

ID Theory & Models Cheat Sheet

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This is the companion to my article [33 Instructional Design Theories, Models, and Principles](#). The article explains each one in depth. This sheet is for the moment you are staring at a new project and need to remember what exists and when to reach for it.

Learning theories

The three big families. Everything else on this sheet builds on one or more of them.

Name	Originator	Core idea	Use it when
Behavioral learning theory	Skinner, Pavlov, Watson	Learning is a change in observable behavior shaped by stimulus, response, and reinforcement.	Procedures, compliance tasks, and anything with one right way to perform.
Cognitive learning theory	Piaget, Miller	Learning is mental processing: the mind encodes, stores, and retrieves information.	Concepts, rules, and problem solving where memory and understanding drive performance.
Constructivist learning theory	Piaget, Vygotsky, Bruner	Learners build their own understanding by connecting new experiences to prior knowledge.	Complex skills and judgment that need exploration, practice, and reflection.

Theory to design decisions

If the goal is accurate, repeatable performance, design like a behaviorist: drills, immediate feedback, reinforcement. If the goal is understanding, design like a cognitivist: chunked content, worked examples, memory supports. If the goal is judgment in messy situations, design like a constructivist: scenarios, cases, and reflection. Most real courses mix all three.

Instructional design theories

Name	Originator	Core idea	Use it when
Merrill's First Principles of Instruction	David Merrill	Instruction works best when it centers on real problems with activation, demonstration, application, and integration.	A quality bar for any course, especially task-centered training.

Backward Design	Wiggins and McTighe	Define the outcome, define the evidence, then design the instruction.	Kicking off any project where assessments must match objectives.
Anchored Instruction	John Bransford	Anchor learning in a rich story or case that learners explore and solve.	Scenario-based and case-based learning.
Cognitive Apprenticeship	Collins, Brown, Newman	Make expert thinking visible through modeling, coaching, scaffolding, and fading.	Teaching invisible mental skills like troubleshooting or writing.
Social Learning Theory	Albert Bandura	People learn by observing others and the consequences of their behavior.	Demonstration videos, role models, mentoring, communities of practice.
Andragogy	Malcolm Knowles	Adults learn best when instruction is relevant, self-directed, experience-based, and problem-centered.	Any corporate audience; it justifies relevance and learner choice.
Stages of Cognitive Development	Jean Piaget	Thinking develops through predictable stages from concrete to abstract.	Younger audiences, or sequencing any content from concrete to abstract.
Situated Cognition Theory	Brown, Collins, Duguid	Knowledge is inseparable from the context and activity where it is used.	Transfer matters most: make practice mirror the real work environment.
Sociocultural Learning Theory	Lev Vygotsky	Learning is social first; language, culture, and interaction drive development.	Cohort programs, discussion-based learning, peer collaboration.
Discovery-Based Learning	Jerome Bruner	Learners grasp ideas more deeply when they uncover them through exploration.	Motivated learners, open-ended activities, low cost of error.
Inquiry-Based Learning	John Dewey	Learning starts from questions that learners investigate and answer themselves.	Research tasks, problem framing, curiosity-driven topics.
Elaboration Theory	Charles Reigeluth	Sequence content from simple to complex, returning to the big picture as detail grows.	Structuring long curricula and multi-module programs.
Individualized Instruction	Fred Keller	Learners move at their own pace and must master each unit before the next.	Self-paced programs with mastery checks between sections.
Zone of Proximal Development and Scaffolding	Vygotsky; Wood, Bruner, Ross	Target what learners can do with help, then remove support as competence grows.	Setting difficulty, designing hints, and fading coaching over time.

Principles and frameworks

Name	Originator	Core idea	Use it when
Mayer's Principles of Multimedia Learning	Richard Mayer	Twelve evidence-based rules for combining words and visuals without overloading learners.	Every slide, screen, and video you design.
Cognitive Load Theory	John Sweller	Working memory is limited; manage necessary load and cut everything extraneous.	Dense content, novice audiences, and deciding what to cut.
Universal Design for Learning	CAST (Rose and Meyer)	Offer multiple means of engagement, representation, and expression so every learner can access the material.	Accessibility requirements and audiences with varied needs.

Instructional design models

Name	Originator	Core idea	Use it when
ADDIE	Florida State University	Five phases: Analyze, Design, Develop, Implement, Evaluate.	The default project backbone; most teams and job postings assume it.
Bloom's Taxonomy	Benjamin Bloom	Classifies learning objectives from remembering up to creating.	Writing objectives and matching assessments to them.
Gagné's Nine Events of Instruction	Robert Gagné	Nine steps from gaining attention through supporting retention and transfer.	A ready-made structure for any single lesson or module.
Kirkpatrick Model	Donald Kirkpatrick	Evaluate training at four levels: reaction, learning, behavior, results.	Planning evaluation and reporting value to stakeholders.
ARCS Model of Motivation	John Keller	Motivation requires Attention, Relevance, Confidence, and Satisfaction.	Diagnosing and fixing engagement problems.
Successive Approximation Model (SAM)	Michael Allen	Iterate: small prototypes, frequent review, successive refinement.	Tight timelines, changing requirements, stakeholders who react better to prototypes than documents.
Dick and Carey Model	Walter Dick, Lou Carey	A systems view: nine interrelated components from goals through summative evaluation.	Large, formal projects that demand rigor and documentation.
ASSURE Model	Heinich, Molenda, Russell, Smaldino	Six steps for planning media and technology into lessons.	Classroom or blended lessons built around media selection.
Kemp Design Model	Morrison, Ross, Kemp	Nine flexible elements you can enter at any point, in any order.	Projects that will not follow a straight line; ongoing course revision.

Gerlach-Ely Model	Vernon Gerlach, Donald Ely	Ten steps that plan content and objectives alongside resources, time, and space.	Teaching contexts where logistics matter as much as content.
Hannafin-Peck Model	Michael Hannafin, Kyle Peck	Three phases (needs assessment, design, develop and implement) with evaluation woven through each.	Small, fast projects that still need built-in review.
Knirk and Gustafson Model	Frederick Knirk, Kent Gustafson	Three stages: problem determination, design, development.	Simple, well-defined problems; plan your own revision step since the model ends at development.
Organizational Elements Model	Roger Kaufman	Links training inputs and outputs to organizational and societal results.	Needs assessment and tying training to business outcomes.

Learn these five first

You do not need all 33 on day one. These five cover the questions every project asks, and they come up constantly in interviews and stakeholder conversations.

1. **ADDIE.** It is the shared process vocabulary of the field; every other model is easier to place once you know it.
2. **Bloom's Taxonomy.** It teaches you to write objectives you can actually assess, which is the root of most design decisions.
3. **Gagné's Nine Events.** It gives you a default structure for any lesson when you are staring at a blank page.
4. **Mayer's Principles of Multimedia Learning.** It tells you how to build slides, screens, and videos that do not overload people.
5. **Kirkpatrick Model.** It gives you the evaluation language stakeholders already speak when they ask if the training worked.

Model-selection checklist

Run this once per project before you commit to a model. Print this page again for each new project.

Project goal

- ☐ I wrote the performance outcome in one sentence.
- ☐ I know whether the content is procedural, conceptual, or judgment-heavy.
- ☐ I matched the outcome to an objective level (Bloom's Taxonomy helps here).

Audience

- ☐ I know the learners' roles, prior knowledge, and context.
- ☐ For adult, self-directed learners, I checked the design against Andragogy.
- ☐ For novices, I planned guidance and worked examples (Cognitive Load Theory).

Iteration tolerance

- ☐ I know how many review cycles the timeline and budget allow.
- ☐ Stakeholders will review early prototypes: SAM fits.
- ☐ Requirements are fixed and sign-off is formal: ADDIE or Dick and Carey fits.

Evaluation needs

- ☐ I know what the business will accept as proof the training worked.
- ☐ I mapped my measures to Kirkpatrick levels before designing anything.
- ☐ Assessments flow from the objectives, not bolted on at the end (Backward Design).

Have any questions? Email me at devlin@devlinpeck.com