TAXONOMY OF EDUCATIONAL OBJECTIVES, HANDBOOK

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# TAXONOMY OF EDUCATIONAL OBJECTIVES

The Classification of Educational Goals

HANDBOOK I: COGNITIVE DOMAIN

by
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19.

# Given an end, recognize best of several means

Many people believe that it would be better if our states had more uniform divorce laws. It is recognized, however, that there are dangers in an attempt to achieve such uniformity. Which one of the following procedures would be most likely to avoid the greatest of these dangers?

- A- An amendment to the U.S. Constitution is passed, which establishes the grounds for divorce to be recognized in all courts.
- B- A federal law is passed which sets forth the maximum grounds which can be recognized by any state.
- C- A commission appointed by the President works out standards for a divorce code and encourages all states to consider these standards in revising their laws.
- D- A conference of state governors decides on a divorce code and each governor attempts to have it made the law of his state.
- E- The U.S. Supreme Court establishes a uniform set of practices by ruling against all divorce laws which do not conform to its standard.

# Given a particular end, determine the means which will serve it

20.

Jane is faced with the problem of selecting material for a school dress. The dress will receive lots of wear and will be laundered frequently. Which of the fabrics would be her best choice? (The test should include examples of fabrics, including some rayons. This would allow more reasons to be given below.)

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Check the qualities the fabric you choose possesses whi rior for Jane's purpose.
(a) Material is colorfast to washing
(b) Material is crease resistant
(c) There is little or no sizing in the material.
(d) Material is easily cared for
(e) Material is soft and will drape easily
(f) Weave is firm, close and smooth
(g) Material is colorfast to sunlight
(h) Material will not show soil easily
(i) Design is printed with the grain

#### APPENDIX

Condensed Version of the Taxonomy of Educational Objectives

#### Cognitive Domain

#### KNOWLEDGE

#### 1.00 KNOWLEDGE

Knowledge, as defined here, involves the recall of specifics and universals, the recall of methods and processes, or the recall of a pattern, structure, or setting. For measurement purposes, the recall situation involves little more than bringing to mind the appropriate material. Although some alteration of the material may be required, this is a relatively minor part of the task. The knowledge objectives emphasize most the psychological processes of remembering. The process of relating is also involved in that a knowledge test situation requires the organization and reorganization of a problem such that it will furnish the appropriate signals and cues for the information and knowledge the individual possesses. To use an analogy, if one thinks of the mind as a file, the problem in a knowledge test situation is that of finding in the problem or task the appropriate signals, cues, and clues which will most effectively bring out whatever knowledge is filed or stored.

#### 1.10 KNOWLEDGE OF SPECIFICS

The recall of specific and isolable bits of information. The emphasis is on symbols with concrete referents. This material, which is at a very low level of abstraction, may be thought of as the elements from which more complex and abstract forms of knowledge are built.

#### 1.11 KNOWLEDGE OF TERMINOLOGY

Knowledge of the referents for specific symbols (verbal and non-verbal). This may include knowledge of the most generally accepted symbol referent, knowledge of the variety of symbols which may be used for a single referent, or knowledge of the referent most appropriate to a given use of a symbol.

- \*To define technical terms by giving their attributes. properties, or relations.
- \*Familiarity with a large number of words in their common range of meanings.

#### 1.12 KNOWLEDGE OF SPECIFIC FACTS

Knowledge of dates, events, persons, places, etc. This may include very precise and specific information such as the specific date or exact magnitude of a phenomenon. It may also include approximate or relative information such as an

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<sup>\*</sup>Illustrative educational objectives selected from the literature.

approximate time period or the general order of magnitude of a phenomenon.

- \*The recall of major facts about particular cultures.
- \*The possession of a minimum knowledge about the organisms studied in the laboratory.

# 1.20 KNOWLEDGE OF WAYS AND MEANS OF DEALING WITH SPECIFICS

Knowledge of the ways of organizing, studying, judging, and criticizing. This includes the methods of inquiry, the chronological sequences, and the standards of judgment within a field as well as the patterns of organization through which the areas of the fields themselves are determined and internally organized. This knowledge is at an intermediate level of abstraction between specific knowledge on the one hand and knowledge of universals on the other. It does not so much demand the activity of the student in using the materials as it does a more passive awareness of their nature.

## 1.21 KNOWLEDGE OF CONVENTIONS

Knowledge of characteristic ways of treating and presenting ideas and phenomena. For purposes of communication and consistency, workers in a field employ usages, styles, practices, and forms which best suit their purposes and/or which appear to suit best the phenomena with which they deal. It should be recognized that although these forms and conventions are likely to be set up on arbitrary, accidental, or authoritative bases, they are retained because of the general agreement or concurrence of individuals concerned with the subject, phenomena, or problem.

- \*Familiarity with the forms and conventions of the major types of works, e.g., verse, plays, scientific papers, etc.
- \*To make pupils conscious of correct form and usage in speech and writing.

# 1.22 KNOWLEDGE OF TRENDS AND SEQUENCES

Knowledge of the processes, directions, and movements of phenomena with respect to time.

- \*Understanding of the continuity and development of American culture as exemplified in American life.
- \*Knowledge of the basic trends underlying the development of public assistance programs.

# 1.23 KNOWLEDGE OF CLASSIFICATIONS AND CATEGORIES

Knowledge of the classes, sets, divisions, and arrangements which are regarded as fundamental for a given subject field, purpose, argument, or problem.

- \*To recognize the area encompassed by various kinds of problems or materials.
- \*Becoming familiar with a range of types of literature.

#### 1.24 KNOWLEDGE OF CRITERIA

Knowledge of the criteria by which facts, principles, opinions, and conduct are tested or judged.

- \*Familiarity with criteria for judgment appropriate to the type of work and the purpose for which it is read.
- \*Knowledge of criteria for the evaluation of recreational activities.

#### 1.25 KNOWLEDGE OF METHODOLOGY

Knowledge of the methods of inquiry, techniques, and procedures employed in a particular subject field as well as those employed in investigating particular problems and phenomena. The emphasis here is on the individual's knowledge of the method rather than his ability to use the method.

- \*Knowledge of scientific methods for evaluating health concepts.
- \*The student shall know the methods of attack relevant to the kinds of problems of concern to the social sciences.

# 1.30 KNOWLEDGE OF THE UNIVERSALS AND ABSTRACTIONS IN A FIELD

Knowledge of the major schemes and patterns by which phenomena and ideas are organized. These are the large structures, theories, and generalizations which dominate a subject field or which are quite generally used in studying phenomena or solving problems. These are at the highest levels of abstraction and complexity.

#### 1,31 KNOWLEDGE OF PRINCIPLES AND GENERALIZATIONS

Knowledge of particular abstractions which summarize observations of phenomena. These are the abstractions which are of value in explaining, describing, predicting, or in determining the most appropriate and relevant action or direction to be taken.

- \*Knowledge of the important principles by which our experience with biological phenomena is summarized.
- \*The recall of major generalizations about particular cultures.

## 1.32 KNOWLEDGE OF THEORIES AND STRUCTURES

Knowledge of the body of principles and generalizations together with their interrelations which present a clear, rounded, and systematic view of a complex phenomenon, problem, or field. These are the most abstract formulations, and they can be used to show the interrelation and organization of a great range of specifics.

- \*The recall of major theories about particular cultures.
- \*Knowledge of a relatively complete formulation of the theory of evolution.

#### INTELLECTUAL ABILITIES AND SKILLS

Abilities and skills refer to organized modes of operation and generalized techniques for dealing with materials and problems. The materials and problems may be of such a nature that little or no specialized and technical information is required. Such information as is required can be assumed to be part of the individual's general fund of knowledge. Other problems may require specialized and technical information at a rather high level such that specific knowledge and skill in dealing with the problem and the materials are required. The abilities and skills objectives emphasize the mental processes of organizing and reorganizing material to achieve a particular purpose. The materials may be given or remembered.

#### 2.00 COMPREHENSION

This represents the lowest level of understanding. It refers to a type of understanding or apprehension such that the individual knows what is being communicated and can make use of the material or idea being communicated without necessarily relating it to other material or seeing its fullest implications.

#### 2.10 TRANSLATION

Comprehension as evidenced by the care and accuracy with which the communication is paraphrased or rendered from one one language or form of communication to another. Translation is judged on the basis of faithfulness and accuracy, that is, on the extent to which the material in the original communication is preserved although the form of the communication has been altered.

- \*The ability to understand non-literal statements (metaphor, symbolism, irony, exaggeration).
- \*Skill in translating mathematical verbal material into symbolic statements and vice versa.

#### 2.20 INTERPRETATION

The explanation or summarization of a communication. Whereas translation involves an objective part-for-part rendering of a communication, interpretation involves a reordering, rearrangement, or a new view of the material.

\*The ability to grasp the thought of the work as a whole at any desired level of generality.

\*The ability to interpret various types of social data.

#### 2.30 EXTRAPOLATION

The extension of trends or tendencies beyond the given data to determine implications, consequences, corollaries, effects, etc., which are in accordance with the conditions described in the original communication.

- \*The ability to deal with the conclusions of a work in terms of the immediate inference made from the explicit statements.
- \*Skill in predicting continuation of trends.

#### 3.00 APPLICATION

The use of abstractions in particular and concrete situations. The abstractions may be in the form of general ideas, rules of procedures, or generalized methods. The abstractions may also be technical principles, ideas, and theories which must be remembered and applied.

- \*Application to the phenomena discussed in one paper of the scientific terms or concepts used in other papers.
- \*The ability to predict the probable effect of a change in a factor on a biological situation previously at equilibrium.

#### 4.00 ANALYSIS

The breakdown of a communication into its constituent elements or parts such that the relative hierarchy of ideas is made clear and/or the relations between the ideas expressed are made explicit. Such analyses are intended to clarify the communication, to indicate how the communication is organized, and the way in which it manages to convey its effects, as well as its basis and arrangement.

#### 4.10 ANALYSIS OF ELEMENTS

Identification of the elements included in a communication.

- \*The ability to recognize unstated assumptions.
- \*Skill in distinguishing facts from hypotheses.

#### 4.20 ANALYSES OF RELATIONSHIPS

The connections and interactions between elements and parts of a communication.

- \*Ability to check the consistency of hypotheses with given information and assumptions.
- \*Skill in comprehending the interrelationships among the ideas in a passage.

### 4.30 ANALYSIS OF ORGANIZATIONAL PRINCIPLES

The organization, systematic arrangement, and structure which hold the communication together. This includes the "explicit" as well as "implicit" structure. It includes the bases, necessary arrangement, and the mechanics which make the communication a unit.

- \*The ability to recognize form and pattern in literary or artistic works as a means of understanding their meaning.
- \*Ability to recognize the general techniques used in persuasive materials, such as advertising, propaganda, etc.

#### 5.00 SYNTHESIS

The putting together of elements and parts so as to form a whole. This involves the process of working with pieces, parts, elements, etc., and arranging and combining them in such a way as to constitute a pattern or structure not clearly there before.

# 5.10 PRODUCTION OF A UNIQUE COMMUNICATION

The development of a communication in which the writer or speaker attempts to convey ideas, feelings, and/or experiences to others.

- \*Skill in writing, using an excellent organization of ideas and statements.
- \*Ability to tell a personal experience effectively.

# 5.20 PRODUCTION OF A PLAN, OR PROPOSED SET OF OPERATIONS

The development of a plan of work or the proposal of a plan of operations. The plan should satisfy requirements of the task which may be given to the student or which he may develop for himself.

- \*Ability to propose ways of testing hypotheses.
- \*Ability to plan a unit of instruction for a particular teaching situation.

#### 5.30 DERIVATION OF A SET OF ABSTRACT RELATIONS

The development of a set of abstract relations either to classify or explain particular data or phenomena, or the deduction of propositions and relations from a set of basic propositions or symbolic representations.

- \*Ability to formulate appropriate hypotheses based upon an analysis of factors involved, and to modify such hypotheses in the light of new factors and considerations.
- \*Ability to make mathematical discoveries and generalizations.

#### 6.00 EVALUATION

Judgments about the value of material and methods for given purposes. Quantitative and qualitative judgments about the extent to which material and methods satisfy criteria. Use of a standard of appraisal. The criteria may be those determined by the student or those which are given to him.

#### 6.10 JUDGMENTS IN TERMS OF INTERNAL EVIDENCE

Evaluation of the accuracy of a communication from such evidence as logical accuracy, consistency, and other internal criteria.

- \*Judging by internal standards, the ability to assess general probability of accuracy in reporting facts from the care given to exactness of statement, documentation, proof, etc.
- \*The ability to indicate logical fallacies in arguments.

# 6.20 JUDGMENTS IN TERMS OF EXTERNAL CRITERIA

Evaluation of material with reference to selected or remembered criteria.

- \*The comparison of major theories, generalizations, and facts about particular cultures.
- \*Judging by external standards, the ability to compare a work with the highest known standards in its field-especially with other works of recognized excellence.