one of the biggest nuisances about installing new technology is staff training, even though IT manufacturers never stop saying their new products will give no trouble.

The language they use to state this has changed over time, from “user-friendly” to “easy to use” to “usable”, but the reality behind it has stayed the same: learning a new product is never straightforward.

In fact, as design guru Donald Norman has pointed out, manufacturers do themselves a disservice with these claims. If they said honestly, “these products will take some learning to use effectively, but the results will be worth it,” users would not lose so much confidence when they first started with a new product and found it difficult. As things are, users feel as betrayed as the child who’s told before the nurse gives him a shot, “This won’t hurt a bit”.

But the solution isn’t as simple as better manuals: manufacturers complain, with some justice, that no matter how carefully they design the program and write the documentation, users perversely insist on using their software in ways they never intended. It’s fair to call technical support if the documentation on a particular feature is poor, or if a user has a specific question; it’s not fair to expect technical support to teach people to write macros, or to take a novice through the basics of navigating Windows.

A large training industry has grown up around computing: books, audio cassettes, videotapes, classroom courses, and computer-based training (CBT). Each has advantages and disadvantages depending on the type of user you have and the situation in which the products are going to be used. (Cynics suggest that the number of books available on a particular software package is proportional to the number of pirated copies of the software which, by definition, lack manuals.)

Choosing Training

In making a decision, the first question to consider is the computer literacy - or lack thereof - of a given system’s users.

People who are already uncomfortable with technology may not react well to computer-based training packages, even though CBT seems like a logical way of showing someone how a program works.

People in this position are likely to feel more comfortable with familiar types of materials - books, for example, which can be laid flat on the desk in front of the PC and used as step-by-step guides, or classroom courses that feature live humans.

On the other hand, very bright, computer-literate people tend to be bored by classroom courses, and may be happier using books, tapes, or CBT, where they can set their own pace. Classroom courses are generally designed for “average” users, which means they’re too slow for the people who tended to jump ahead in the textbooks in their school days, and possibly too fast for the least experienced technophobes.

Trainers do try to accommodate various grades of user - small classes mean they spend some time helping each trainee come to grips with the exercises they generally assign - but within a two- or three-day course intended to teach all of a program like Excel they can’t do remedial teaching. As classroom courses tend to be expensive, it’s important to make sure you have a good match between the type of course and the skills and aptitudes of your user population.

At the same time, it’s important to think about what your users actually need to learn. In the case of a DTP package, for example, they may not need to learn everything the package can do as much as they need to learn how to produce specific materials such as a company newsletter, letterhead, or memos.

Sometimes the solution to this sort...
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of thing may not lie in training at all but in customised macros or style sheets, supplemented by a page or two of instructions for their use.

Finally, there is the matter of cost. Of the various types of training, classroom courses tend to cost the most. Knowledge acquired in those courses isn’t easily transferable from one staff member to another. CBT packages, audio and video tapes, and books all have the advantage that they can be passed around a company and reused. Also, they are still available later for new staff to learn from.

Ancillary to that is the matter of geography. Opinions vary widely on this one. Some people find it easiest to learn something new when there are no other demands on them. These people are happier going off-site to do their training, where they won’t be interrupted. Others find losing whole workdays too disruptive, and are happier with on-site training, particularly using techniques where they can set their own pace or learn just what they need when they need it.

Bearing in mind that a company is most likely to benefit from using a mix of methods. Also, it’s worth being a little creative about training. It shouldn’t be about just learning the features of the company software packages. Today’s computers have put onto everyone’s desktops tools that formerly would have been reserved for highly skilled people. Giving the people using the computers some of those skills helps them make the most of the IT investment. So besides product-based courses, look at courses that teach business writing and the literacy skills that secretaries used to supply such as design, and even typing.

CBT

Almost always, the first place to start is with the manufacturer’s own materials. These are, after all, free, or at least included in the price you’ve already paid. Most new products now come with some kind of online guided tour of the product. The best of these, like the tour of Intuit’s QuickBooks small-business accounting program, offer to run automatically the first time the user loads up the program and give the new user an introduction to the main features.

WordPerfect in particular has for a long time included tutorials with its packages - even WordPerfect 5.1, in the DOS days, had a CBT tutorial with exercises to teach you the basics.

Some of these materials are getting quite sophisticated: Microsoft Word for Windows 6, for example, includes a “switchkit” aimed specifically at former WordPerfect users, just as Lotus 1-2-3 for Windows gives old DOS users the ability to call up the old, familiar menus.

It’s unfortunate, though, that so many manufacturers are moving to online documentation. It’s easy to understand their motivation: all those hefty manuals cost a lot to print and ship. Put the whole thing, program and documentation, on a CD-ROM, and watch your distribution costs plummet. But it’s not as good for many users, even if, as manufacturers suspect, few read the manuals all the way through.

Targeting

Another problem with all types of commercial training is that everything targets mainstream applications, operating systems, and programming languages. Even the cheapest form of training - books - focuses on the top sellers, with hundreds of titles on Windows, DOS, the Internet and the common Novell, Lotus, and Microsoft office applications, but almost nothing on well-known niche applications like contact managers or personal information managers.

CBT has come a long way since scientists first started talking about the idea of teaching machines back in the 1950s. For a long time, CBT seemed to be limited to putting up pages of text on screen where it was less convenient and less comfortable to read than in a book. These days, CBT comes in a variety of interactive forms that can be very effective in teaching people the ropes in a new system. The one thing to remember is that CBT can be very intimidating to completely inexperienced users. If you have never seen a mouse, for example, a mouse-driven tutorial will seem extraordinarily difficult and cumbersome - it’s easy to forget that you have to practice to acquire the muscular control you need.

CBT Varieties

There are two main kinds of CBT packages: simulation and concurrent. A simulation tutorial is exactly what it sounds like. It simulates the computer environment the user will be working in and, through exercises, teaches the user how to perform the necessary tasks.

The problem with this approach is that the simulation is never around when you need it most - when you’re actually working. Generally speaking, people are better at remembering things they’ve learned if they are learned as part of doing real work. Simulation CBT is sterile, and the lessons it teaches tend not to be retained well or for long.

However, there are certain circumstances where simulations are important. You don’t, for example, want to turn a novice loose on the company’s live financial data or on a safety-critical system. Simulations constrain the user from doing any damage by limiting the number of fea-
Wizards And Experts

Most manufacturers now include a CBT package of some kind with their software. With more recent releases of its Office products, Microsoft has added step-by-step guidance systems for complicated tasks which it calls “Wizards”. Wizards guide you, for example, through the early stages of designing a newsletter or calendar in Word for Windows 6, and through most of the steps of setting up a relational database in Access or a presentation in PowerPoint.

Other major applications have similar features, with names such as coaches or experts.

It’s well worth looking through the collection of wizard-like utilities that comes with the software your users are currently running. Make sure that all users run the most common wizards so that they know the official way of performing common tasks.

You can also write your own wizards, and the tools for doing so are often free of charge - contact the software companies concerned.

It’s important, though, to encourage users to get past these sets of training wheels, particularly on the publishing and presentation side of things - you don’t want everything you release to look like everything everyone else in the world releases, no matter how tasteful it is.

After you’ve been to enough presentations, for example, it gets relatively easy to tell which presentation graphics package the speaker used in preparing his or her slides. If you haven’t got a set of corporate templates, one way around this while still keeping things relatively simple is to take those standard templates and style sheets as a starting point and make small variations - change the colour scheme a little, or choose a different type of bullet point or font.

Most commercial CBT packages are produced by one of a few specialist companies and are sold directly by specialist distributors. Many combine the computer portion of the course with other media, such as a book or a set of audio cassettes. It may sound strange to listen to a tape to teach you to use a computer, but it can be very effective as it leaves the user’s hands and eyes free.

Try to keep away from CBT packages that are nothing more than electronic versions of reading matter - if what you’re going to do is read, it’s easier to do it on paper. Fortunately, this type of package is becoming scarce. Newer packages generally use graphical authoring tools to create interactive interfaces.

Classroom Training

Classroom courses are probably the easiest to find of all types of training except books, although they are the most expensive. You can pay anything up to around $3000 for a place on a 3 or 4-day course.

All sorts of organisations offer courses. In ascending order of cost these include local colleges, user groups, and corporate training companies. Many software companies maintain lists of authorised training centres. This is in addition to programmes run by companies like Novell and Microsoft that offer special certification for certain types of support engineers and applications developers.

Local colleges and corporate training companies usually list themselves in the telephone book. User groups are a little more obscure. Try asking your software publisher or supplier if there are relevant groups with nearby offices. Groups tend to vary widely in what services they offer and at what cost. However, most user groups offer some form of technical support. Training from these groups isn’t always cheaper, but sometimes it fills in gaps left by more mainstream organisations.

Corporate training outfits also vary a great deal, and many offer customised services, either tailoring the material the course covers to the exact software add-ons and templates a company has, or adapting their delivery methods to suit staff schedules. You might, for example, find it more efficient in staff time to hire a trainer to spend days on the company premises answering user questions by appointment in private, one-on-one sessions rather than conducting all-day standard classroom sessions.

This technique is especially useful for senior staff, some of whom may not learn well in a classroom-based course for other reasons than scheduling: some are embarrassed to admit they don’t know or don’t understand something, especially in front of junior staff.

Other Media

Books are portable, if heavy; video tapes can be replayed; and audio cassettes keep your hands free. All of these media allow people to learn at their own pace, refer back, and repeat material as necessary. What they don’t have is either the human flexibility of classroom training or exercise checking and constraints of CBT. It has to be said, also, that many of these materials are fairly dreadful.
Video tapes in particular have failed to live up to their obvious potential. The best thing about video tape is that you can see what your screen is supposed to look like as you move around it and enter commands. Unfortunately, most of the video tapes on the market play like taped lectures by a PR expert - exactly what you don’t need at the prices they charge for these things.

One notable exception is the very good range of tapes from Softvision which take a member of the software company’s development team and pair him up with a genuinely inexperienced but articulate user. The user asks questions and the developer answers with thorough explanations while the camera focuses on the computer’s display as the developer demonstrates how to perform each task.

The resulting three-hour tapes are remarkably effective, and provide on average the equivalent of about a day and a half of classroom training for about the cost of a single day.

A real limitation to the video tape approach, though, is that it may be difficult to assemble all the necessary technology in a single place. A training room equipped with a VCR and computer that employees can book into might be one solution; another might be allowing employees to take tapes home. But tapes are awkward to refer back to, even though tapes like Softvision’s give you timings at the beginning of each section so you can find it again without a lot of trial and error.

Audio cassettes, such as those produced by the specialist companies Comput-Ed and Headline Communications, have even greater curing problems, but they do have the advantage of ease of use. Almost everyone has a Walkman or other type of portable cassette player, and you can listen to the tapes with hands free to follow along on the keyboard. Most audio cassette packages come with additional documentation on floppy disk, which can be read on screen or printed out.

Unlike video tapes, which typically teach the common range of desktop applications, audio cassette packages tend to concentrate on newcomer materials such as introductions to PCs and the like - starting with the PC’s arrival in the box with instructions on how to unpack it and set it up, something which all those manufacturer-supplied online navigation systems can’t provide.

Newer methods, such as CD-I (compact disc interactive) or interactive video are promising, but aren’t widely available yet. In general, these media are likely to find a niche in areas where it’s important for a user to get objective feedback, such as interviewing techniques or presentation skills. They’re not likely to be widely used for teaching IT skills, which require you to interact with a computer rather than an audience.

Books

It is the computer book industry that’s really booming, even though most computer books are simply regurgitated, reordered manuals. Many are organised into long-running, consistent series with standardised formats, so that a user faced with a new product can pick a book with a familiar format, layout and style to learn from. This sort of desire for familiarity should be recognisable to anyone who has chosen to eat in a chain restaurant in a foreign city just because it means they know what they’ll be getting.

There are a few points to watch out for when picking books. First of all, although many books advertise that they include diskfuls of software, often the software is shareware, and a would-be user is honour-bound to pay the licence fee. Second, almost all books are written in the US for the US market; very few of even the general communications and Internet books bother to include a chapter regarding international considerations. On the basic desktop products few features work significantly differently. But watch out especially for books on finance packages, as large chunks of these will be wholly irrelevant outside the US because of different tax laws.

The same is true, to a lesser extent, of books on the Internet, comms, and networking which talk about products and services intended to make your life easier. Also, take a look at the book itself. If you’re trying to teach a beginner a graphical interface, look for good illustrations: too many Windows books are packed with text.

As the vogue for pre-installing software and charging extra for disks and manuals grows, books may soon become better value than they have been in the past. Techies may like to do everything on searchable screens, but books have a lot of appeal. They’re portable, even if heavy, they don’t block the active windows on your screen, and they don’t have power supplies that blow out just when you need them.

Education methods may be changing to incorporate multimedia and virtual worlds, but old learning methods will be with us for a long time yet.
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