

Bloom's Taxonomy

Benjamin Bloom created this taxonomy for categorizing level of abstraction of questions that commonly occur in educational settings. The taxonomy provides a useful structure in which to categorize test questions, since professors will characteristically ask questions within particular levels, and if you can determine the levels of questions that will appear on your exams, you will be able to study using appropriate strategies.

Competence	Skills Demonstrated
Knowledge	<ul style="list-style-type: none"> • observation and recall of information • knowledge of dates, events, places • knowledge of major ideas • mastery of subject matter • <i>Question Cues:</i> list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.
Comprehension	<ul style="list-style-type: none"> • understanding information • grasp meaning • translate knowledge into new context • interpret facts, compare, contrast • order, group, infer causes • predict consequences • <i>Question Cues:</i> summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend
Application	<ul style="list-style-type: none"> • use information • use methods, concepts, theories in new situations • solve problems using required skills or knowledge • <i>Questions Cues:</i> apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover
Analysis	<ul style="list-style-type: none"> • seeing patterns

	<ul style="list-style-type: none"> • organization of parts • recognition of hidden meanings • identification of components • <i>Question Cues:</i> analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer
Synthesis	<ul style="list-style-type: none"> • use old ideas to create new ones • generalize from given facts • relate knowledge from several areas • predict, draw conclusions • <i>Question Cues:</i> combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare, generalize, rewrite
Evaluation	<ul style="list-style-type: none"> • compare and discriminate between ideas • assess value of theories, presentations • make choices based on reasoned argument • verify value of evidence • recognize subjectivity • <i>Question Cues</i> assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize

* Adapted from: Bloom, B.S. (Ed.) (1956) *Taxonomy of educational objectives: The classification of educational goals: Handbook I, cognitive domain*. New York ; Toronto: Longmans, Green.

As teachers we tend to ask questions in the "knowledge" category 80% to 90% of the time. These questions are not bad, but using them all the time is. Try to utilize higher order level of questions. These questions require much more "brain power" and a more extensive and elaborate answer. Below are the six question categories as defined by Bloom.

- **KNOWLEDGE**
 - remembering;
 - memorizing;
 - recognizing;
 - recalling identification and
 - recall of information
 - Who, what, when, where, how ...?
 - Describe
- **COMPREHENSION**
 - interpreting;
 - translating from one medium to another;
 - describing in one's own words;
 - organization and selection of facts and ideas
 - Retell...
- **APPLICATION**
 - problem solving;
 - applying information to produce some result;
 - use of facts, rules and principles
 - How is...an example of...?
 - How is...related to...?
 - Why is...significant?
- **ANALYSIS**
 - subdividing something to show how it is put together;
 - finding the underlying structure of a communication;
 - identifying motives;
 - separation of a whole into component parts
 - What are the parts or features of...?
 - Classify...according to...
 - Outline/diagram...

- How does...compare/contrast with...?
 - What evidence can you list for...?
- **SYNTHESIS**
 - creating a unique, original product that may be in verbal form or may be a physical object;
 - combination of ideas to form a new whole
 - What would you predict/infer from...?
 - What ideas can you add to...?
 - How would you create/design a new...?
 - What might happen if you combined...?
 - What solutions would you suggest for...?
- **EVALUATION**
 - making value decisions about issues;
 - resolving controversies or differences of opinion;
 - development of opinions, judgements or decisions
 - Do you agree...?
 - What do you think about...?
 - What is the most important...?
 - Place the following in order of priority...
 - How would you decide about...?
 - What criteria would you use to assess...?

Bloom's Taxonomy's Model Questions and Key Words

Based on Bloom's Taxonomy, Developed and Expanded by John Maynard

I. KNOWLEDGE (drawing out factual answers, testing recall and recognition)

who	where	describe	which one
what	how	define	what is the best one
why	match	choose	how much
when	select	omit	what does it mean

II. COMPREHENSION (translating, interpreting and extrapolating)

state in your own words	classify	which are facts
what does this mean	judge	is this the same as
give an example	infer	select the best definition
condense this paragraph	show	what would happen if
state in one word	indicate	explain what is happening
what part doesn't fit	tell	explain what is meant
what expectations are there	translate	read the graph, table
what are they saying	select	this represents
what seems to be	match	is it valid that
what seems likely	explain	show in a graph, table
which statements support	represent	demonstrate
what restrictions would you add		

III. APPLICATION (to situations that are new, unfamiliar or have a new slant for students)

predict what would happen if	explain
choose the best statements that apply	identify the results of
judge the effects	select
what would result	tell what would happen
tell how, when, where, why	tell how much change there would be

IV. ANALYSIS (breaking down into parts, forms)

distinguish	what is the function of
identify	what's fact, opinion
what assumptions	what statement is relevant

what motive is there	related to, extraneous to, not applicable
what conclusions	what does author believe, assume
make a distinction	state the point of view of
what is the premise	state the point of view of
what ideas apply	what ideas justify conclusion
what's the relationship between	the least essential statements are
what's the main idea, theme	what inconsistencies, fallacies
what literary form is used	what persuasive technique
implicit in the statement is	

V. SYNTHESIS (combining elements into a pattern not clearly there before)

create	how would you test	make up
tell	propose an alternative	compose
make	solve the following	formulate
do	plan	how else would you
choose	design	state a rule
develop		

VI. EVALUATION (according to some set of criteria, and state why)

appraise	what fallacies, consistencies, inconsistencies appear
judge	which is more important, moral, better, logical, valid, appropriate
criticize	find the errors
defend	compare

Knowledge

Useful Verbs	Sample Question Stems	Potential activities and products
tell list describe relate locate write find state name	What happened after...? How many...? Who was it that...? Can you name the...? Describe what happened at...? Who spoke to...? Can you tell why...? Find the meaning of...? What is...? Which is true or false...?	Make a list of the main events.. Make a timeline of events. Make a facts chart. Write a list of any pieces of information you can remember. List all the in the story. Make a chart showing... Make an acrostic. Recite a poem.

Comprehension

Useful Verbs	Sample Question Stems	Potential activities and products
explain interpret outline discuss distinguish predict restate translate compare describe	Can you write in your own words...? Can you write a brief outline...? What do you think could of happened next...? Who do you think...? What was the main idea...? Who was the key character...? Can you distinguish between...? What differences exist between...? Can you provide an example of what you mean...? Can you provide a definition for...?	Cut out or draw pictures to show a particular event. Illustrate what you think the main idea was. Make a cartoon strip showing the sequence of events. Write and perform a play based on the story. Retell the story in your words. Paint a picture of some aspect you like. Write a summary report of an event. Prepare a flow chart to illustrate the sequence of events. Make a colouring book.

Application

Useful Verbs	Sample Question Stems	Potential activities and products

<p>solve show use illustrate construct complete examine classify</p>	<p>Do you know another instance where...? Could this have happened in...? Can you group by characteristics such as...? What factors would you change if...? Can you apply the method used to some experience of your own...? What questions would you ask of...? From the information given, can you develop a set of instructions about...? Would this information be useful if you had a ...?</p>	<p>Construct a model to demonstrate how it will work. Make a diorama to illustrate an important event. Make a scrapbook about the areas of study. Make a paper-mache map to include relevant information about an event. Take a collection of photographs to demonstrate a particular point. Make up a puzzle game using the ideas from the study area. Make a clay model of an item in the material. Design a market strategy for your product using a known strategy as a model. Dress a doll in national costume. Paint a mural using the same materials. Write a textbook about... for others.</p>
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Analysis

Useful Verbs	Sample Question Stems	Potential activities and products
<p>analyse distinguish examine compare contrast investigate categorise identify explain separate advertise</p>	<p>Which events could have happened...? I ... happened, what might the ending have been? How was this similar to...? What was the underlying theme of...? What do you see as other possible outcomes? Why did ... changes occur? Can you compare your ... with that presented in...? Can you explain what must have happened when...? How is ... similar to ...? What are some of the problems of...? Can you distinguish between...? What were some of the motives behind...? What was the turning point in the game? What was the problem</p>	<p>Design a questionnaire to gather information. Write a commercial to sell a new product. Conduct an investigation to produce information to support a view. Make a flow chart to show the critical stages. Construct a graph to illustrate selected information. Make a jigsaw puzzle. Make a family tree showing relationships. Put on a play about the study area. Write a biography of the study person. Prepare a report about the area of study. Arrange a party. Make all the arrangements and record the steps needed. Review a work of art in terms of form, colour and</p>

	with...?	texture.
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Synthesis

Useful Verbs	Sample Question Stems	Potential activities and products
create invent compose predict plan construct design imagine propose devise formulate	Can you design a ... to ...? Why not compose a song about...? Can you see a possible solution to...? If you had access to all resources how would you deal with...? Why don't you devise your own way to deal with...? What would happen if...? How many ways can you...? Can you create new and unusual uses for...? Can you write a new recipe for a tasty dish? can you develop a proposal which would...	Invent a machine to do a specific task. Design a building to house your study. Create a new product. Give it a name and plan a marketing campaign. Write about your feelings in relation to... Write a TV show, play, puppet show, role play, song or pantomime about...? Design a record, book, or magazine cover for...? Make up a new language code and write material using it. Sell an idea. Devise a way to... Compose a rhythm or put new words to a known melody.

Evaluation

Useful Verbs	Sample Question Stems	Potential activities and products
judge select choose decide justify debate verify argue recommend assess discuss rate prioritise	Is there a better solution to... Judge the value of... Can you defend your position about...? Do you think ... is a good or a bad thing? How would you have handled...? What changes to ...	Prepare a list of criteria to judge a ... show. Indicate priority and ratings. Conduct a debate about an issue of special interest. Make a booklet about 5 rules you see as important. Convince others. Form a panel to discuss views, eg "Learning at School." Write a letter to ... advising on changes needed at... Write a half yearly report.

determine	would you recommend? Do you believe? Are you a ... person? How would you feel if...? How effective are...? What do you think about...?	Prepare a case to present your view about...
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