

Training in the Spare Moments: A Self-Directed Faculty Software Training Program

Gary Randolph, Ron Goodnight, Tom Zickel
Purdue University School of Technology - Anderson

Professional education is an on-going process that includes self-directed learning and inquiry². As the use of computer tools has become more critical, it has become apparent that professional education must also include knowledge of how to effectively use software. Yet as software is updated more and more quickly, those in academia, outside of the computer disciplines, can quickly fall behind. How can a faculty member find the time to keep his or her skills up to date?

Computer-based training (CBT) is becoming an answer for many in the business world. According to *Training* magazine, 19% of all formal training courses in business organizations are now delivered via computer in some way¹.

Computer-based training offers several advantages over traditional classroom training:

- It is self-directed and self-paced, allowing people to focus quickly on the information they need to learn, repeat difficult lessons as needed, and skip over material that is irrelevant.
- It is asynchronous, not requiring a group of people to assemble at one time and place.
- It is less expensive and less invasive on schedules. People don't need to schedule entire days for training or lock in three-hour blocks for a semester. Instead they can train in small blocks of time whenever they have a chance.

During the 1998-99 academic year, the authors investigated a pilot program for self-directed training of faculty members on Microsoft Word, Microsoft Excel, and Microsoft PowerPoint.

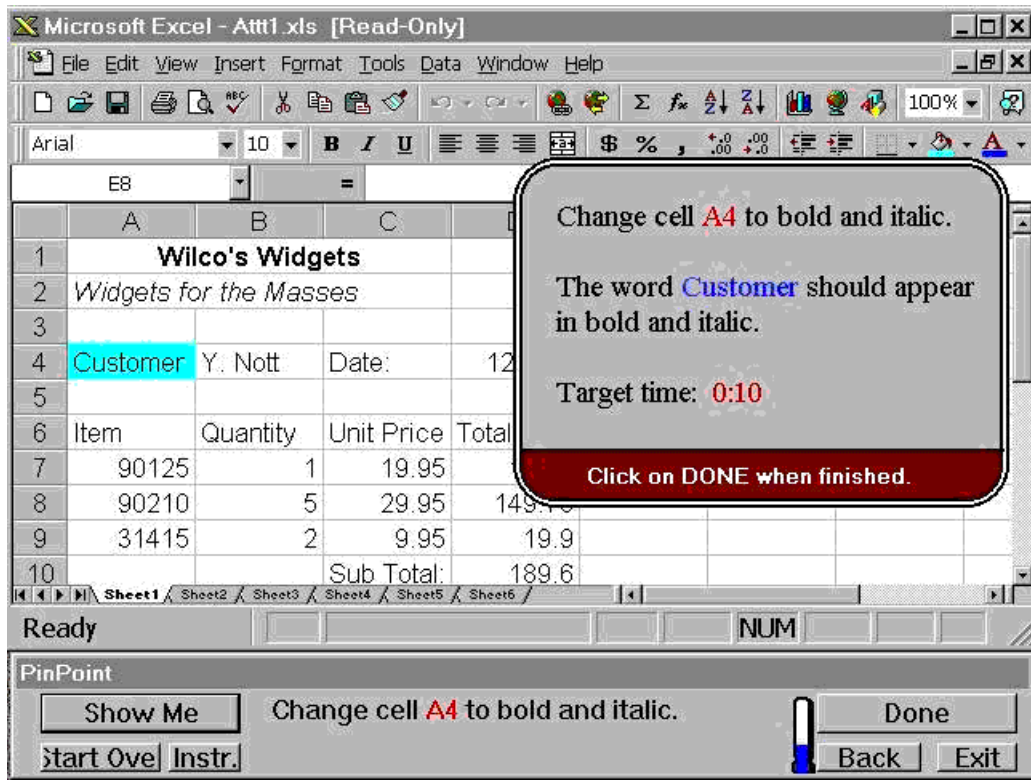
Training Tool

The training tool used was Kelly PinPoint, a self-directed

training software developed by Kelly Services for training temporary employees and adapted for academic classroom use by Macmillan Computer Publishing.

PinPoint runs a series of lessons that require the user to complete a succession of tasks (see Figure 1). As each task is completed, PinPoint provides feedback on whether or not that task was done correctly and the time the task took to complete. When users get stuck they can click on the "Show Me" button to see how to perform the task. Following training, users can generate reports of their overall progress and accuracy.

Figure 1. -- PinPoint Training Tool



Methodology

The PinPoint software is normally licensed on a per student basis for use with Macmillan's computer training textbooks. Permission was obtained by the authors to install the software on faculty machines for this project.

The site of the pilot project was Purdue University School of Technology at Anderson, Indiana. The Anderson campus is a small, satellite campus of Purdue University. One professor in the Organizational Leadership and Supervision department and one professor in the Electrical Engineering Technology department were selected for the training project. They are perhaps typical of many professors who are extremely proficient in their fields but struggle to maintain proficiency with constantly changing software. A professor in the Computer Technology department planned and coordinated the project.

The PinPoint software was installed on the two faculty members' computers with training modules for Microsoft Word, Microsoft Excel, and Microsoft PowerPoint. Each faculty member was given a

brief hands-on demonstration of how to start and use the PinPoint software. They were then left to train themselves at their leisure.

Observations

Because of the small size of the pilot project, no attempt was made to employ any analytical statistics. Instead, the two subject faculty members recorded their observations and impressions of using the software.

What they found was that PinPoint could be extremely helpful at times, but at other times most frustrating. The self-training generally seemed to be straightforward and easy to follow. It was also favorably observed that PinPoint allowed learners to progress at their own pace.

However, problems in using the self-training method were also observed. One major problem came simply from the structure of the PinPoint program. Word, Excel, and PowerPoint could be run from within PinPoint. But PinPoint could not be run from within Word, Excel, or PowerPoint. This meant that one could not use PinPoint to get answers to problems that came up while doing daily tasks. Instead, one had to use the PinPoint trainer as a separate task and then try to remember the lessons learned when later doing daily tasks.

Some of the more complex tasks that PinPoint asked learners to perform seemed to not be thoroughly explained, even with the "Show Me" option. This often led to frustration. When those discouraging times occurred, quitting generally followed very quickly. Then many days passed until one was ready to "tackle the monster" again.

Finally, professors are naturally oriented toward looking for answers in books. Learning from software is for many a new paradigm. In many respects, a good reference book might have worked better or at least have been a valuable resource.

Conclusions

While the overall results from using PinPoint were less than hoped for, this kind of self-learning has its place in on-going faculty education. One of the subject faculty members believed that this kind of training would probably work best when used on a brand new software package. However, even that belief was not universally shared among the team.

Two adult-learning approaches could also be incorporated to strengthen the self-training program. First, faculty members

using the self-training program should schedule a weekly or bi-weekly session with a highly skilled computer professor or support person to answer questions relative to trouble areas. This would help relieve frustration and encourage the continuation of the self-study, self-learning sessions. Second, the adult learner professors need planned follow-up Microsoft application sessions. They should have material to process, reports to prepare, documents to generate or reconfigure, etc. actually using the applications they just learned. This material is so voluminous and complex it requires continued work and refreshing to retain.

Since professors like to be "masters of their own destiny," this method of learning computer applications is most beneficial. The two recommendations would be especially helpful if they could be incorporated into the training mode.

References:

1. Gordon, Jack, ed. (1998, October) Training by Computer. Training, 35, 71-76.
2. Stanford, T. G. & Keating, D. A. (1998). An Integrative Approach to Teaching and Learning at the Professional Level for Graduate Engineers in Industry. 1998 ASEE Annual Conference Proceedings [CD-ROM]. Seattle, WA: American Society for Engineering Education.

GARY RANDOLPH

Gary Randolph is an Assistant Professor in the Department of Computer Technology at Purdue University School of Technology in Anderson. He is a member of ASEE and the Association for Information Systems. He earned a BS at Taylor University and an MA at Ball State University. He has eighteen years experience in information systems development. In addition to teaching he maintains an active consulting practice, specializing in database and web site development.

RON GOODNIGHT

Ronald Goodnight is currently an Associate Professor in the Department of Organizational Leadership and Supervision at Purdue University School of Technology in Anderson. He received his Doctorate in Adult Learning and Executive Development at Ball State University, his MS and BS from Iowa State University and Purdue University, respectively, in Industrial Psychology. Dr. Goodnight has twenty-seven years experience as a professional training and development manager in industry prior to joining academia. He also has owned and managed a Human Resources Consulting firm since 1979 and has serviced over twenty corporations.

TOM ZICKEL

Thomas Zickel is currently an Assistant Professor in Electrical Engineering Technology at Purdue University - Anderson Site. He received his Bachelor of

Electrical Engineering and Master's in Physics from the University of Louisville. Mr. Zickel has thirty-two years engineering and engineering management experience at General Motors. He holds several Patents in such diverse areas as Anti-Lock Braking and First Computer Driven Ignition Systems for Automobiles.