

Definition of Effective Teaching

Effective teaching is the knowledge, strategies, processes and behaviours which lead to good student outcomes.

Effective teachers have a positive impact on their students and use their expertise to improve learning.

These good outcomes are often those that can be measured easily, usually through summative assessment.

At National University of Singapore, an effective teacher is characterised as one who:

- Prioritises student learning;
- Integrates subject matter expertise with pedagogical knowledge;
- Reflects on practice that is informed by relevant evidence and theories;
- Engages in continuous development as a teacher; and
- Nurtures a supportive culture by sharing teaching practices.

Prerequisites for Effective Teaching

1. **Know your stuff:** Expert teachers know their subjects, continually study them, know how questions will be set and what the answers should be.
2. **Have Strong Communication Skills:** You must have the capability to let your students understand – what you are trying to make them understand.
3. **Know your students:** Students are from various background and are not of same level.
4. **Tool them up:** provide all the resources students need to learn independently. It's horrible teaching when you are the only resource; when you (or your absence) become a barrier between a student and their learning.
5. **Plan long:** Learning is a long-term process, not a short-term one. It's important, therefore, to plan accordingly, taking account of the distribution of content over time. A lesson is then just the next part of a learning sequence that you adjust as you go along.
6. **Evaluate in various modes:** Don't use only class tests. There are various ways a teacher can engage in learning and evaluating.

Seven Principles of Good Teaching

The following is a brief summary of the Seven Principles for Good Practice in Undergraduate Education as compiled in a study supported by the American Association for Higher Education, the Education Commission of the United States, and The Johnson Foundation.

1. Good Practice Encourages Student-Faculty Contact

Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans.

2. Good Practice Encourages Cooperation Among Students

Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions improves thinking and deepens understanding.

3. Good Practice Encourages Active Learning

Learning is not a spectator sport. Students do not learn much just sitting in classes listening to teachers, memorizing prepackaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives. They must make what they learn part of themselves.

4. Good Practice Gives Prompt Feedback

Knowing what you know and don't know focuses learning. Students need appropriate feedback on performance to benefit from courses. In getting started, students need help in assessing existing knowledge and competence. In classes, students need frequent opportunities to perform and receive suggestions for improvement. At various points during college, and at the end, students need chances to reflect on what they have learned, what they still need to know, and how to assess themselves.

5. Good Practice Emphasizes Time on Task

Time plus energy equals learning. There is no substitute for time on task. Learning to use one's time well is critical for students and professionals alike. Students need help in learning effective time management. Allocating realistic amounts of time means effective learning for students and effective teaching for faculty. How an institution defines time expectations for students, faculty, administrators, and other professional staff can establish the basis for high performance for all.

6. Good Practice Communicates High Expectations

Expect more from students and you will get it. High expectations are important for everyone--for the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated. Expecting students to perform well becomes a self-fulfilling prophecy when teachers and institutions hold high expectations for themselves and make extra efforts.

7. Good Practice Respects Diverse Talents and Ways of Learning

There are many roads to learning. People bring different talents and styles of learning to college. Brilliant students in the seminar room may be all thumbs in the lab or art studio. Students rich in hands-on experience may not do so well with theory. Students need the opportunity to show their talents and to learn in ways that work for them. Then they can be pushed to learning in new ways that do not come so easily.

Developing Proper Assessment System for the Students

Education:

Desirable changes in the behavior of learner in the form of:

- acquisition of knowledge,
- proficiency in skills and
- development of attitudes.

Components of Education

1. Development of Educational/Learning objectives
2. Organization of Teaching-Learning activities
3. Evaluation

There are relations between Components of Education and motive/ objective (PLO) of education

Program Learning Outcome (PLO)

- Program learning outcomes (PLO)s state what the graduate is expected to know, understand and able to do when they complete the program.
- This outcome is all about the expected outcome of the program, i.e. BBA program.
- Learning outcomes can be defined in terms of a list of problems that graduates should be able to solve.

Thus, curriculum should be defined by its outcomes:

- **What do we need our graduates to be able to do?**
 - So what must we teach them?
 - So how much we teach them?
 - And therefore, what do we not need to teach them?
- **Therefore, the concerns are:**
 - What students are expected to study?
 - So, how faculty will teach and assess the students (as per the expectation).
 - How to enable auditing of the program.
 - To ensure consistency of product across/within institutions.
- **Hence, from our perspective Learning Outcomes (LO)s include:**
 - Teaching, and
 - Assessing the students.

For all of these we need to fix standards

- Promotion to the next year or achieve other reward is granted upon achievement of the standards, while extra classes, repeating the year (or course), or other consequences result upon those who do not meet the standards.
- Standards-based assessments determine whether students have achieved the stated standard.
- Assessments may take any form, so long as the assessments actually measure whether the student knows the required information or can perform the required task.

Therefore, we need to develop a competency list that will define PLOs in order to develop effective curricula.

Blooms Taxonomy

Benjamin Samuel Bloom was an American Educational Psychologist

His Contributions:

- 1. Taxonomy of Learning**
- 2. Theory of Mastery learning**

Bloom's Learning Domains

- Cognitive/Thinking
- Affective/ Skill
- Psychomotor/ Doing

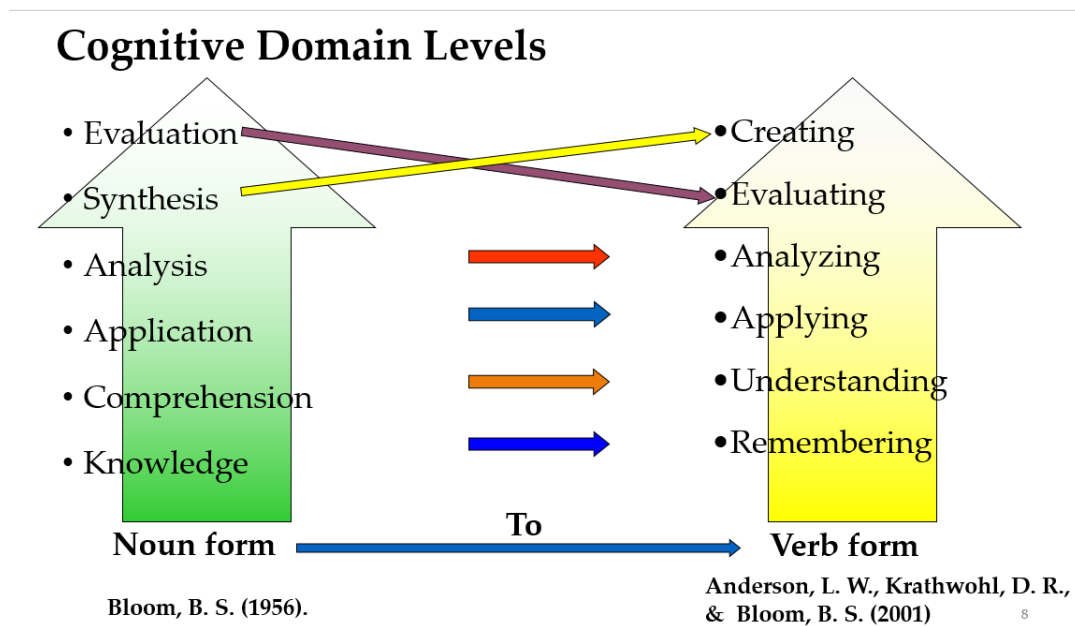
How Does Bloom's Taxonomy Work?

- Classification of educational objectives
 - into **domains/category/area**; and
 - then into **levels** under each domain according to **hierarchy (low to high)) or complexity (simple to complex)**.
- Use of Bloom's Taxonomy
 - helps educators to arrange learning objectives **sequentially** according to levels of complexity.

COGNITIVE DOMAIN

The mental or intellectual thinking behaviors demonstrated by an individual.

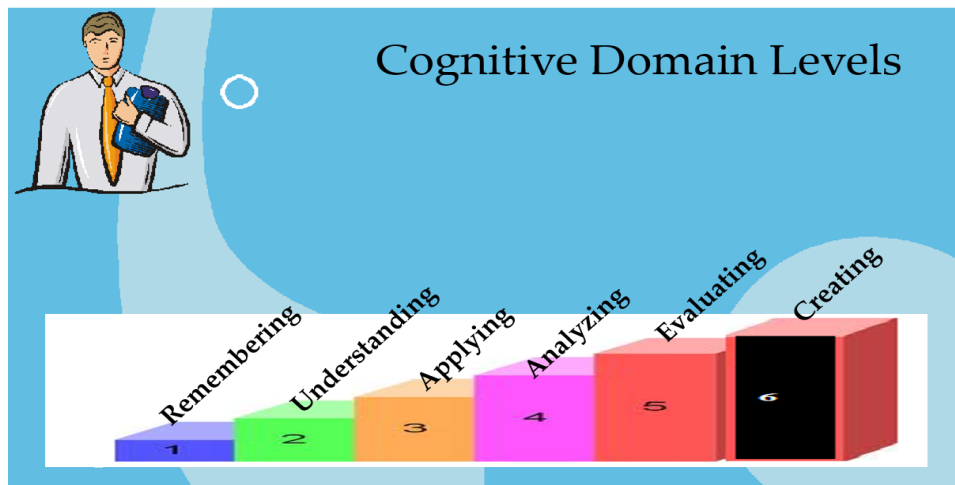
(Facts, figures, concepts, ideas)



Hierarchy of Cognitive Domain Levels

Six sub-domains/level of cognitive domain:

- | | | |
|------------------|---|------------------------------|
| 1. Remembering | } | Lower-order Learning |
| 2. Understanding | | |
| 3. Applying | } | Higher Order Learning |
| 4. Analysing | | |
| 5. Evaluating | | |
| 6. Creating | | |
- Simple
Complex



Cognitive Domain...

Levels	Meaning
Remembering	Recall
Understanding	Restate/Paraphrase
Applying	Use and utilize
Analyzing	Breaking down the parts of a whole
Evaluating	Judge a value
Creating	Produce a new whole

levels	Working Definition
Remembering	a student can define terms
Understanding	a student can work assigned problems and can provide example what they did
Applying	a student recognizes what methods need to be used and then use the methods to solve problems
Analyzing	a student can explain why the solution process works
Evaluating	among the variety of ways a student select the solution method best suited for the problem.
Creating	a student can combine the part of a process in new and useful ways

Remembering

Ability of students to remember factual knowledge/retrieving relevant knowledge from long term memory.

1. Recalling 2. Recognizing

Examples:

- recall common terms (Demand, supply, proteins, entrepreneurship etc.)
- recall facts (source, structure, functions, etc.)
- recall methods and procedures
- recall principles, theories

Action verbs/key phrases for assessment:

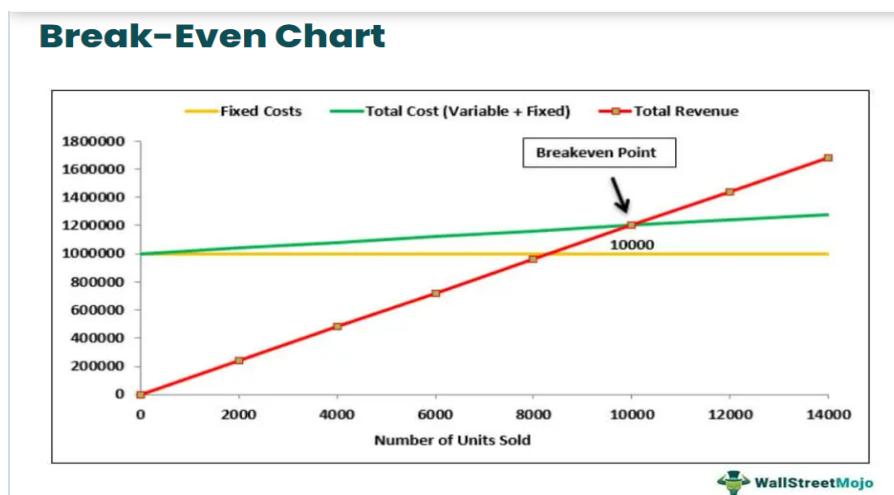
who, what, define, label, list, name, recall, repeat, state, enumerate, etc.

Understanding

Ability of students to *grasp* the meaning of information so that they can restate the meaning of information by interpreting and translating what has been learned.

Examples:

- understand facts and principles
- interpret and translate data
- interpret charts and graphs
- translate verbal material to pictures, mathematical formula etc.
- estimate the future consequences implied in data



Action verb/key phrases for assessment:

- convert, translate, illustrate, describe, discuss, estimate, explain, generalize, give example, make sense out of, restate (in own words), summarize, trace, express, identify, indicate, locate, recognize, report, review, select etc.

Applying

Abilities of students to *use/apply* learned information in a new context different from the one in which it was learned. Carrying out or using a procedure in a given situation.

Examples:

- apply concepts and principles to new situations
 - apply laws and theories to practical situations
 - solve mathematical problems
 - construct graphs and charts
 - relate or associate information to specific conditions

Action verb/key phrases for assessment:

- apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, act, administer, articulate, compute, construct, implement, prepare, relate, show, teach etc.

Analyzing

(to sort the wheat from the chaff)

Ability of the learner to:

- break/separate learned information/material into its component parts (cause & effect etc.)
- analyze relationships/how the component parts relate to one another
- clarify the overall idea taking one portion or piece at a time/relate to an overall structure or purpose

Examples:

- analyze historical events, cause and consequence/effect
- separate specific and non-specific symptoms and signs of a disease
- analyze the organizational structure of an institute
- recognizes logical fallacies in reasoning
- distinguish between facts and inferences

Action verb/key phrases for assessment:

- analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, break down, categorize, correlate, diagram, focus, illustrate, prioritize, separate, subdivide.

Evaluating

Ability of the students to

- **judge value of materials** (statement, novel, poem, research report, investigation report, clinical observations) **based on personal values/opinions** (internal) or **definite criteria** (external) for a given purpose.

Examples:

- judge the logical consistency of written material,
- judge the adequacy with which conclusions are supported by data
- judge the value of a work by the use of internal criteria
- judge the value of a work by use of external standards of excellence

Action verb/key phrases for assessment:

- `appraise, argue, assess, choose, compare, defend, estimate, judge, predict, rate, core, select, support, value, evaluate, contrast, conclude, criticize, critique, decide, interpret, justify, reframe

Creating

Ability of the students to

- putting together parts and elements into a new form.
- organizing ideas into new patterns and putting materials together in a structure which was not there before.

Examples:

- write a well organized theme
- gives a well organized speech
- write a creative short story/poem/music
- integrate learning from different areas into a plan for solving a problem (research proposal),

Action verb/key phrases for assessment:

- arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up, write, adapt, anticipate, collaborate, combine, communicate, compile, devise, express, facilitate, generate, hypothesize, incorporates, individualizes, initiates, integrate, intervene, invent, model, modify, negotiate, progress, rearranges, reconstructs, reinforce, reorganizes, revise, structure, substitute, validate.

What Question Type Should you be Using?

- True/False
- Multiple Choice
- Multi-Select
- Short Answer
- Fill in the Blank
- Matching/Ordering
- Long Answer/Written Response

	T/F	MC	MS	LA	SA	FIB	MAT	ORD
Create				X				
Evaluate			X	X			X	X
Analyze				X				
Apply		X		X		X	X	X
Understand		X	X		X	X		
Remember	X	X	X		X	X		

Subject Related Examples

SET-I: Economics

Remembering	Define 'demand' and 'supply'.
Understanding	Describe meaning of 'law of demand' and 'law of supply with example.
Applying	Suppose given the linear demand equation $Q_{dx}=100-20 P_x$. Explain the demand equation and draw the demand schedule and demand curve from the given equation
Analyzing	Analyze the demand equation considering the price changing scenario.
Evaluating	What will be the effects on consumer demand if income level of the consumer is changed? Explain
Creating	Analyzing changing market price and consumers' income what would be your strategy for market stability?

SET-II: Literature

Remembering	What were the King's three questions of Leo Tolstoy's parable "Three Questions"?
Understanding	Explain the main idea of the Leo Tolstoy's parable "Three Questions"?
Applying	How would we apply understanding of Leo Tolstoy's parable "Three questions" in our life
Analyzing	Analyze the hermit's answering techniques to the King's questions.
Evaluating	Do you agree with the three answers of King's three questions by the Hermit in Leo Tolstoy's parable "Three Questions"? Why or why not/ Justify your answer?
Creating	Write a story depicting importance of 'present time' in human life.

SET-III: Entrepreneurship

Remembering	Define a manager, an entrepreneur and entrepreneurship.
Understanding	Describe the common features of successful entrepreneurs in your words.
Applying	How will you identify an entrepreneur and a manager?
Analyzing	Analyze the inspiring factors to be an entrepreneur as career.
Evaluating	Evaluate the initiatives taken by government to encourage entrepreneurship in Bangladesh.
Creating	Develop a strategic roadmap for the government to promote entrepreneurship among the youth in Bangladesh.

Need to discuss further

- Application of Other Domains of Blooms Taxonomy for Evaluating Students
- BNQF Learning Domain
- Prerequisites of make good/effective questions?
- Using Rubric for Assessing Exam Paper

Thank you Very much for your cooperation