A Cognitivist-Constructivist Instructional Design Model

When working with faculty to design and develop technology-based resources, we use this model (Mann & Kovalchick, 1998) below to insure that instructional coherence is built into the project. The utility of this model - which was developed for a faculty orientation workshop - is that it highlights important components of an instructional design framework from a faculty point of view.

1. How do people develop from novices to experts in your discipline?
Are there distinct stages of development? Is your discipline more convergent (getting the right answer) or divergent (creative), or both? How does your project fit into the course sequence in your department? Does this sequence lead students in a logical path of development? What concepts from your discipline are critical for students to understand? Which concepts or skills are most difficult for students to learn, and why? Do students have misconceptions about your discipline that make teaching more difficult?

2. How well are your students prepared to learn?
What do the students in your course already know about the subject? Are you sure? Would a pretest be helpful? How motivated are the students? Is their motivation more intrinsic (love of the subject), extrinsic (desire for degree, job, $), or a mixture of both? How good are the students' study skills? Can they self-assess accurately?

3. What is reasonable to expect of your students at the end of your project or course?
At what level do you expect them to learn (e.g., recognize or recall facts, apply concepts, synthesize or evaluate knowledge)? How can you measure these outcomes?

4. What teaching and learning strategies are best for your discipline and project topic?
How can application-driven learning be applied to your project to motivate students and activate their relevant prior knowledge? How can students form the habit of self-assessment in your course? How is feedback about learning provided to students? How can students be supported in generalizing from what they learn from your project to new applications for the knowledge?

5. What materials do you need to develop, in what media?
How can technology best be used to support the teaching and learning strategy you have developed?

6. How can draft materials for your project be developed for pilot testing?
What parts of your project are the most important to "prototype" and test? Why?

7. What should be the evaluation criteria for the completed TIPs project?
Do you only want to look for the anticipated benefits of the project? Is there a way to examine unexpected benefits as well as problems that occur with the content or the technology?