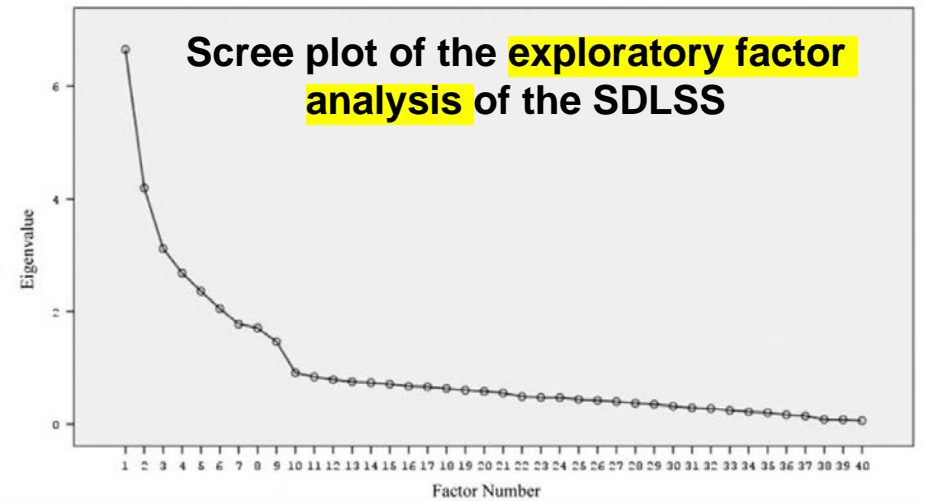
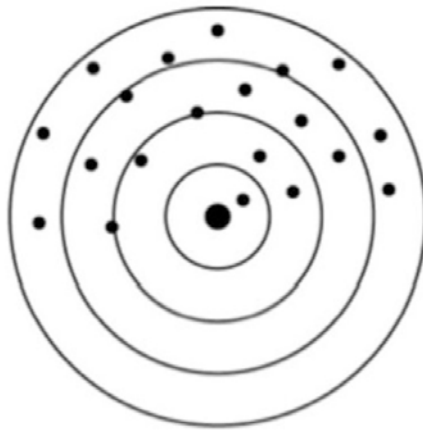**Figure 2. Confirmatory factor analysis model for the SDLSS**
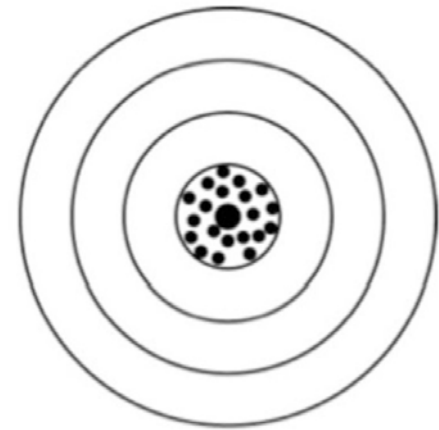
Validity vs Reliability

Reliable
but not valid

Valid
but not reliable

Neither reliable,
nor valid

**Both reliable
and valid**

Four Criteria 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

Who decides?

(Sireci, 1998)

Table 3.2 Example form for expert content validation

Item	Category						Certainty				Relevance		
1. Getting A's is very difficult for me	I	II	III	IV	V	VI	1	2	3	4	1	2	3
2. I feel alienated at school	I	II	III	IV	V	VI	1	2	3	4	1	2	3
3. I am not motivated to study for exams	I	II	III	IV	V	VI	1	2	3	4	1	2	3
4. I dislike my courses	I	II	III	IV	V	VI	1	2	3	4	1	2	3
5. School is of no value to me	I	II	III	IV	V	VI	1	2	3	4	1	2	3
6. I wish that I went to a different school	I	II	III	IV	V	VI	1	2	3	4	1	2	3
7. I feel socially isolated at school	I	II	III	IV	V	VI	1	2	3	4	1	2	3
8. I put forth minimal effort on my schoolwork	I	II	III	IV	V	VI	1	2	3	4	1	2	3
9. Most teachers here are poor teachers	I	II	III	IV	V	VI	1	2	3	4	1	2	3
10. I do not feel like I belong at this school	I	II	III	IV	V	VI	1	2	3	4	1	2	3
11. I have trouble keeping track of my assignments	I	II	III	IV	V	VI	1	2	3	4	1	2	3
12. I hate school	I	II	III	IV	V	VI	1	2	3	4	1	2	3
13. I feel powerless at school	I	II	III	IV	V	VI	1	2	3	4	1	2	3

An acceptable average congruency in percentage is 90% or higher (Beck and Gable 2001).

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 gathering supportive construct validity evidence in later studies (Haynes et al., 1995).

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**.

Let's try Inter-Item Criteria

Create other questions that should be able to

measure the same construct

ฉันมักจะนั่งหลับขณะนั่งฟังบรรยาย/ฟังเทศน์/นั่งสมาธิ

- **ฉันมักจะมีสติ และรู้ตัวอยู่เสมอ**

- **ฉันสามารถกำหนดลมหายใจได้ดี**

- **ฉันสามารถตระหนักถึงอารมณ์ความรู้สึกต่างๆ ที่เกิดขึ้นกับตัวฉัน**

ฉันสามารถลืมสิ่งที่ทำให้ฉันโกรธ หรือเสียใจได้โดยง่าย

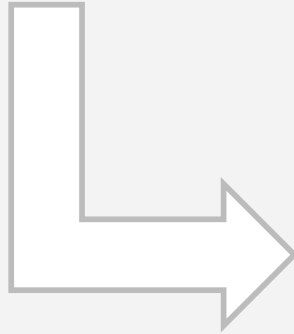ฉันมักคิดเรื่องราวอื่นๆ ที่ไม่เกี่ยวกับงาน หรือสิ่งที่ทำอยู่

ฉันขี้กังวล และหดหู่ได้ง่าย

เมื่อเห็นขนม ลูกอม ของขบเคี้ยว ฉันหยิบกินทั้งที่ไม่หิว

ฉันมักซื้อของที่ไม่ได้ตั้งใจจะซื้อ

Case studies

03

Case 1

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

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 (SD)	Postim... 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)	4.6...
I know that I can motivate my patients to participate in their own diabetes self-care.	3.82 (0.683)	4.6...
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.

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 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 organization	Identifying and developing opportunities: identifying hidden ones, creating new ones, eliminating the need for one and creating demand for antagonistic assets

4	Valuing and organization	Identifying and developing opportunities: identifying hidden ones, creating new ones, eliminating the need for one and creating demand for antagonistic assets
5	Valuing and organization	Distinguishing business models for specific businesses in terms of scale model, role model, organism, recipes
6	Valuing and organization	Applying the "business model canvas" concept to 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
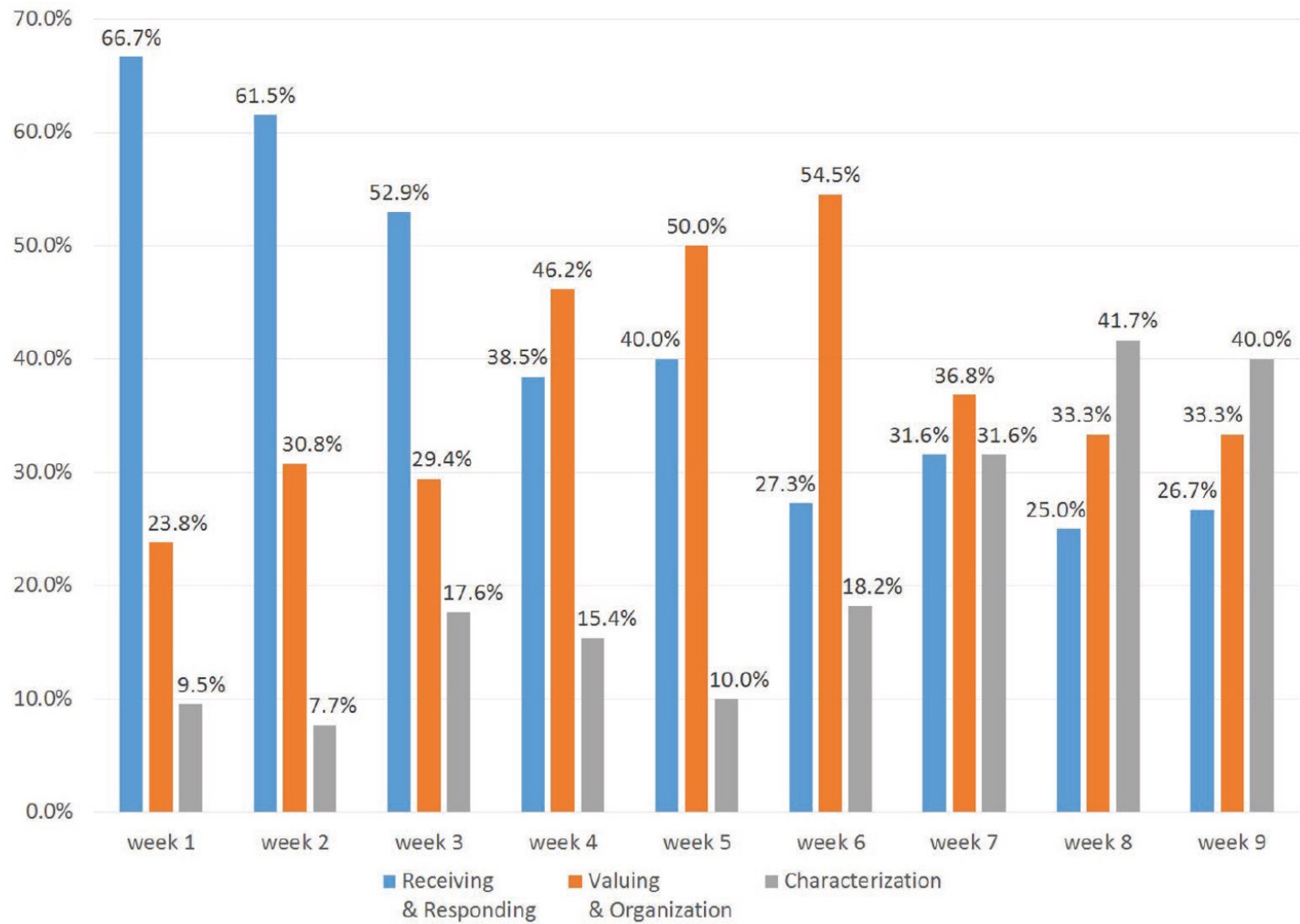
| Variation of affective goals.

Q & A