

David Jonassen,
“Designing Constructivist
Learning Environments,”
in Charles M. Reigeluth
(ed.), *Instructional-
Design Theories and
Models, Volume II*,
Lawrence Erlbaum
Associates, Inc., Pub.,
1999, pp.215-239.

Goals and preconditions. *The primary goal of this theory is to foster problem solving and conceptual development. It is intended for ill-defined or ill-structured domains.*

Values. *Some of the values on which this theory is based include:*

- *learning that is driven by an ill-defined or ill-structured problem (or question, case, project),*
- *a problem or learning goal that is “owned” by the learner,*
- *instruction that consists of experiences which facilitate knowledge construction (meaning making),*
- *learning that is active and authentic.*

Methods. *Here are the major methods this theory offers:*

1. *Select an appropriate problem (or question, case, project) for the learning to focus on.*
 - *The problem should be interesting, relevant and engaging, to foster learner ownership.*
 - *The problem should be ill-defined or ill-structured.*
 - *The problem should be authentic (what practitioners do).*
 - *The problem design should address its context, representation, and manipulation space.*
2. *Provide related cases or worked examples to enable case-based reasoning and enhance cognitive flexibility.*
3. *Provide learner-selectable information just-in-time.*
 - *Available information should be relevant and easily accessible.*
4. *Provide cognitive tools that scaffold required skills, including problem-representation tools, knowledge-modeling tools, performance-support tools, and information-gathering tools.*
5. *Provide conversation and collaboration tools to support discourse communities, knowledge-building communities, and/or communities of learners.*
6. *Provide social/contextual support for the learning environment.*

This theory also offers the following instructional activities to support learning:

- A. *Model the performance and the covert cognitive processes.*
- B. *Coach the learner by providing motivational prompts, monitoring and regulating the learner’s performance, provoking reflection, and/or perturbing learners’ models.*
- C. *Scaffold the learner by adjusting task difficulty, restructuring the task, and/or providing alternative assessments.*

Major contribution. *The integration of much work in the constructivist arena into a coherent instructional framework.*