

## Levels of cognitive objectives<sup>1</sup>

1. **Knowledge:** Simple remembering, by recall or recognition of specific facts, terminology, criteria, methods, principles, generalizations or theories. Learner needs simply to select the correct material from memory
    - memorize
    - **list, name, define, repeat, record, recall**
  2. **Comprehension:** Simple understanding demonstrated by means of paraphrasing, summarizing, interpreting, or inferring simple conclusions. Learner must put simple knowledge in a different form.
    - Express in everyday language; Discuss implications of ideas; Translate among the three languages (words ↔ math ↔ pictures); Interrelate concepts
    - Relate one idea to another without having the professor or the text make the connection
    - **report, locate, restate, discuss, describe, explain, express, identify, calculate**
  3. **Application:** Using general knowledge in new, specific and concrete situations (not previously learned).
    - Situation is unique or different; problems are complex and confusing; requires choosing among solutions
    - **use, show, apply, interpret, decide, respond to, illustrate, demonstrate, dramatize**
  4. **Analysis:** Breaking down information into its separate parts, explicating the relationship between parts and/or the overall organizational structure. Learner divides complex whole into parts in order to better understand.
    - **solve, relate, diagram, appraise, analyze, examine, differentiate, distinguish, calculate**
  5. **Synthesis:** Combining of two or more elements or parts into a new (for the learner) form or whole. Learner creates a “new” communication, plan, abstract relationship, ect
    - Create theories, models, paradigms, ect.
    - **plan, design, create, compose, propose, prepare, construct, formulate, organize, modify**
  6. **Evaluation:** Judging information or knowledge against some appropriate criteria either internal to the material or an external standard.
    - **value, revise, judge, assess, compare, select, appraise, evaluate, measure**
- Critical thinking begins at level 3.
- Traditionally, undergraduate only covered levels 1 and 2. Movement toward 1 – 4.

### Examples:

Level 1: List four characteristics of market structure

Level 2: Compare and contrast the different market structures (ie. similarities and differences)

Level 3: Given a scenario (not presented before), describe how the event impacts market equilibrium and illustrate your answer.

Level 4: Find a newspaper article that describes a demand/supply scenario. Using the article discuss what happens to the market equilibrium and illustrate your answer.

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<sup>1</sup> Bloom, B.S., et al. (1956). Taxonomy of Educational Objectives: Handbook 1 Cognitive Domain. New York: Longmans Green.