## FACTORS ASSOCIATED WITH THE DECLINE OF HIGH-LEVEL COGNITIVE DEMANDS

- 1. Problematic aspects of the task become routinized (e.g., students press the teacher to reduce the complexity of the task by specifying explicit procedures or steps to perform; the teacher ``takes over" the thinking and reasoning and tells students how to do the problem).
- 2. The teacher shifts the emphasis from meaning, concepts, or understanding to the correctness or completeness of the answer.
- 3. Not enough time is provided to wrestle with the demanding aspects of the task or too much time is allowed and students drift into off-task behavior.
- 4. Classroom management problems prevent sustained engagement in high-level cognitive activities.
- 5. Inappropriateness of task for a given group of students (e.g., students do not engage in high-level cognitive activities due to lack of interest, motivation, or prior knowledge needed to perform; task expectations not clear enough to put students in the right cognitive space.
- 6. Students not held accountable for high-level products or processes (e.g., although asked to explain their thinking, unclear or incorrect student explanations are accepted; students are given the impression that their work will not "count" toward a grade).

## FACTORS ASSOCIATED WITH THE MAINTENANCE OF HIGH-LEVEL COGNITIVE DEMANDS

- 1. Scaffolding of student thinking and reasoning.
- 2. Students are provided with means of monitoring their own progress.
- 3. Teacher or capable students model high-level performance.
- 4. Sustained press for justification, explanations, and/or meaning through teacher questioning, comments, and/or feedback.
- 5. Tasks build on students' prior knowledge.
- 6. Teacher draws frequent conceptual connections.
- 7. Sufficient time to explore (not too little, not too much).