**MANAGEMENT OF INSTRUCTION**

Determining and Formulating Goals / Objectives

“Goals are our guiding star.”

**Guiding Principles in determining and Formulating Learning Objectives**

1. “Begin with the end in mind”
2. Share lesson objective with students
3. Lesson objectives must be in the two or three domains-knowledge (cognitive) skill, (psychomotor) and values (affective).
4. Work on significant and relevant lesson objectives
5. Lesson objective must be aligned with the aims of education as embodied in the Philippine Constitution and other Laws and on the vision-mission statements of the educational institution of which you are a part.
6. Aim at the development of critical and creative thinking.
7. For accountability of learning, lesson objectives must be SMART, i.e., Specific, Measurable, Attainable, Result-oriented, and Relevant Time-bound.

**Bloom's Taxonomy of Learning Domains**

**The Three Types of Learning**

There is more than one type of [learning](http://www.nwlink.com/%7Edonclark/learning/learning.html). A committee of colleges, led by Benjamin Bloom (1956), identified three domains of educational activities:

* **Cognitive**: mental skills (*Knowledge*)
* **Affective**: growth in feelings or emotional areas (*Attitude*)
* **Psychomotor**: manual or physical skills (*Skills*)

## Cognitive Domain

The cognitive domain (Bloom, 1956) involves knowledge and the development of intellectual skills. This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills. There are six major categories, which are listed in order below, starting from the simplest behavior to the most complex. The categories can be thought of as degrees of difficulties. That is, the first ones must normally be mastered before the next ones can take place.

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| Category | Example and Key Words (verbs) |
| **Knowledge**: Recall data or information. | **Examples**: Recite a policy. Quote prices from memory to a customer. Knows the safety rules.  **Key Words**: defines, describes, identifies, knows, labels, lists, matches, names, outlines, recalls, recognizes, reproduces, selects, states. |
| **Comprehension**: Understand the meaning, translation, interpolation, and interpretation of instructions and problems. State a problem in one's own words. | **Examples**: Rewrites the principles of test writing. Explain in one's own words the steps for performing a complex task. Translates an equation into a computer spreadsheet.  **Key Words**: comprehends, converts, defends, distinguishes, estimates, explains, extends, generalizes, gives an example, infers, interprets, paraphrases, predicts, rewrites, summarizes, translates. |
| **Application**: Use a concept in a new situation or unprompted use of an abstraction. Applies what was learned in the classroom into novel situations in the work place. | **Examples**: Use a manual to calculate an employee's vacation time. Apply laws of statistics to evaluate the reliability of a written test.  **Key Words**: applies, changes, computes, constructs, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses. |
| **Analysis**: Separates material or concepts into component parts so that its organizational structure may be understood. Distinguishes between facts and inferences. | **Examples**: Troubleshoot a piece of equipment by using logical deduction. Recognize logical fallacies in reasoning. Gathers information from a department and selects the required tasks for training.  **Key Words**: analyzes, breaks down, compares, contrasts, diagrams, deconstructs, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, relates, selects, separates. |
| **Synthesis**: Builds a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure. | **Examples**: Write a company operations or process manual. Design a machine to perform a specific task. Integrates training from several sources to solve a problem. Revises and process to improve the outcome.  **Key Words**: categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes. |
| **Evaluation**: Make judgments about the value of ideas or materials. | **Examples**: Select the most effective solution. Hire the most qualified candidate. Explain and justify a new budget.  **Key Words**: appraises, compares, concludes, contrasts, criticizes, critiques, defends, describes, discriminates, evaluates, explains, interprets, justifies, relates, summarizes, supports. |

## Affective Domain

The affective domain (Krathwohl, Bloom, Masia, 1973) includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The five major categories are listed from the simplest behavior to the most complex:

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| Category | Example and Key Words (verbs) |
| **Receiving Phenomena**: Awareness, willingness to hear, selected attention. | **Examples**: Listen to others with respect. Listen for and remember the name of newly introduced people.  **Key Words**: asks, chooses, describes, follows, gives, holds, identifies, locates, names, points to, selects, sits, erects, replies, uses. |
| **Responding to Phenomena**: Active participation on the part of the learners. Attends and reacts to a particular phenomenon. Learning outcomes may emphasize compliance in responding, willingness to respond, or satisfaction in responding (motivation). | **Examples**:  Participates in class discussions.  Gives a presentation. Questions new ideals, concepts, models, etc. in order to fully understand them. Know the safety rules and practices them.  **Key Words**: answers, assists, aids, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes. |
| **Valuing**: The worth or value a person attaches to a particular object, phenomenon, or behavior. This ranges from simple acceptance to the more complex state of commitment. Valuing is based on the internalization of a set of specified values, while clues to these values are expressed in the learner's overt behavior and are often identifiable. | **Examples**:  Demonstrates belief in the democratic process. Is sensitive towards individual and cultural differences (value diversity). Shows the ability to solve problems. Proposes a plan to social improvement and follows through with commitment. Informs management on matters that one feels strongly about.  **Key Words**: completes, demonstrates, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, shares, studies, works. |
| **Organization**: Organizes values into priorities by contrasting different values, resolving conflicts between them, and creating an unique value system.  The emphasis is on comparing, relating, and synthesizing values. | **Examples**:  Recognizes the need for balance between freedom and responsible behavior. Accepts responsibility for one's behavior. Explains the role of systematic planning in solving problems. Accepts professional ethical standards. Creates a life plan in harmony with abilities, interests, and beliefs. Prioritizes time effectively to meet the needs of the organization, family, and self.  **Key Words**: adheres, alters, arranges, combines, compares, completes, defends, explains, formulates, generalizes, identifies, integrates, modifies, orders, organizes, prepares, relates, synthesizes. |
| **Internalizing values** (characterization): Has a value system that controls their behavior. The behavior is pervasive, consistent, predictable, and most importantly, characteristic of the learner. Instructional objectives are concerned with the student's general patterns of adjustment (personal, social, emotional). | **Examples**:  Shows self-reliance when working independently. Cooperates in group activities (displays teamwork). Uses an objective approach in problem solving.  Displays a professional commitment to ethical  practice on a daily basis. Revises judgments and changes behavior in light of new evidence. Values people for what they are, not how they look.  **Key Words**: acts, discriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, serves, solves, verifies. |

## Psychomotor Domain

The psychomotor domain (Simpson, 1972) includes physical movement, coordination, and use of the motor-skill areas. Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution. The seven major categories are listed from the simplest behavior to the most complex:

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| Category | Example and Key Words (verbs) |
| **Perception**: The ability to use sensory cues to guide motor activity.  This ranges from sensory stimulation, through cue selection, to translation. | **Examples**:  Detects non-verbal communication cues. Estimate where a ball will land after it is thrown and then moving to the correct location to catch the ball. Adjusts heat of stove to correct temperature by smell and taste of food. Adjusts the height of the forks on a forklift by comparing where the forks are in relation to the pallet.  **Key Words**: chooses, describes, detects, differentiates, distinguishes, identifies, isolates, relates, selects. |
| **Set**: Readiness to act. It includes mental, physical, and emotional sets. These three sets are dispositions that predetermine a person's response to different situations (sometimes called mindsets). | **Examples**:  Knows and acts upon a sequence of steps in a manufacturing process. Recognize one's abilities and limitations. Shows desire to learn a new process (motivation). NOTE: This subdivision of Psychomotor is closely related with the “Responding to phenomena” subdivision of the Affective domain.  **Key Words**: begins, displays, explains, moves, proceeds, reacts, shows, states, volunteers. |
| **Guided Response**: The early stages in learning a complex skill that includes imitation and trial and error. Adequacy of performance is achieved by practicing. | **Examples**:  Performs a mathematical equation as demonstrated. Follows instructions to build a model. Responds hand-signals of instructor while learning to operate a forklift.  **Key Words**: copies, traces, follows, react, reproduce, responds |
| **Mechanism**: This is the intermediate stage in learning a complex skill. Learned responses have become habitual and the movements can be performed with some confidence and proficiency. | **Examples**:  Use a personal computer. Repair a leaking faucet. Drive a car.  **Key Words**: assembles, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches. |
| **Complex Overt Response**: The skillful performance of motor acts that involve complex movement patterns. Proficiency is indicated by a quick, accurate, and highly coordinated performance, requiring a minimum of energy. This category includes performing without hesitation, and automatic performance. For example, players are often utter sounds of satisfaction or expletives as soon as they hit a tennis ball or throw a football, because they can tell by the feel of the act what the result will produce. | **Examples**:  Maneuvers a car into a tight parallel parking spot. Operates a computer quickly and accurately. Displays competence while playing the piano.  **Key Words**: assembles, builds, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches.  NOTE: The Key Words are the same as Mechanism, but will have adverbs or adjectives that indicate that the performance is quicker, better, more accurate, etc. |
| **Adaptation**: Skills are well developed and the individual can modify movement patterns to fit special requirements. | **Examples**:  Responds effectively to unexpected experiences.  Modifies instruction to meet the needs of the learners. Perform a task with a machine that it was not originally intended to do (machine is not damaged and there is no danger in performing the new task).  **Key Words**: adapts, alters, changes, rearranges, reorganizes, revises, varies. |
| **Origination**: Creating new movement patterns to fit a particular situation or specific problem. Learning outcomes emphasize creativity based upon highly developed skills. | **Examples**:  Constructs a new theory. Develops a new and comprehensive training programming. Creates a new gymnastic routine.  **Key Words**: arranges, builds, combines, composes, constructs, creates, designs, initiate, makes, originates. |

## Bloom's Revised Taxonomy Bloom's Revised Taxonomy

Lorin Anderson, a former student of Bloom, revisited the cognitive domain in the learning taxonomy in the mid-nineties and made some changes, with perhaps the two most prominent ones being, 1) changing the names in the six categories from noun to verb forms, and 2) slightly rearranging them (Pohl, 2000).

This new taxonomy reflects a more active form of thinking and is perhaps more accurate:

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| Category | Example and Key Words (verbs) |
| **Remembering**: Recall previous learned information. | **Examples**: Recite a policy. Quote prices from memory to a customer. Knows the safety rules.  **Key Words**: defines, describes, identifies, knows, labels, lists, matches, names, outlines, recalls, recognizes, reproduces, selects, states. |
| **Understanding**: Comprehending the meaning, translation, interpolation, and interpretation of instructions and problems. State a problem in one's own words. | **Examples**: Rewrites the principles of test writing. Explain in one's own words the steps for performing a complex task. Translates an equation into a computer spreadsheet.  **Key Words**: comprehends, converts, defends, distinguishes, estimates, explains, extends, generalizes, gives an example, infers, interprets, paraphrases, predicts, rewrites, summarizes, translates. |
| **Applying**: Use a concept in a new situation or unprompted use of an abstraction. Applies what was learned in the classroom into novel situations in the work place. | **Examples**: Use a manual to calculate an employee's vacation time. Apply laws of statistics to evaluate the reliability of a written test.  **Key Words**: applies, changes, computes, constructs, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses. |
| **Analyzing**: Separates material or concepts into component parts so that its organizational structure may be understood. Distinguishes between facts and inferences. | **Examples**: Troubleshoot a piece of equipment by using logical deduction. Recognize logical fallacies in reasoning. Gathers information from a department and selects the required tasks for training.  **Key Words**: analyzes, breaks down, compares, contrasts, diagrams, deconstructs, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, relates, selects, separates. |
| **Evaluating**: Make judgments about the value of ideas or materials. | **Examples**: Select the most effective solution. Hire the most qualified candidate. Explain and justify a new budget.  **Key Words**: appraises, compares, concludes, contrasts, criticizes, critiques, defends, describes, discriminates, evaluates, explains, interprets, justifies, relates, summarizes, supports. |
| **Creating**: Builds a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure. | **Examples**: Write a company operations or process manual. Design a machine to perform a specific task. Integrates training from several sources to solve a problem. Revises and process to improve the outcome.  **Key Words**: categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes. |

### 1987 PHILIPPINE CONSTITUTION

### ARTICLE XIV Education

**Section 1.** The State shall protect and promote the right of all citizens to quality education at all levels and shall take appropriate steps to make such education accessible to all.

**Section 2.** The State shall:

(1) Establish, maintain, and support a complete, adequate, and integrated system of education relevant to the needs of the people and society;

(2) Establish and maintain, a system of free public education in the elementary and high school levels. Without limiting the natural rights of parents to rear their children, elementary education is compulsory for all children of school age;

(3) Establish and maintain a system of scholarship grants, student loan programs, subsidies, and other incentives which shall be available to deserving students in both public and private schools, especially to the underprivileged;

(4) Encourage non-formal, informal, and indigenous learning systems, as well as self-learning, independent, and out-of-school study programs particularly those that respond to community needs; and

(5) Provide adult citizens, the disabled, and out-of-school youth with training in civics, vocational efficiency, and other skills.

**Section 3.** (1) All educational institutions shall include the study of the Constitution as part of the curricula.

(2) They shall inculcate patriotism and nationalism, foster lover of humanity, respect for human rights, appreciation of the role of national heroes in the historical development of the country, teach the rights and duties of citizenship, strengthen ethical and spiritual values, develop moral character and personal discipline, encourage critical and creative thinking, broaden scientific and technological knowledge, and promote vocational efficiency.

(3) At the option expressed in writing by the parents or guardians, religion shall be allowed to be taught to their children or wards in public elementary and high schools within the regular class hours by instructors designated or approved by the religious authorities of the religion to which the children or wards belong, without additional cost to the Government.

**Section 4.**(1) The State recognizes the complementary roles of public and private institutions in the educational system and shall exercise reasonable supervision and regulation of all educational institutions.

(2) Educational institutions, other than those established by religious groups and mission boards, shall be owned solely by citizens of the Philippines or corporations or associations at least sixty per centum of the capital of which is owned by such citizens. The Congress may, however, require increased Filipino equity participation in all educational institutions.

The control and administration of educational institutions shall be vested in citizens of the Philippines.

No educational institution shall be established exclusively for aliens and no group of aliens shall comprise more than one-third of the enrollment in any school. The provisions of this subsection shall not apply to schools established for foreign diplomatic personnel and their dependents and, unless otherwise provided by law, for other foreign temporary residents.

(3) All revenues and assets of non-stock, non-profit educational institutions used actually, directly, and exclusively for educational purposes shall be exempt from taxes and duties. Upon the dissolution or cessation of the corporate existence of such institutions, their assets shall be disposed of in the manner provided by law.

Proprietary educational institutions, including those cooperatively owned, may likewise be entitled to such exemptions subject to the limitations provided by law including restrictions on dividends and provisions for reinvestment.

(4) Subject to conditions prescribed by law, all grants, endowments, donations, or contributions used actually, directly, and exclusively for educational purposes shall be exempt from tax.

**Section 5.** (1) the State shall take into account regional and sectoral needs and conditions and shall encourage local planning in the development of educational policies and programs.

(2) Academic freedom shall be enjoyed in all institutions of higher learning.

(3) Every citizen has a right to select a profession or course of study, subject to fair, reasonable, and equitable admission and academic requirements.

(4) The State shall enhance the right of teachers to professional advancement. Non-teaching academic and non-academic personnel shall enjoy the protection of the State.

(5) The State shall assign the highest budgetary priority to education and ensure that teaching will attract and retain its rightful share of the best available talents through adequate remuneration and other means of job satisfaction and fulfillment.

#### Language

**Section 6.** The national language of the Philippines is Filipino. As it evolves, it shall be further developed and enriched on the basis of existing Philippine and other languages.

Subject to provisions of law and as the Congress may deem appropriate, the Government shall take steps to initiate and sustain the use of Filipino as a medium of official communication and as language of instruction in the educational system. Section 7. For purposes of communication and instruction, the official languages of the Philippines are Filipino and, until otherwise provided by law, English.

The regional languages are the auxiliary official languages in the regions and shall serve as auxiliary media of instruction therein.

Spanish and Arabic shall be promoted on a voluntary and optional basis.

**Section 8.** This Constitution shall be promulgated in Filipino and English and shall be translated into major regional languages, Arabic, and Spanish.

**Section 9.** The Congress shall establish a national language commission composed of representatives of various regions and disciplines which shall undertake, coordinate, and promote researches for the development, propagation, and preservation of Filipino and other languages.

#### Science and Technology

**Section 10.** Science and technology are essential for national development and progress. The State shall give priority to research and development, invention, innovation, and their utilization; and to science and technology education, training, and services. It shall support indigenous, appropriate, and self- reliant scientific and technological capabilities, and their application to the country's productive systems and national life.

**Section 11.** The Congress may provide for incentives, including tax deductions, to encourage private participation in programs of basic and applied scientific research. Scholarships, grants-in-aid, or other forms of incentives shall be provided to deserving science students, researchers, scientists, inventors, technologists, and specially gifted citizens.

**Section 12.** The State shall regulate the transfer and promote the adaptation of technology from all sources for the national benefit. It shall encourage the widest participation of private groups, local governments, and community-based organizations in the generation and utilization of science and technology.

**Section 13.** The State shall protect and secure the exclusive rights of scientists, inventors, artists, and other gifted citizens to their intellectual property and creations, particularly when beneficial to the people, for such period as may be provided by law.

#### Arts And Culture

**Section 14.** The State shall foster the preservation, enrichment, and dynamic evolution of a Filipino national culture based on the principle of unity in diversity in a climate of free artistic and intellectual expression.

**Section 15.** Arts and letters shall enjoy the partronage of the State. The State shall conserve, promote, and popularize the nation's historical and cultural heritage and resources, as well as artistic creations.

**Section 16.** All the country's artistic and historic wealth constitutes the cultural treasure of the nation and shall be under the protection of the State which may regulate its disposition.

**Section 17.** The State shall recognize, respect, and protect the rights of indigenous cultural communities to preserve and develop their cultures, traditions, and institutions. It shall consider these rights in the formulation of national plans and policies.

**Section 18.** (1) The State shall ensure equal access to cultural opportunities through the educational system, public or private cultural entities, scholarships, grants and other incentives, and community cultural centers, and other public venues.

(2) The State shall encourage and support researches and studies on the arts and culture.

#### Sports

**Section 19.** (1) The State shall promote physical education and encourage sports programs, league competitions, and amateur sports, including training for international competitions, to foster self-discipline, teamwork, and excellence for the development of a healthy and alert citizenry.

## (2) All educational institutions shall undertake regular sports activities throughout the country in cooperation with athletic clubs and other sectors.

## Questions for Discussion

## Choose a topic from the (Philippine Secondary Learning Competencies) PSLC. Formulate 3 SMART learner’s objectives in the 3 domains. Refer to the given behavioral terms. Evaluate your objectives with the help of the following questions:

## Are the terms behavioral?

## Are they SMART

## Are they relevant and significant and therefore, worth pursuing?

## Are the three 3 domains of objectives represented?

## In your group, let two members present their output before the whole class. The class will evaluate the output using the same questions in # 1 as guide.