

Bloom, Feisel-Schmitz, SOLO, ...

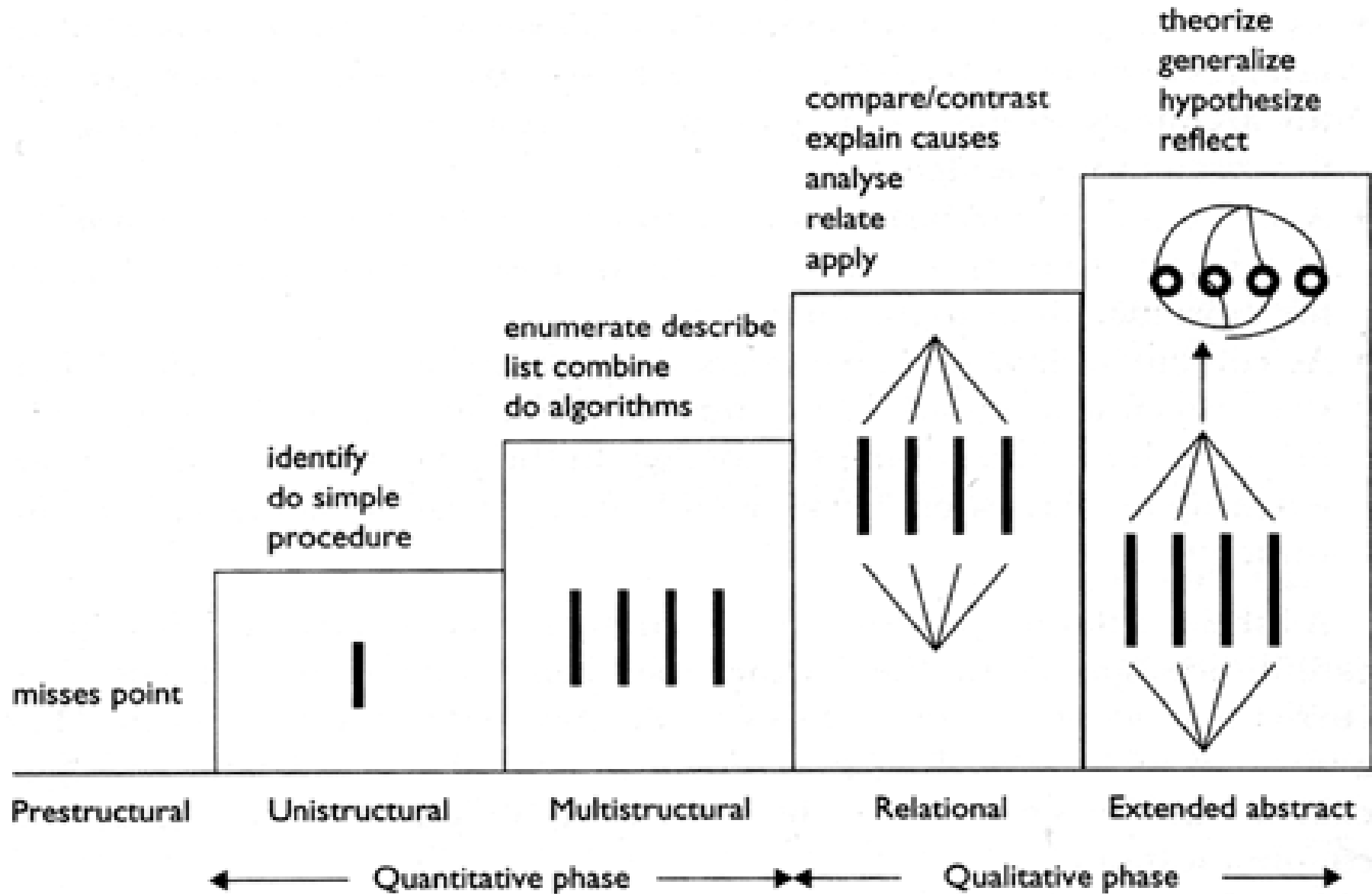
TAXONOMIES FOR LEARNING

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Feisel-Schmitz Technical Taxonomy

Judge: (värdera)	To be able to critically evaluate multiple solutions and select an optimum solution
Solve: (lösa problem)	Characterize, analyze, and synthesize to model a system (provide appropriate assumptions)
Explain: (förklara)	Be able to state the outcome/concept in their own words
Compute: (räkna typtal)	Follow rules and procedures (substitute quantities correctly into equations and arrive at a correct result, Plug & Chug)
Define: (återge)	State the definition of the concept or is able to describe in a qualitative or quantitative manner

SOLO taxonomy Biggs p. 79

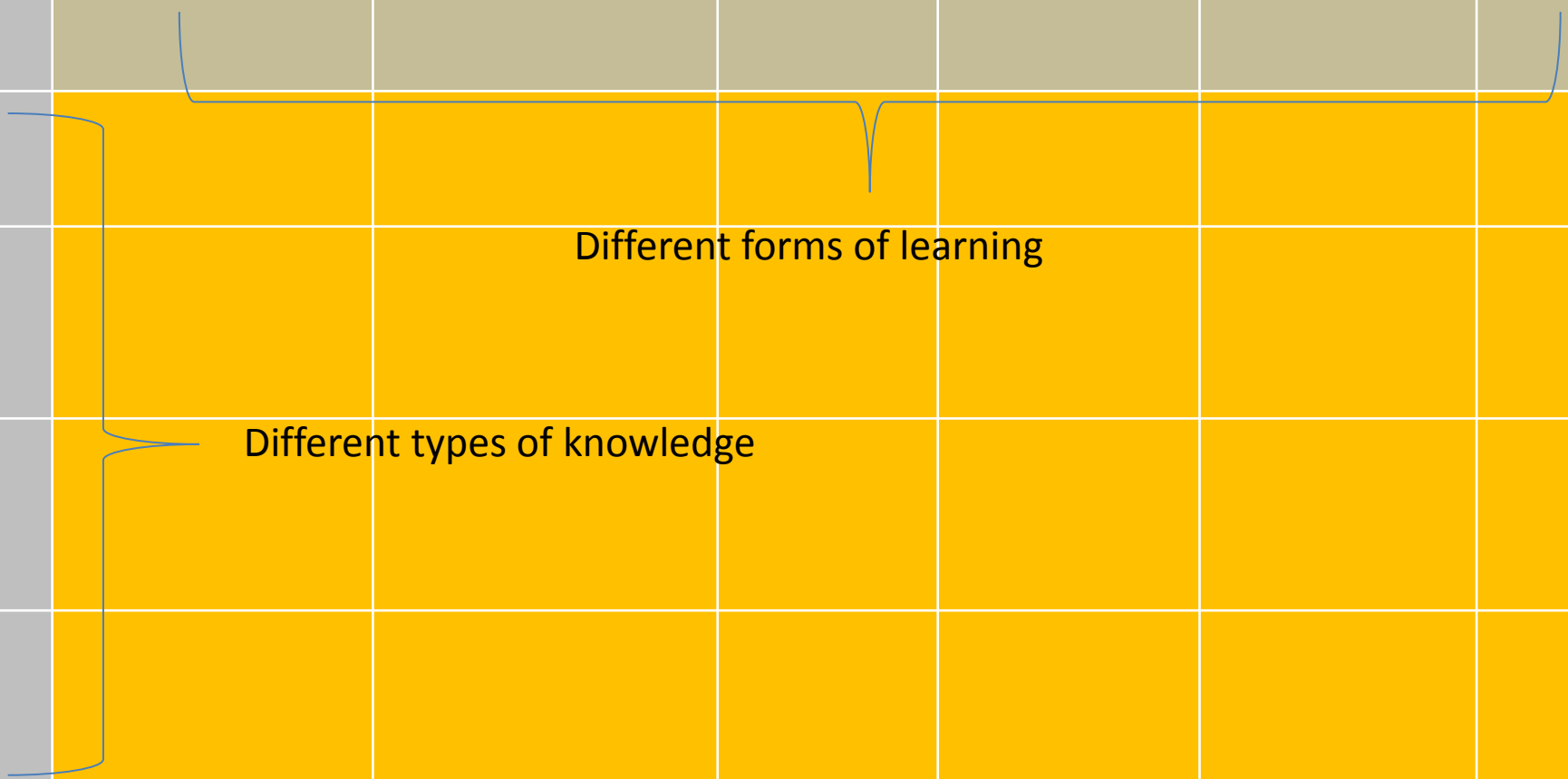


Bloom's taxonomy

[Bloom 1956]

Action Words for Bloom's Taxonomy					
Knowledge	Understand	Apply	Analyze	Evaluate	Create
define	explain	solve	analyze	reframe	design
identify	describe	apply	compare	criticize	compose
describe	interpret	illustrate	classify	evaluate	create
label	paraphrase	modify	contrast	order	plan
list	summarize	use	distinguish	appraise	combine
name	classify	calculate	infer	judge	formulate
state	compare	change	separate	support	invent
match	differentiate	choose	explain	compare	hypothesize
recognize	discuss	demonstrate	select	decide	substitute
select	distinguish	discover	categorize	discriminate	write
examine	extend	experiment	connect	recommend	compile
locate	predict	relate	differentiate	summarize	construct
memorize	associate	show	discriminate	assess	develop
quote	contrast	sketch	divide	choose	generalize
recall	convert	complete	order	convince	integrate
reproduce	demonstrate	construct	point out	defend	modify
tabulate	estimate	dramatize	prioritize	estimate	organize
tell	express	interpret	subdivide	find errors	prepare
copy	identify	manipulate	survey	grade	produce
discover	indicate	paint	advertise	measure	rearrange
duplicate	infer	prepare	appraise	predict	rewrite
enumerate	relate	produce	break down	rank	role-play
listen	restate	report	calculate	score	adapt
observe	select	teach	conclude	select	anticipate
omit	translate	act	correlate	test	arrange
read	ask	administer	criticize	argue	assemble
recite	cite	articulate	deduce	conclude	choose
record	discover	chart	devise	consider	collaborate
represent	generalize	collect	diagram	criticize	collect

Bloom's revised taxonomy in 2 dim. Krathwohl (2002)

		The Cognitive Process Dimension					
The Knowledge Dimension		1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual Knowledge	 <p>Different types of knowledge</p> <p>Different forms of learning</p>						
B. Conceptual Knowledge							
C. Procedural Knowledge							
D. Metacognitive Knowledge							

	The Cognitive Process Dimension					
The Knowledge Dimension	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual Knowledge Aa. Knowledge of terminology Ab. Knowledge of specific details and elements						
B. Conceptual Knowledge Ba. Knowledge of classifications and categories Bb. Knowledge of principles and generalizations Bc. Knowledge of theories, models, and structures						
C. Procedural Knowledge Ca. Knowledge of subject-specific skills and algorithms Cb. Knowledge of subject-specific techniques and methods Cc. Knowledge of criteria for determining when to use appropriate procedures						
D. Metacognitive Knowledge Da. Strategic knowledge Db. Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge Dc. Self-knowledge						

	The Cognitive Process Dimension					
The Knowledge Dimension	1. Remember 1.1 Recognizing 1.2 Recalling	2. Understand 2.1 Interpreting 2.2 Exemplifying 2.3 Classifying 2.4 Summarizing 2.5 Inferring 2.6 Comparing 2.7 Explaining	3. Apply 3.1 Executing 3.2 Implementing	4. Analyze 4.1 Differentiating 4.2 Organizing 4.3 Attributing	5. Evaluate 5.1 Checking 5.2 Critiquing	6. Create 6.1 Generating 6.2 Planning 6.3 Producing
A. Factual knowledge						
B. Conceptual knowledge						
C. Procedural knowledge						
D. Meta-cognitive knowledge						



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The Cognitive Process Dimension

The Knowledge Dimension	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual Knowledge	2 3 X E 4	2 3 X E 4	2 X E			
B. Conceptual Knowledge	2 3 X E 4 5	2 3 X E 4 5	2 X E 4 5	2 X E 4	2 X E 4	4* X E
C. Procedural Knowledge	1 2 X E 4 5	1 2 X E 4 5	1 2 X E 4 5	1 2 X E 5	1 2 X E 5	* X E 5*
D. Metacognitive Knowledge	6 X 7	6 X 7	X	X		

1-5: ILOs

X: Learning activity

E: Examination