

Learning Objectives

Robert Mager (Making Instruction Work)

How to Create Learning Objectives:

1. Collect all the analysis documents drafted to this point.
2. While reviewing the task flowcharts, write an objective to describe the performance on each task.
3. Now look at the list of skills that anyone would have to have before practicing the entire task. Write an objective to describe each of those skills. In other words, write a statement to describe the limits of those skills, one that tells how much of each skill is needed by someone intending to perform the task.
4. Test your objectives for completeness. Each one will be good enough when you can answer yes to the following questions:
 - a. Does it say what someone will be doing when demonstrating accomplishment of the objective (e.g. writing, solving, disassembling)?
 - b. Does it describe the important conditions that will exist while the performing is being done (e.g. given an irate customer)?
 - c. Does it tell how to recognize when the performance will be considered satisfactory (e.g. all customer objections have been addressed)?
5. If you have completed one or more goal analyses during the task analysis, and if you listed one or more performances that students cannot now do, write an objective to describe each performance that will need to be taught. Mark the performances that represent things student cannot yet do, and write an objective describing each of those performances.
6. Each objective must be measurable and observable. Therefore, terms such as *understand*, *comprehend*, *appreciate*, *know*, *demonstrate*, or other abstractions, should be avoided.

Appendix A: Bloom's Taxonomy of Cognitive Objectives

Judgment /Evaluation - Highest level. Refers to making quantitative and qualitative judgments according to a set of specific criteria.

Hints

Supports conclusions with data
 Defends value of work by use of internal/external criteria

Verbs

| | | | | |
|------------|-----------|----------|-----------|------------|
| Appraises | Contrasts | Judges | Compares | Criticizes |
| Interprets | Concludes | Supports | Justifies | Argues |
| Defends | Attacks | | | |

Synthesis - Refers to combining existing data and information in such a way to produce a new product/plan.

Hints

Organizes material
 Innovates an approach
 Creates a plan for problem-solving

Verbs

| | | | | |
|-------------|------------|------------|----------|------------|
| Categorizes | Combines | Concludes | Compiles | Creates |
| Discusses | Formulates | Devises | Composes | Organizes |
| Predicts | Designs | Generates | Resolves | Integrates |
| Modifies | Summarizes | Determines | Proposes | Recommends |

Analysis - Refers to the ability to break down material into its component parts so that relationships among parts are clear.

Hints

Distinguishes facts from inferences
 Assesses fallacies in reasoning
 Analyzes relevancy of data

Verbs

| | | | | |
|-------------|----------|----------|----------------|---------------|
| Breaks down | Diagrams | Assesses | Differentiates | Distinguishes |
| Separates | Analyzes | Compares | Contrasts | Relates |

Application - Refers to the ability to use learned material in a new and concrete way.

Hints

Applies theories to practical situations
 Constructs charts and graphs
 Solves numerical problems
 Applies principles to new situations

Verbs

| | | | | |
|------------|------------|----------|-----------|----------|
| Operates | Modifies | Produces | Solves | |
| Constructs | Predicts | Relates | Discovers | Computes |
| Prepares | Classifies | Performs | Shows | Applies |

Comprehension - Refers to ability to grasp meaning of material.

Hints

Explains verbal material
 Illustrates charts and graphs
 Defends facts and principles

Verbs

| | | | |
|-----------|-------------|-------------|----------|
| Extends | Generalizes | Paraphrases | Infers |
| Estimates | Illustrates | Represents | Restates |

Knowledge - Lowest level. Refers to recognition of previously learned material.

Hints

States common terms
 Selects methods and procedures
 Recalls basic concepts

Verbs

| | | | | |
|------------|------------|------------|---------|------------|
| Lists | Names | Outlines | Labels | Identifies |
| Reproduces | Selects | Underlines | States | Recalls |
| Indicates | Recognizes | Writes | Matches | Chooses |

Appendix B: Action Verbs Used in Performance Objectives –

The following are action verbs that can be used to write performance objectives:

| | | | |
|------------|-------------|-------------|------------|
| Add | Develop | List | Release |
| Advise | Direct | Locate | Remit |
| Analyze | Discuss | Maintain | Render |
| Anticipate | Disseminate | Make | Report |
| Approve | Distribute | Manage | Represent |
| Arrange | Divide | Measure | Request |
| Ascertain | Draft | Merge | Resolve |
| Assemble | Edit | Multiply | Review |
| Assign | Evaluate | Note | Revise |
| Assist | Examine | Notify | Route |
| Attach | Execute | Observe | Scan |
| Attend | Exercise | Obtain | Screen |
| Audit | Expedite | Open | Search |
| Authorize | Facilitate | Operate | Select |
| Backup | File | Organize | Separate |
| Balance | Fill in | Originate | Sign |
| Calculate | Find | Outline | Sort |
| Check | Flag | Participate | Stack |
| Circulate | Follow-up | Perform | Study |
| Classify | Formulate | Plan | Subtract |
| Code | Furnish | Process | Submit |
| Collate | Implement | Program | Summarize |
| Collect | Inform | Purchase | Supervise |
| Compile | Initiate | Rate | Survey |
| Compose | Insert | Read | Tabulate |
| Consult | Inspect | Receive | Trace |
| Control | Instruct | Recommend | Train |
| Copy | Interpret | Reconstruct | Transcribe |
| Correct | Interview | Record | Transpose |
| Debug | Investigate | Recover | Type |
| Delegate | Issue | Refer | Verify |
| Delete | Itemize | Register | Write |
| Determine | Link | Schedule | |

The BLACK List - the following terms and phrases are subject to interpretation and should **NOT** be used for performance objectives:

| | | | |
|---------------------|---------------------|------------------|-------------|
| Ability, ability to | Believe, to believe | Familiarity With | Proficient |
| Advanced | Comprehensive | Have | Strong |
| Appreciate | Effective | In-depth | Thorough |
| Aptitude | Enjoy, to enjoy | Internalize | Willingness |
| Attitude | Extensive | Limited | |