

## **Teaching the Science Teacher: Understanding Expectations**

This case study presented an interesting challenge in that the goal was identified, but the strategies and tactics were not clearly defined to achieve the goal. The goal of training teachers to teach science based on a constructivist model regardless of their level of expertise in the subject matter is outlined by Dr. Cynthia Oakes (Ertmer & Quinn, 2007), but the specifics of the training require further development.

As I developed my approach, I took into consideration some of the findings uncovered during preliminary discussions as well as develop an understanding of the required shift from a traditional teaching environment to a constructivist environment. Historically, teachers and designers developed the objectives thus the materials were developed to support those goals (Duffy & Jonassen, 1992). Instructional content is therefor an external influence (Duffy & Jonassen, 1992) rather than an organic process that encourages exploration, collaboration and ultimately retention.

Therefore, the preliminary design is based not only on the overall goals of the project, but also the needs of the teachers, the new expectations and support for both students and teachers as well as the development of assessments based on Bloom's Taxonomy.

### **References**

Duffy, T. M., & Jonassen, D. H. (1992). *Constructivism and the technology of instruction, a conversation*. Hillsdale, NJ: Lawrence Erlbaum.

Ertmer, P., & Quinn, J. (2007). *The id casebook: Case studies in instructional design*. (3rd ed.). Saddle River, NJ: Pearson Education, Inc.