Chapter XVII
Case Study in E-Learning

The future of e-learning is wide open in terms of innovations in software, hardware, instructional content, and teaching practices. Recent innovations in software have been instrumental in the development of rapid e-learning that allows the creation of podcasts and vodcasts (video podcasts) in 2 to 3 weeks versus 4 to 5 months (Weekes, 2007). Hardware such as PDAs, mobile phones, and pocket PCs provide new avenues in mobile e-learning. Businesses view e-learning as a way to train employees locally and worldwide. Student enrollment in distance education courses in U.S. colleges and universities increased from 2.3 million in 2004 to 3.2 million in 2006 (Allen & Seaman, 2006). It appears that the delivery of instructional content through e-learning will continue to be another growth area in the new millennium.

Project goal:	Re-engineer
Design goal:	Re-engineer an existing e-learning course
Target Audience:	Adult learners, ages 22-55, in Egypt, Italy, and India (generic)
Production Stage:	Pre-production

Re-engineering is suitable for a product or on-line environment where part or most of the design can be revamped. This means that re-engineering requires making major changes related to coding, restructuring, and rebuilding. Re-engineering assists in modifying and reconceptualizing the e-learning system. The task of re-engineering involves examining, recording, and analyzing the pre-existing system or product. This may begin with observing learners, documenting the behavior of learners, and evaluating learners before and after using the e-learning system. As an example, a tracking system may be implemented to evaluate an existing e-learning system. The tracking system can analyze when learners are moving forward with tasks, need to review tasks, or continue to error out on tasks (Iksal, Barré, Choquet, & Corbiére, 2004).

With re-engineering, there should be technical and culture-based considerations. These considerations may focus on isolating the software coding for the technical context and culture-based context. The goal is to allow future re-engineering to be added to the e-learning system on the basis of technical-only or design-only specifications (Hoft, 1995; Taylor, 1992).

In applying CBM to an e-learning system, the following steps can be taken.

Step 1: *Determine the areas of the ID-TABLET that will be used for the project. Begin by reviewing the guiding questions in Chapter III (under Add-on). In any area where the answer is yes, that area of CBM should be considered. The process might proceed as follows:*

> **Inquiry: Does the project need monitoring for design and development issues?** In determining the answer to this question, work with the Inquiry area by reviewing the questions related to Genre, such as the following: I1a. *What ICTs are being used and why?* and I1b. *Which ICTs are more effective given the content?* These questions may be relevant in an e-learning environment where learners receive content in on-line and printed form. Review the following questions: I1c. *Is the project affordable to the target audience, given the ICTs used?* and I1d. *How have ICTs influenced the design of the product?* Both of these questions are relevant to re-engineering and an e-learning environment. Framing questions ask the following: I2a. *Who is the target audience?* and I2b. *How is the content presented to the target audience?* These questions are needed to keep the project focused. Omission questions ask the following: I3a. *What has been intentionally omitted and why?* This line of questions is important in providing a balanced design. Backgrounding questions ask the following: I4a. *What has been backgrounded?* This is a relevant question because whatever is hidden in the design is important in determining whether bias existed or still exists. Foregrounding questions ask the following: