

A gloss content can cross a page boundary.

A gloss can continue from one page to the next.

The gloss content is written to the video screen starting from the beginning of the gloss name on the video screen and observing all the character entry rules. If there are any characters on the video screen, where the gloss content is to be written, they are overwritten, unless the video screen is in insert mode.

When you recall a gloss, it replaces the gloss name on the screen. The gloss replaces any other characters on the line, unless you are in insert mode.

"Beep" acoustic signal after depression of any key. Indicates a machine malfunction.

A beep when you press a key means that the typewriter is not working properly.

When a character is typed, it is visualized on the display and transferred to the memory.

The system displays and memorizes characters as you type.

CONCLUSION

Simple testing will tell you whether a sentence is doing its job. Just ask several people what they understand the sentence to mean. Start with colleagues, then ask the department secretary, then, when the sentence is in what you think is its final form, ask a few "real people"--people who match the description of the user you are trying to reach. They are the ones whose opinion really counts.

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CBT - WHAT IT IS AND WHERE YOU MIGHT FIND IT

Patricia Lawson

WHAT IS CBT?

CBT is when all learning occurs because of trainee-controlled interaction with a computer system. It is defined by the courseware (software used in an education application) run on a computer system. More than computer-aided instruction (CAI), where a computer augments traditional instructor-led seminars, it incorporates computer-managed instruction (CMI), a computerized method of keeping trainee records. Moreover, it provides individualized instruction where trainees absorb information and demonstrate competence at their own level and pace.

CBT IS COST AND LEARNING-EFFECTIVE

CBT decreases course duration up to 30% over traditional methods. CBT also reduces the involvement of expensive subject experts in classroom instruction. It spreads their consultation time over an unlimited number of training sessions. This means that class size is limited only by the number of terminals at which trainees can work. With CBT, the main cash outlay is the capital invested for the hardware.

Statistics indicate that as much, if not more, learning results with CBT. This derives from the uniform quality of content and format, and from trainees being able to proceed at their own pace and being required to master content.

Ideally each course is developed by educational experts. This ensures content and format that is consistent and solid, and promotes uniform results. Every trainee is exposed to the same content and format, although not at the same pace or in the same sequence.

A large factor of competence is attitude. CBT has been proven to increase trainee satisfaction. Trainees do more than read and respond. They exercise control over the tasks, the sequence, the

approach and the level. The system gives them individualized feedback and help as appropriate.

With CBT, trainee performance can be tracked more objectively and specifically on an individual basis. In the same way, instructional effectiveness can be measured more accurately.

CBT IS AN ALTERNATIVE TO, NOT A REPLACEMENT OF, TRADITIONAL METHODS

Despite its many pluses, CBT is not the panacea of training needs. Procedural and conceptual learning are better addressed through self-paced instruction. Affective or attitudinal learning is better addressed through instructor-led or multi-media presentation.

CBT does not replace what already works. It adds aspects which work better in some cases. Instructors will not be replaced but their role as the main dispensers of information must be rethought. Technology, in the form of CBT, does not eradicate human interaction. If anything, it promotes it. CBT is a technological tool which frees instructors from the drudgery of pushing details at the masses. It allows teachers to help trainees on an individual, need-to-know level. In the same way that the invention of the printing press enhanced the educator's role, CBT provides instructors with real opportunities to effect long-term learning and trainee satisfaction.

THE B.C. TEL EXPERIMENT

Several years ago, B.C. Tel, like many operating companies, found itself faced with major cost increases to provide retraining for their employees. Conversion to digital technology meant that their traditional courses had to be upgraded quickly and cost-effectively. To meet this challenge, they researched an innovative approach with some extraordinary results.

With the new approach, a paper-base, self-paced course that took 8.5 days to complete now takes an average of 4.5 days. Final grades have soared to 93% from 76%. Trainee response to the quality of the content and the new method has been enthusiastic.

Comments have included: "If this is the future, I wish I was twenty years younger.", "I could go at my own pace and review practise problems until I was satisfied I understood the concepts.", "The information really sank in because I was forced to concentrate.", and "It held my attention for the whole class period."

The approach, of course, is CBT. In January 1984, the CBT research group within B.C. Tel formally became a part of Microtel Learning Services, a training and education branch within Microtel Ltd., their manufacturing arm.

"CBT evolved as a natural alternative to the more traditional methods of learning and our contribution to the telecommunications training industry," says Ray Cumberworth, their General Manager. Microtel Learning Services has successfully piloted two generic telecommunications courses, "Digital Logic" and "Computer Fundamentals", and have more in the development stage.

BOUQUETS IN, BOUQUETS OUT

As with all computer applications, the quality is inherent to the planning, creation and production of the input. More than its courseware, the Microtel Learning Services sells its experience and expertise in the preparation of CBT as well as all other forms of training.

Their trained professionals help training departments assess their concerns to determine if training is the most cost-effective solution. If CBT is the recommended solution, they offer help in purchasing a suitable computer system.

At any or all levels, they consult on the analysis, design, development, implementation and/or evaluation stages of effective training programs. This field-proven, five-level validation process of the International System Development (ISD) ensures the courseware meets rigid standards and is among the most efficient and effective CBT available.

All CBT producers claim to be, the Microtel Learning Services system truly is, trainee-controlled and individualized. Trainees may step backwards or forwards through text; review, preview or skip material; take content in any sequence or at any speed; and take tests whenever they feel ready. Moreover, trainees may choose the level of the instruction--detailed or concise--as available. They get computerized help whenever they ask for it and, further, automatically if needed (whether they have asked for it or not).

This feature distinguishes the Microtel Learning Service development system from other CBT systems. The system tracks response time and content, and presents trainees with advice screens. Trainees can access additional practise items and/or additional instruction. This electronic response analysis capability represents individualized learning at its best.

SUMMARY

CBT results when all learning occurs because of trainee-controlled interaction with a computer system. Its benefits include decreased training time, standardized instruction, increased trainee satisfaction and high-performance results. While CBT is highly effective in many cases, it is an alternative to, rather than a replacement of, traditional training methods.

B.C. Tel established Microtel Learning Service as a training branch within Microtel Ltd., their manufacturing arm. The CBT group within Microtel Learning Services has successfully piloted two generic courses for the telecommunications industry and have more in development.

All courseware developed by Microtel Learning Services goes through a five-level validation process, incorporating the talents of subject matter experts, instructional designers and courseware developers. It is produced on a computer system especially designed for courseware development and which ensures trainee-controlled, individualized learning.

CONCLUSIONS

Although the Microtel Learning Service application of CBT is for industry, their research, process and marketability speak directly to the academic use of computer courseware. Ideally, CBT:

- offers individualized, trainee-controlled education at its best.
- enhances the role of the instructor as facilitator, motivator and helper by freeing instructors from the drudgery of record-keeping and peddling details en masse to a hypothetical average trainee.
- courseware is consistent, pedagogically sound, contains measurable behaviours and meets its objectives.
- reduces training time by at least 1/3.
- increases trainee motivation and satisfaction.

There is more to effective CBT than merely computerizing existing training programs. Interested individuals and companies should work with consultants to assess their training needs and design, develop, implement and/or evaluate their results.

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Pat Lawson is a Technical Writer for Microtel Learning Services. She writes, edits and produces instructor's guides, trainee handouts and handbooks, job aids, operator manuals, etc. to be used with self-paced, instructor-led and computer-based instruction. She works with instructional designers, courseware designers and a graphic artist to produce material that is pedagogically sound, technically correct, appealing to the eye, and easy to read and comprehend. She also contributes to marketing and advertising copy.