



## **Feature Article**

### **Mentored Computer Based Training**

By  
Jay Orlin

During the past 15 years, I have explored technology-assisted training for business, industry, and education from several perspectives including: training manager, independent consultant, project manager, and board member. This exploration included formal experiments and studies aimed at discovering what actually works well, and under which circumstances. In this article I would like to share what I believe is one of the more exciting studies. It is what I called Mentored CBT.

Mentored CBT involves a classroom setting where a number of students take the same CBT course. Prior to beginning the program, students receive guidance on how to use the CBT programs, some hints about bugs or limitations of a given program, and instructions on how to easily and quickly contact the mentor when they are in class. At this point the students work independently at their own pace, or receive assistance by picking up the telephone to speak with the mentor.

In 1993, Tandem Computers operated six sessions of CBT-based classroom training with 78 working professionals. Students voluntarily enrolled to take the course during their normal working hours. There were five courses in the areas of

- C programming
  - UNIX
  - Basic and Advanced C Programming
  - UNIX Awareness, Fundamentals and Editors
- Conclusions about the study were reached through

extensive observation of the classes, written evaluations, detailed debriefing of students immediately after classes, the mentors expert opinion of student progress, and some pre/post testing.

The conclusion is that mentored CBT is a method which can ensure students gain significantly more benefit from existing CBT programs when they are supported by a mentor who is not physically in the room with them.

Analysis of the evaluation scores indicate a high degree of satisfaction by students completing this type of training. The evaluation looked at five different areas. The degree of challenge involved, the value of the course content, the experience of using the computer for training, how students felt about the classroom setting, and the value of having a classroom mentor. Additional data was gathered about the average frequency of breaks and the motivation experienced from training in the group setting. The scoring was done on a five-point system. Following are highlights of the study.

#### **Challenge**

Determining the level of challenge was a key indicator of how well courses targeted the needs of specific audiences. The results indicated that a significant portion of students considered the degree of difficulty level to be appropriate, questions to be targeted, and the effort required to complete courses in a reasonable period of time.

#### **Value of Content**

On a 5-point scale these questions determined how well courses were organized, met their objectives and accuracy and timeliness of the information (4.2). When asked about immediate application to the job, the rating was somewhat lower but still acceptable (3.9). The data showed that the level of detail pro-

## Job Bank (cont.)

### 6. Network Management Course Developer (new listing)

As a senior-level course developer, you will be responsible for instructor-led lecture lab course development on UNIX network management products. You will also manage subcontractor(s) developing DOS/Windows network management courses. Your audiences are internal, resellers and post sales engineers.

#### Requirements:

- Ideally, Previous development of a network management.. course on IBM HP/SUN hardware.
- Experience and education in instructional design.
- Able to work independently in a fast-paced environment with rapid technological developments.

### 7. Sales Course Developer (new listing)

You will be developing courses that target re-seller and distributor audiences. You should be technically knowledgeable of networking products and technologies, including hubs, switching, LANS and internetworking. You will develop instructor-led, self-paced classes sales tools/job aids for the reseller and distributor sales channel.

#### Requirements:

- 3+ years experience and education in instructional design
- Multimedia work experience
- Development has been in a MAC environment
- Familiar with Framemaker/Work, Illustrator/Excel/Hypercard/Powerpoint
- Presentation skills are necessary.
- Train-the-trainer experience a plus

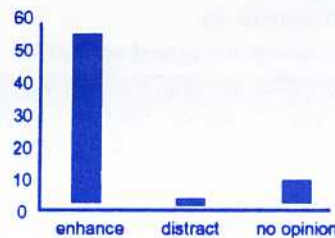
vided met the students expectations for the courses.

### Training on a Computer

These questions focus on the actual design of the courseware, separate from issues of content. They considered interface (3.7), graphics and screen layout (4.0), enjoyment of learning on the computer (4.1); and willingness to recommend it to others (4.2).

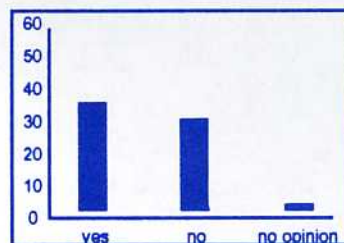
### Classroom-Based CBT

These questions involved motivation, learning and preference for group versus privacy while taking CBT. A significant majority found that the group setting enhanced their learning<sup>1</sup> while only a few found it distracting. In terms of motivation, there was no signifi-



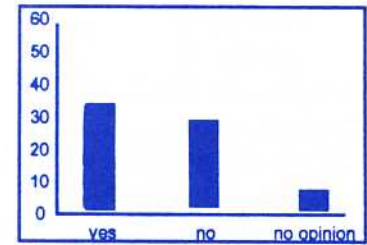
1 Learning

cant difference between the number of students who were not motivated by the group setting<sup>2</sup>.



2 Motivation

Similarly, the number who prefer to take training alone was close to those who preferred the group setting<sup>3</sup>.



3 Prefer Alone

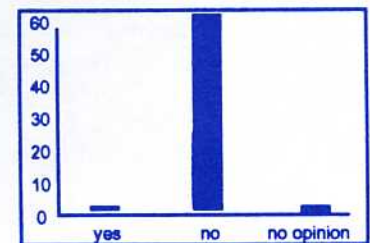
### Mentored Training Sessions

The mentor received very high ratings for subject knowledge. The mentor was clearly considered an asset to the training. More students favored mentoring to no mentoring by more than a 4-1 margin<sup>4</sup>. They also seem to



4 Prefer Mentor

recognize the productivity inherent in having a mentor available but not dedicated to the CBT training room. When asked if the mentor should be in the room full time, the response was more than 10 - 1 opposing full time attendance in the room<sup>5</sup>.



5 Full time Mentor

## Other Data

The study found with full day CBT training sessions students required breaks at two hours intervals. Some students required breaks every 45 minutes, while others stopped only once per day. The prevailing opinion was that full day CBT training sessions are too demanding, and that half-day sessions are more preferable.

While verbally debriefing students, a great deal of additional information was collected. Much of it was specific to the courseware and identified minor and major problems with the courses. This information was relayed to the vendor within days after it was received.

A dominant theme was more supplemental documentation was needed so students would not need to take extensive notes. Note taking in some instances seriously impacted their ability to complete training within the allotted time. Students also expressed a desire for more flexibility in moving through programs, and more in-depth reference dictionaries in the courses.

## Summary Comments

The results indicate most students felt that the classroom setting enhanced their learning performance. This makes sense when you consider most people put more effort into mastering an activity in a group setting. Whether it is an aerobics fitness class, a fine arts course, martial arts, or other skills, the classroom setting usually encourages positive peer support.

The preference for mentoring was clearly expressed by the majority. They appreciated the quick availability of support without the mentor watching them in the room. The verbal debriefing reinforced the value of the mentor in numerous other aspects.

On the subjects of motivation and preference for training in a group or alone, participants were more closely divided. The combination of available mentoring and technical support encouraged the majority to favor the classroom while they were more evenly split on these two areas.

Mentored classroom CBT does require significantly more planning and coordination than simply making courses available on diskettes or over a network.

However, if the results of the training are key to the business objectives this method would be well worth your consideration.

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## From the President...

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As Dawn Snyder took over the next year, it was not the number of members that was growing, but the services provided to those members that was on the rise. Through some very successful workshops, the Chapter's bank account increased even as the number of members decreased.

My immediate predecessor, Roy Gibson, started off by wishing he had heard all this before he had become President. This historical perspective answered a lot of questions concerning why we do things the way we do.

I'd like to thank all the past Presidents for coming to our celebration and giving us all a little perspective.

Dave Doty