Learning Styles/Bloom’s Taxonomy

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ACTIVE AND REFLECTIVE LEARNERS

REFLECTIVE

ACTIVE

(63 Students)
ACTIVE AND REFLECTIVE LEARNERS

• Active learners tend to retain and understand information best by doing something active with it—discussing or applying it or explaining it to others. Reflective learners prefer to think about it quietly first.

• "Let's try it out and see how it works" is an active learner's phrase; "Let's think it through first" is the reflective learner's response.

• Active learners tend to like group work more than reflective learners, who prefer working alone.

• Sitting through lectures without getting to do anything physical but take notes is hard for both learning types, but particularly hard for active learners.
SENSING AND INTUITIVE LEARNERS

![Bar graph showing the distribution of Intuitive and Sensing learners among 44 students.](image)
SENSING AND INTUITIVE LEARNERS

INTUITIVE (63 Students)

SENSING

(63 Students)
SENSING AND INTUITIVE LEARNERS

- Sensing learners tend to like learning facts, intuitive learners often prefer discovering possibilities and relationships.
- Sensors often like solving problems by well-established methods and dislike complications and surprises; intuitors like innovation and dislike repetition. Sensors are more likely than intuitors to resent being tested on material that has not been explicitly covered in class.
- Sensors tend to be patient with details and good at memorizing facts and doing hands-on (laboratory) work; intuitors may be better at grasping new concepts and are often more comfortable than sensors with abstractions and mathematical formulations.
- Sensors tend to be more practical and careful than intuitors; intuitors tend to work faster and to be more innovative than sensors.
- Sensors don't like courses that have no apparent connection to the real world; intuitors don't like "plug-and-chug" courses that involve a lot of memorization and routine calculations.
VISUAL AND VERBAL LEARNERS

VERBAL

(44 Students)

VISUAL

(44 Students)
VISUAL AND VERBAL LEARNERS

VERBAL

VISUAL

(63 Students)
VISUAL AND VERBAL LEARNERS

- Visual learners remember best what they see—pictures, diagrams, flow charts, time lines, films, and demonstrations. Verbal learners get more out of words—written and spoken explanations. Everyone learns more when information is presented both visually and verbally.

- In most college classes very little visual information is presented: students mainly listen to lectures and read material written on chalkboards and in textbooks and handouts. Unfortunately, most people are visual learners, which means that most students do not get nearly as much as they would if more visual presentation were used in class. Good learners are capable of processing information presented either visually or verbally.
GLOBAL AND SEQUENTIAL LEARNERS

GLOBAL

(44 Students)

SEQUENTIAL

(44 Students)
SEQUENTIAL AND GLOBAL LEARNERS

GLOBAL

SEQUENTIAL

(63 Students)
SEQUENTIAL AND GLOBAL LEARNERS

• Sequential learners tend to gain understanding in linear steps, with each step following logically from the previous one. Global learners tend to learn in large jumps, absorbing material almost randomly without seeing connections, and then suddenly "getting it."

• Sequential learners tend to follow logical stepwise paths in finding solutions; global learners may be able to solve complex problems quickly or put things together in novel ways once they have grasped the big picture, but they may have difficulty explaining how they did it.
Knowledge: remembering of previously learned material; recall (facts or whole theories); bringing to mind.

Comprehension: grasping the meaning of material; interpreting (explaining or summarizing); predicting outcome and effects (estimating future trends).

Application: ability to use learned material in a new situation; apply rules, laws, methods, theories.

Analysis: breaking down into parts; understanding organization, clarifying, concluding.

Synthesis: ability to put parts together to form a new whole; unique communication; set of abstract relations.

Evaluation: ability to judge value for purpose; base on criteria; support judgment with reason. (No guessing).
Knowledge
observation and recall of information
  • knowledge of dates, events, places
  • knowledge of major ideas
  • mastery of subject matter

• Question Cues: list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.

Comprehension
• understanding information
  • grasp meaning
  • translate knowledge into new context
  • interpret facts, compare, contrast
  • order, group, infer causes
  • predict consequences

• Question Cues: summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend
Blooms Taxonomy

Application
- use information
- use methods, concepts, theories in new situations
- solve problems using required skills or knowledge

Questions Cues:
apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover

Analysis
- seeing patterns
- organization of parts
- recognition of hidden meanings
- identification of components

Question Cues:
analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer
Blooms Taxonomy

**Synthesis**
- use old ideas to create new ones
- generalize from given facts
- relate knowledge from several areas
- predict, draw conclusions

**Question Cues:**
combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare, generalize, rewrite

**Evaluation**
- compare and discriminate between ideas
- assess value of theories, presentations
- make choices based on reasoned argument
- verify value of evidence
- recognize subjectivity

**Question Cues**
assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize