The CBT Craftsman

Anybody Can't Do CBT
A TEAM APPROACH TO COURSE DEVELOPMENT

Jesse M. Heine

Anybody can't do CBT working alone; it takes a number of people with a range of skills.

A typical list looks something like this:

1. Training analysis
2. Statement of objectives
3. Development of subject matter
4. Instructional design
5. Media design
6. Storyboarding
7. Media production
8. Programming
9. Testing
10. Revision
11. Release

This list includes only one testing and one revision step, but in most cases testing (or at least review) and revision take place after almost every step in the process. To be sure, a considerable amount of editing and review would normally take place between the storyboarding and production steps. The above list is also presented sequentially, but in many cases the work on two or more of the steps can be done concurrently, or work on successive steps can overlap.

No matter how you might alter this list for your company, it should be evident that the set of skills needed to complete the entire process can rarely be found in a single person. Even if you happen to employ such a superman or superwoman, he or she can very seldom deliver the optimum course all alone.

My reasons for the preceding statement are subtle. The super-developer's dire problems arise from a lack of skill in each individual step, but from the inability to give each step its full due without the influence of the others. That is, it is extremely difficult to do truly creative instructional design while worrying about how hard the design is going to be to program.

Consider, for example, what happens when the subject matter lends itself to a specific instructional design that may be difficult, if not impossible, to implement in the designated authoring system. If the instructional designer is also the programmer, he or she may be inclined to change the instructional design to more closely match one of the interaction strategies anticipated by the authoring system developers. Such a situation limits the designer's effectiveness and often decreases the educational value of the course.

It is better to employ programming specialists who, while they certainly might contribute to the instructional design process, are there primarily to implement interactions as specified on storyboard forms. If this means writing assembly language subroutines to be called from the authoring system, so be it. All good programmers know that any interaction can be programmed given the proper tools and sufficient time. The best programmers, however, are those who can also estimate how long a complex piece of code will take to write. It is then the project manager's responsibility to decide whether the time investment is warranted, based on deadlines and the adaptability of the code for use in other CBT courses.

Frederick Burhans argued in his Mythical Man-Month that two people can sometimes do twice the work of one, but four can seldom do twice the work of two. Coordination and communication problems act as strong resisters to productivity, and they multiply at an ever-increasing rate as the number of people on a project increases. Yet when multiple skills are involved, it is virtually impossible for a single worker to produce a truly creative product.

Managers must strive to balance their project teams with respect to the number of people they contain and the heterogeneity of their skills. The best teams are those in which each team member's responsibilities are discrete, yet each member's product builds on the work of the others. While anybody can't do CBT with this approach, everybody can.

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