

Acknowledgment:

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THE END

**A Brief Guide to Learning Domains
(Cognitive, Psychomotor & Affective)
& Life Skills**

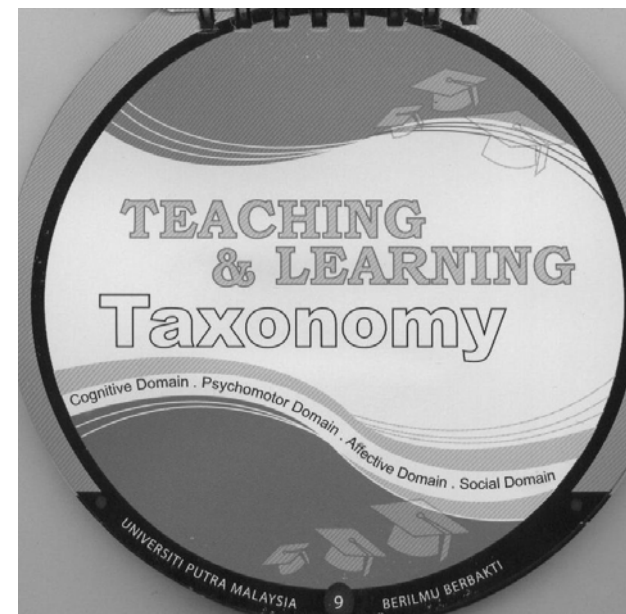
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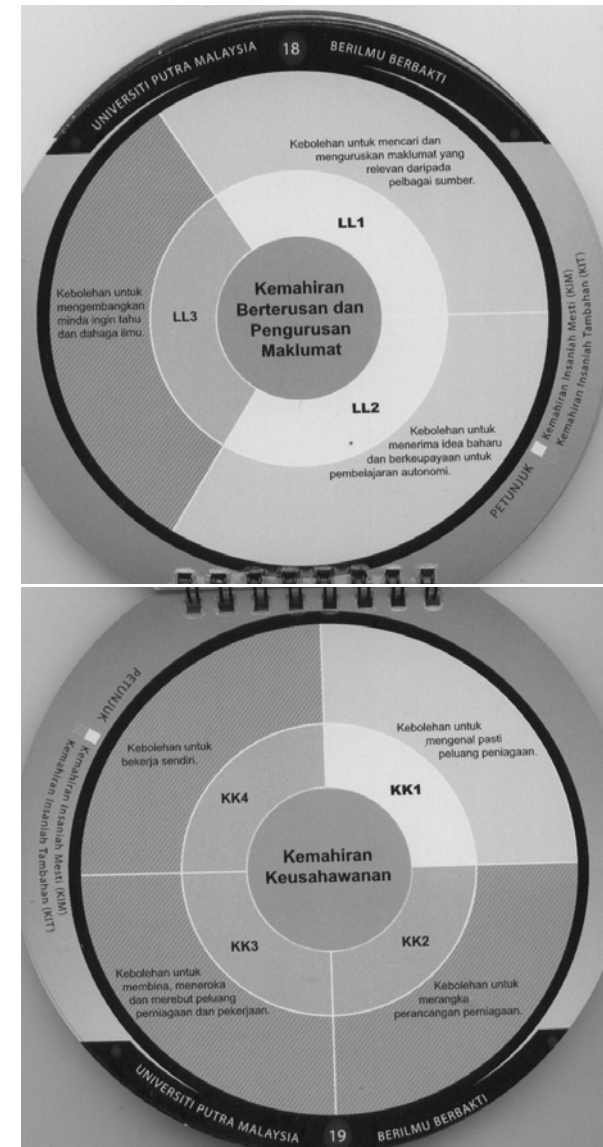
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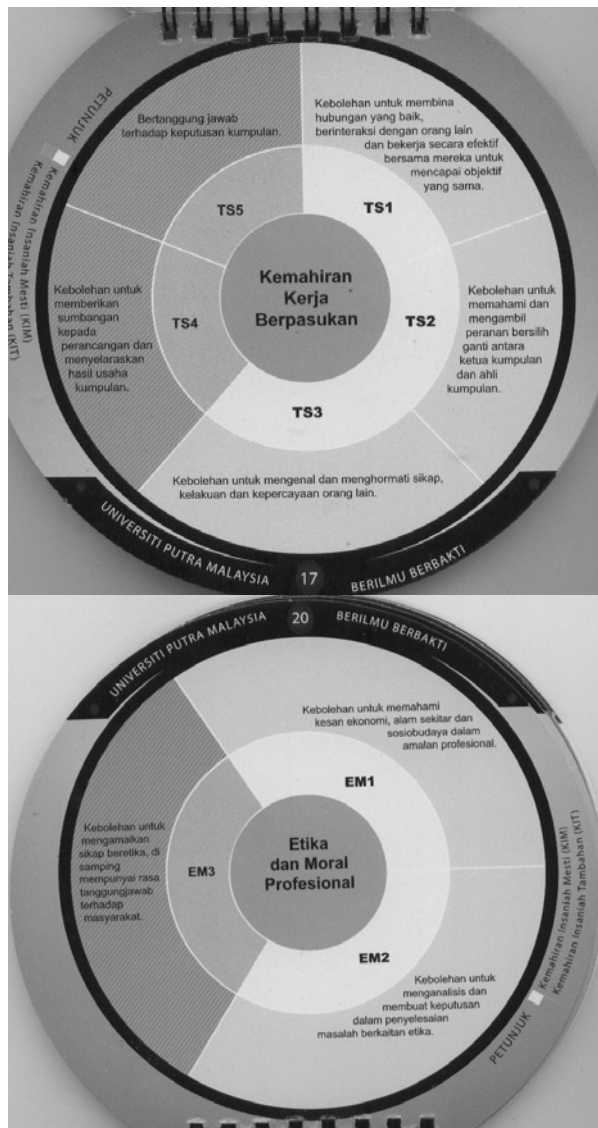
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The six levels of cognitive domain:

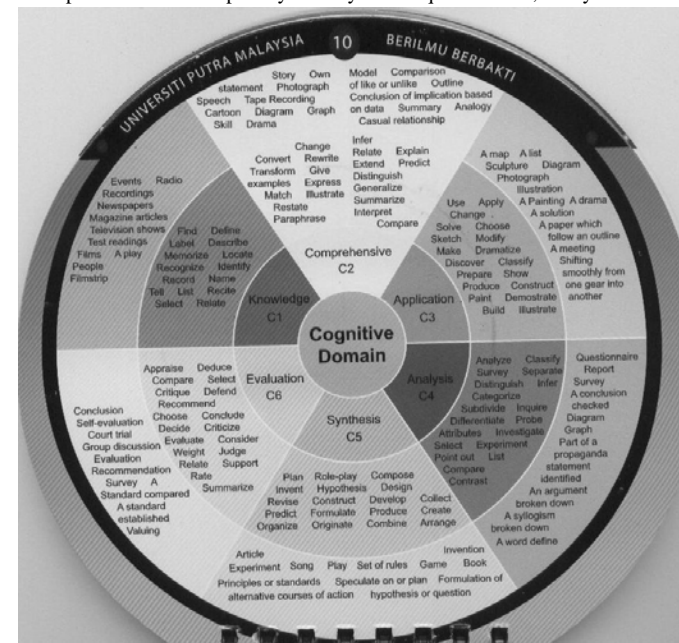
1. **Knowledge:** recognize or recall information.
 Q: What is the capital of Maine? Who wrote "Hamlet?"
 Words typically used: define, recall, recognize, remember, who, what, where, when.
2. **Comprehension:** demonstrate that the student has sufficient understanding to organize and arrange material mentally
 Q: What do you think Hamlet meant when he said, "to be or not to be, that is the question?" (Rosenshine, among others, would argue that one of the best ways to teach is to teach pupils how to ask their own questions about the topic under consideration.)
 Words typically used: describe, compare, contrast, rephrase, put in your own words, explain the main idea.
3. **Application:** a question that asks a student to apply previously learned information to reach an answer. Solving math word problems is an example.
 Q: According to our definition of socialism, which of the following nations would be considered to be socialist?
 Words typically used: apply, classify, use, choose, employ, write and example, solve, how many, which, what is.
4. **Analysis:** higher order questions that require students to think critically and in depth. In analysis questions, students are asked to engage in cognitive processes such as:
 - identify the motives, reasons, and/or causes for a specific occurrence (Q: Why was Israel selected as the site for the Jewish nation?),
 - consider and analyze available information to reach a conclusion, inference, or generalization based on this information (Q: After taking a few physics courses, what can you conclude about the need to study physics in understanding the world around you).
 Words typically used: identify motives/causes, draw conclusions, determine evidence, support, analyze, why.
5. **Synthesis:** higher order question that asks the student to perform original and creative thinking. Synthesis questions ask students to:
 - produce original communications. (Q: What's a good name for this invention? Write a letter to the editor on a social issue of concern to you. Make a collage of pictures and words that represents your beliefs and feelings about the issue.)
 - make predictions. (Q: How would the U.S.A. be different if the South had won the Civil War? What would happen if school attendance was made optional? What is the next likely development in popular music?)
 - solve problems--although analysis questions may also ask students to solve problems, synthesis questions differ because they don't require a single correct answer but, instead allow a variety of creative answers. (How could we determine the number of pennies in a jar without counting them? How can we raise money for our ecology project?)



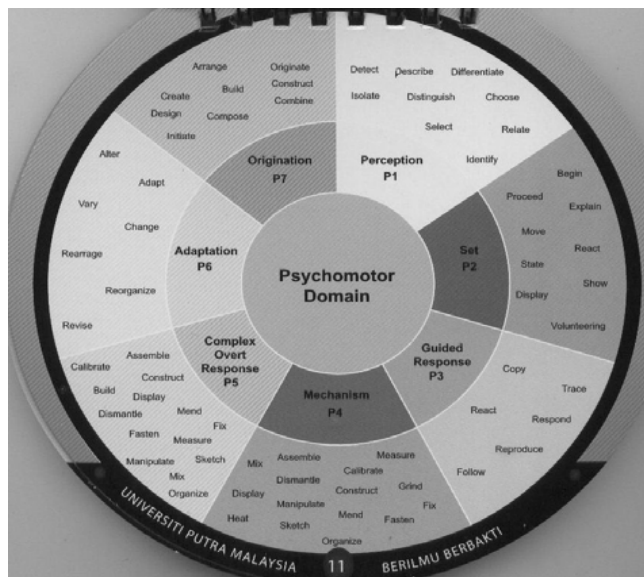


Words typically used in synthesis questions: predict, produce, write, design, develop, synthesize, construct, how can we improve, what would happen if, can you devise, how can we solve

6. **Evaluation:** a higher level question that does not have a single correct answer. It requires the student to judge the merit of an idea, a solution to a problem, or an aesthetic work. The student may also be asked to offer an opinion on an issue. To answer evaluation questions objective criteria or personal values must be applied. Some standard must be used. differing standards are quite acceptable and they naturally result in different answers. This type of question frequently is used to surface values or to cause students to realize that not everyone sees things the same way. It can be used to start a class discussion. It can also precede a follow-up analysis or synthesis question like, "Why?"



Psychomotor Domain Taxonomy (Source: <http://www.personal.psu.edu/bxb11/Objectives/psychomotor.html>). This domain is characterized by progressive levels of behaviors from observation to mastery of a physical skill. Several different taxonomies exist. Simpson (1972) built this taxonomy on the work of Bloom and others:

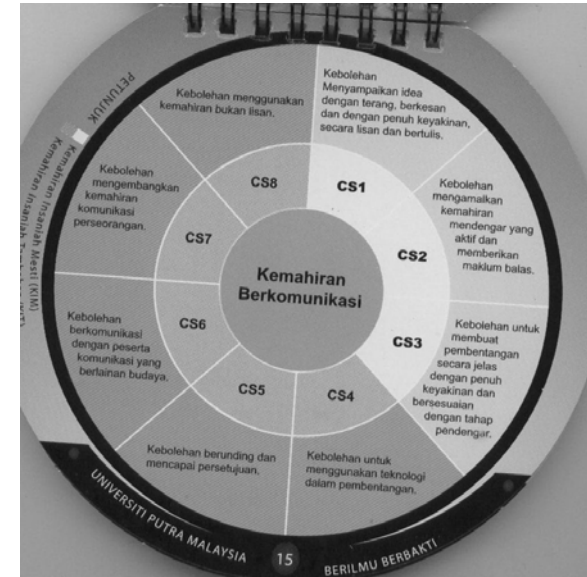
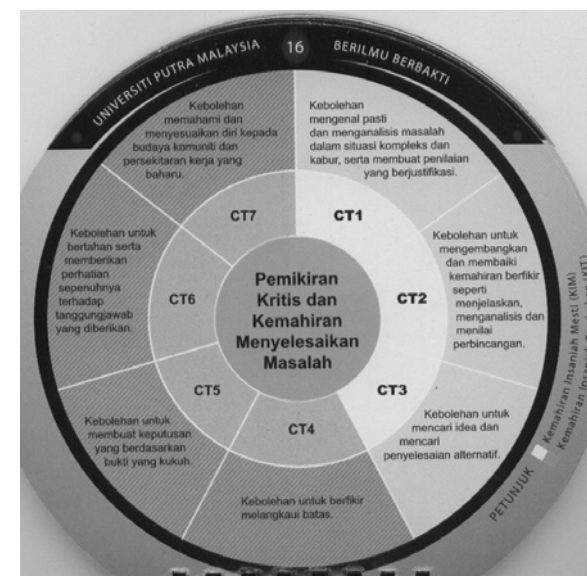


- Perception - Sensory cues guide motor activity.
- Set - Mental, physical, and emotional dispositions that make one respond in a certain way to a situation.
- Guided Response - First attempts at a physical skill. Trial and error coupled with practice lead to better performance.
- Mechanism - The intermediate stage in learning a physical skill. Responses are habitual with a medium level of assurance and proficiency.
- Complex Overt Response - Complex movements are possible with a minimum of wasted effort and a high level of assurance they will be successful.
- Adaptation - Movements can be modified for special situations.
- Origination - New movements can be created for special situations.

Simpson, E. (1972). *The classification of educational objectives in the psychomotor domain: The psychomotor domain*. Vol. 3. Washington, DC: Gryphon House.

Dave (1970) developed this taxonomy:

- Imitation - Observing and copying someone else.
- Manipulation - Guided via instruction to perform a skill.



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5. Characterization by a Value or Value Complex. At this level, the person has held a value system that has controlled his behavior for a sufficiently long time that a characteristic "life style" has been developed. Behavior is pervasive, consistent and predictable. Objectives are concerned with personal, social, and emotional adjustment: displays self reliance in working independently, cooperates in

Education is not training. Education involves all the three domains of learning with the intention of producing change. Change is to enable the graduating students to have the attributes set forth by the program, 3 to 5 years upon graduation. The Ministry of Higher Education learning outcomes are :

1. Knowledge in Specific Area – Content
2. Practical Skills
3. Thinking and Scientific Skills
4. Communication skills
5. Social skills, teamwork and responsibilities
6. Values, Ethics and professionalism
7. Information Management and Life Long Learning
8. Management and Entrepreneurship
9. Leadership skills

The characteristics of social or life skills are presented in the scanned images that follows and some of the images are written in Bahasa Melayu. (the scanned images are copyright of Universiti Putra Malaysia).



- Precision - Accuracy, proportion and exactness exist in the skill performance without the presence of the original source.
- Articulation - Two or more skills combined, sequenced, and performed consistently
- Naturalization - Two or more skills combined, sequenced, and performed consistently and with ease. The performance is automatic with little physical or mental exertion.

Based upon R. H. Dave, as reported in R. J. Armstrong et al., *Developing and Writing Behavioral Objectives* (Tucson, AZ: Educational Innovators Press, 1970).

The following list is a combination of the above taxonomies:

Psychomotor Domain		
Level	Definition	Example
1. Observing	Active mental attending of a physical event.	The learner watches a more experienced person. Other mental activity, such as reading may be a part of the observation process.
2. Imitating	Attempted copying of a physical behavior.	The first steps in learning a skill. The learner is observed and given direction and feedback on performance. Movement is not automatic or smooth.
3. Practicing	Trying a specific physical activity over and over.	The skill is repeated over and over. The entire sequence is performed repeatedly. Movement is moving towards becoming automatic and smooth.
4. Adapting	Fine tuning. Making minor adjustments in the physical activity in order to perfect it.	The skill is perfected. A mentor or a coach is often needed to provide an outside perspective on how to improve or adjust as needed for the situation.

BEHAVIORAL VERBS APPROPRIATE FOR THE PSYCHOMOTOR DOMAIN

<ul style="list-style-type: none"> ● bend ● calibrates ● constructs ● differentiate (by touch) ● dismantles ● displays ● fastens ● fixes ● grasp 	<ul style="list-style-type: none"> ● grinds ● handle ● heats ● manipulates ● measures ● mends ● mixes ● operate 	<ul style="list-style-type: none"> ● organizes ● perform (skillfully) ● reach ● relax ● shorten ● sketches ● stretch ● write
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Affective Domain of the Taxonomy of Educational Objectives

The Affective Domain addresses interests, attitudes, opinions, appreciations, values, and emotional sets. If the teaching purpose is to change attitudes/behavior rather than to transmit/process information, then the instruction should be structured to progress through the levels of the **Affective Domain**:

1. **Receiving.** The student passively attends to particular phenomena or stimuli [classroom activities, textbook, music, etc. The teacher's concern is that the student's attention is focused. Intended outcomes include the pupil's awareness that a thing exists. Sample objectives: listens attentively, shows sensitivity to social problems. Behavioral terms: asks, chooses, identifies, locates, points to, sits erect, etc.
2. **Responding.** The student actively participates. The pupil not only attends to the stimulus but reacts in some way. Objectives: completes homework, obeys rules, participates in class discussion, shows interest in subject, enjoys helping others, etc. Terms: answers, assists, complies, discusses, helps, performs, practices, presents, reads, reports, writes, etc.
3. **Valuing.** The worth a student attaches to a particular object, phenomenon, or behavior. Ranges from acceptance to commitment (e.g., assumes responsibility for the functioning of a group). Attitudes and appreciation. Objectives: demonstrates belief in democratic processes, appreciates the role of science in daily life, shows concern for others' welfare, demonstrates a problem-solving approach, etc. Terms: differentiates, explains, initiates, justifies, proposes, shares, etc.

4. **Organization.** Bringing together different values, resolving conflicts among them, and starting to build an internally consistent value system--comparing, relating and synthesizing values and developing a philosophy of life. Objectives: recognizes the need for balance between freedom and responsibility in a democracy, understands the role of systematic planning in solving problems, accepts responsibility for own behavior, etc. Terms: Arranges, combines, compares, generalizes, integrates, modifies, organizes, synthesizes, etc.

5. **Characterization by a Value or Value Complex.** At this level, the person has held a value system that has controlled his behavior for a sufficiently long time that a characteristic "life style" has been developed. Behavior is pervasive, consistent and predictable. Objectives are concerned with personal, social, and emotional adjustment: displays self reliance in working independently, cooperates in group activities, maintains good health habits, etc.

