

# An Anxiety Management Approach to Computerphobia

A timely alternative to the attitude-changing methods traditionally used to combat computerphobia in the work place.

By ARVID J. BLOOM

Computerphobia, fear of computers, first gained attention well over a decade ago. Today industries rush to get on the computer bandwagon, and put intense pressure on some individuals to learn about computers. These pressures sometimes result in anxiety and resistance to the technology. Trainers of new computer users need effective ways to convey technical information to apprehensive audiences. Anxiety management can help. Before the approach is presented, however, let us examine some common fears new users have.

## Common fears

Some fears about computers result from lack of facts about the computer's capabilities. Most of the remaining fears stem from lack of success in training and in working with computers.

- *Breaking the computer or making costly errors.* Fear of breaking an expensive computer is natural for users who do not know about the many safeguards that most systems contain. The more complex the system, the greater is the fear of catastrophic results from human mistakes. Beginners tend to fear that incorrect commands will "crash" the system, commands are irrevocable, commands will consume large chunks of computer time and funds and valuable data will be lost forever in computer storage.
- *Looking stupid.* Fear of negative evaluations is commonplace. Awkwardness when using unfamiliar equipment

can bring with it expectations of being judged harshly. New users may feel stupid for having to ask questions and refer to manuals.

- *Error messages.* When users expect a computer to be intolerant of their mistakes, they may avoid the machine to keep anxieties low. Frustration with computers can result from "beeps" and terse error messages. Furthermore, computer jargon in error messages may both perplex and frustrate users.

- *Working with a powerful other.* The computer is thought by some new users to have mind-reading powers. Others are upset by parallels between the way computers "think" and the way human beings think. Limits in our own thinking can be highlighted by the speed and reliability of computers. Recognizing these limits can humiliate humans who value their superior intelligence.

- *Documentation.* Beginners often fear having to turn to instruction manuals and guides to resolve problems and errors. Part of the fear stems from concerns about appearing stupid. Another aspect is the fear of having to decipher unclear or inconsistent instructions. Many manuals are written by technical people who do not take the point of view of new users. The product often presents jargon and cryptic explanations that frustrate beginners. Typographical and editorial errors sometimes compound the problem.

- *Losing control.* Loss of power and control to a machine concerns new computer users. Threats to the nature of trainees' jobs can arise in many contexts. Introducing computers to the work place can challenge their ability to control work out-

put, willingness to trust a new machine, sense of being valued by the organization, familiar ways of thinking, needs to interact with others and perceptions of physical safety.

- *Lack of time.* Many people do not think they have the time to learn to use the computer correctly. Immediate job pressures may create feelings that learning time is not a worthwhile investment. Fear of time demands for learning, especially by highly paid professionals, may discourage learning about computers.

- *Disappointment.* What users expect from computers affects their acceptance of them. Disappointments are a by-product of frequent exaggerations of the benefits of computers. Because of prior unmet expectations, users can become skeptical and resistant toward new systems.

- *Futility.* Computers are perceived by some users as a source of unstable job requirements. Constantly varying task demands may be brought about by rapid changes in software, hardware and data handling needs. Resistance to learning about new systems is one symptom of the fear of never keeping up-to-date. That fear may be especially pronounced with personal computers, where changes in the technology are accelerating swiftly.

## Traditional approaches

Computer anxieties commonly lead to avoidance of the machines or to problems in learning about them. Traditional training methods aim to lower anxieties by presenting facts about computers to dispel unfounded fears, patiently per-

suading users that computers will positively influence their work lives, and/or encouraging games at terminals. The basic approach is to alter trainees' attitudes. Improved learning is assumed to emerge from more positive thinking about computers. There are several difficulties with such attitude-change methods:

- *Conscious control of anxiety is difficult.* A trainee may view computers in an entirely rational manner and yet remain highly anxious. Why should the anxiety persist? One reason is that the physical symptoms and negative thinking characteristic of anxiety are likely to be part of ingrained patterns. These patterns frequently reflect years of previous experiences with handling new situations. As habits, anxiety reactions do not yield easily to persuasive efforts by trainers. Anxiety's bodily symptoms (e.g., a rapid pulse, sweaty palms, muscular tensions, uneasy stomach) are largely out of conscious control. Simple trainee willpower may not be enough to help.

- *Attention to anxiety can make it worse.* Sometimes trainees create their own anxiety about being anxious. Typical thoughts of someone with this kind of anxiety are "Why am I so anxious?," "What is wrong with me?" and "I shouldn't be feeling so tense!" When a trainer attends to a highly anxious person's symptoms or deficient performance, anxiety may simply intensify. The trainee may believe that he or she must really be anxious because of all the special trainer attention. Trainers need to be sensitive to an anxious person's desire for assistance in order to avoid making things worse.

- *Anxiety can distract attention from the trainer.* Persuading people that they do not need to become anxious is not very effective in lowering anxieties. One reason is because anxious trainees do not fully attend to a trainer's efforts to provide them with facts. A portion of their attention is diverted to physical symptoms and negative thoughts. Typical negative thoughts focus on how much brighter others may be, the consequences of failure, lack of preparation, judgments that others may make and self-criticism. The facts anxious trainees do absorb can lead to more positive thinking about computers without necessarily lessening physical tensions and worrisome thoughts. Most training programs for new users still expect patient persuasion alone to calm anxieties.

- *Concerns may not be addressed.* Attendees bring dozens of concerns about

computers into group training sessions. Some concerns tend to be highly individualized and difficult to address prior to users returning to their jobs after training. With limited time available, the trainer may be confined to conveying technical specifics about a new system. At best, the trainer may have time to try to calm only the most common of trainees' anxieties. A trainee whose concerns are not addressed may experience anxiety upon concluding that they must be unimportant to others.

- *Games may be unrealistic.* Some training programs introduce users to computer games at the start of training. Users are expected to learn not to become anxious once they discover the non-threatening nature of the computer. Positive attitudes forged from playing games are assumed to reduce anxieties in real job situations. One problem with games, however, is that they do not involve the kinds of evaluation that can create anxieties in training sessions. The most acute concerns held by new users focus on judgments that trainers, bosses and peers will make of them. Outcomes from computer games provide a very different evaluation experience. It is not surprising to observe individuals who are at ease playing computer games but quite anxious when learning job-related tasks.

## A case for anxiety management

Psychology research suggests that changing people's attitudes does not ensure changes in how they will act.<sup>1</sup> Studies on anxiety suggest that the learning of people who fear computers can be improved by targeting their bodily stress symptoms and distracting thought patterns.

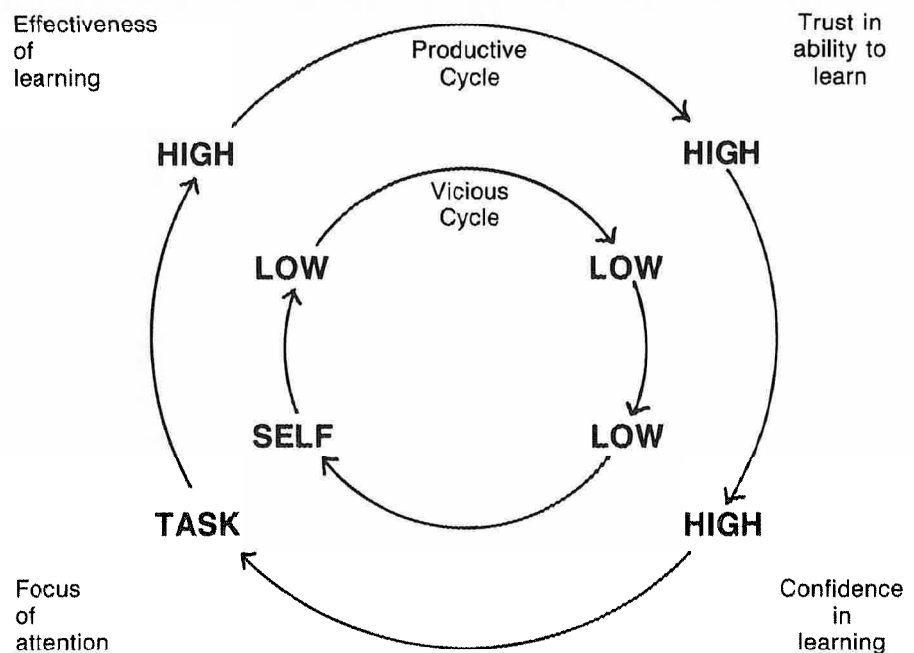
Anxiety about computers and avoidance of them are often parts of a larger cycle of thinking, feeling and acting. Productive (non-anxious) patterns also form a cycle. The two kinds of cycles can serve as models for helping people learn about computers with a minimum of anxiety. Figure 1 summarizes the components of the cycles.

Computer-anxious trainees often find themselves in a vicious cycle (see Figure 1). The cycle is basically unproductive. A trainee may not learn well despite having the necessary ability. There are four steps to this cycle. Each step leads to the next. The point at which one starts is arbitrary.

- Abilities to learn about the computer are distrusted. Poor evaluations are anticipated from the trainer, peers, one's manager and oneself.

- Confidence in learning to use the

**Figure 1—The vicious and productive cycles of thinking, feeling and acting.**



## CBI: What Really Concerns Training Managers

Wilbur Parrott, an instructional designer with Digital Equipment Corporation, Nashua, N.H., recently surveyed a random sample of ASTD members on the subject of computer-based instruction. Opinions common to many include the following:

- CBI is just one more tool in a trainer's kit.
- CBI is an excellent training tool for education, but not the only answer for it.
- CBI is not universally applicable to all training situations.

### Cost

- The start-up cost is high.
- Continuing costs such as courseware development and modification are high.
- CBI becomes cost effective when class size becomes large.
- CBI will never become cost effective for small companies or training departments.
- Uncertainty about the cost of CBI—not actual cost figures—causes problems.

### Courseware

- Locating applicable off-the-shelf courseware and the amount of time, energy and money needed to develop good courseware appear as problems.
- The rapidly changing nature of some subjects and the need for human interaction in such fields as sales training compound problems with CBI.
- CBI is only as good as the person who develops and programs it.

### Usefulness

- CBI is the wave of the future.
- CBI, when coupled with other technologies such as videodiscs, will grow.

### Relation to Programmed Instruction

- CBI must be disassociated from its heritage in programmed instruction before a number of people in the training field will accept it.

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computer successfully is low.

- High levels of worry and bodily symptoms of stress draw attention toward oneself and away from the learning process.
- Learning about the computer is relatively ineffective. This step leads back to the first.

In the *productive* cycle, trainees perform closer to their abilities. A desirable outcome of training is to entrench trainees in this cycle. Anxiety levels are low enough not to hinder learning. Success experiences lead to positive feelings, thoughts and actions. The four steps in this cycle parallel those of the vicious cycle. Each step leads to the next.

- Abilities to learn about the computer are highly trusted. Positive feedback is anticipated from others.
- Confidence in using the computer successfully is high.
- Attention is heavily devoted to learning about the computer. Anxiety symptoms are interpreted as excitement or as a challenge to do the best possible job.
- Effective learning takes place. This step leads back to the first.

Once a person's feelings, thoughts and actions create conditions for a vicious cycle, the pattern is difficult to break. Persuasion by a skilled trainer is often insufficient. Targeting any one of the four steps in the vicious cycle may begin to break that cycle. However, a coordinated attack at several points promises even better results.

## Program framework

Bodily stress symptoms and worrying are largely learned reactions that are often difficult to control. Three types of elements for a training program can enhance the chances of breaking vicious cycle patterns:

- *Education.* Provide trainees with basic facts about computers together with an understanding of stress responses, why people become anxious and how the training program will help them deal with uncomfortable feelings and thoughts.
- *Skill building.* Provide trainees with physical relaxation skills that can be used

whenever they anticipate facing a stressor (such as a computer terminal) or actually become frustrated using the machine. One of the simplest skills involves taking a deep breath, tensing various muscle groups, observing the tensions and letting go of the tensions while exhaling slowly. Also provide skills to alter trainees' distracting thoughts whenever the level of worrying becomes excessive and threatens to interfere with problem-solving at the terminal. A straightforward approach involves repeating positive statements to oneself (e.g., "Remember, worry won't help anything") that replace worrisome statements.

- *Practice.* Allow trainees to practice their newly acquired coping skills by interacting with the computer (preferably working at real problems).

The three types of elements provide several points of transfer from the vicious cycle into the productive cycle. The attitude change approach common to most training programs is employed in the education elements. The education elements also promote self-insight, recognition of some stress as normal, and feelings of not being unique just because one may be anxious. The skill-building elements address worrisome thoughts and bodily symptoms of anxiety directly. Trainees learn coping responses that help them focus more on the learning process and less on themselves. In the practice elements, trainees accumulate success experiences. These experiences in turn build feelings of competence and confidence.

## Benefits

The anxiety management approach offers some distinct advantages over traditional ways of reducing computer anxiety:

- *A large proportion of trainees can be helped.* One beauty of anxiety management is that trainees can be helped to feel more at ease regardless of their anxieties. This does not mean that the causes of these anxieties are unimportant. Rather, anxiety management can be a powerful tool to break vicious cycle patterns unique to individual trainees. When working with groups of trainees, the trainer is

**Table 1—A Nine-Module Program for Reducing Computer Anxiety**

<i>Name of Module</i>	<i>Objective of Module</i>	<i>Approach Used</i>	<i>Suggested Use</i>
1. What these modules are all about	Introduce basic purpose and structure of modules.	Mini-lecture.	At start of training.
2. How do you feel about computers?	Record feelings about working with computers for (a) self-diagnosis and (b) later comparison with a reassessment at end of training.	Checklist containing 40 adjectives (e.g., excited, lost, panicky, tense, curious) where trainees check ones that apply to themselves.	At start of training. Optional.
3. Why some people become uneasy around computers	Review common fears about computers so that trainees realize how commonplace some of their reactions are and how erroneous some of their ideas about computers may be.	Mini-lecture which outlines the nine classes of fears discussed in this article.	Before specific computer commands are taught.
4. How to relax	Teach a simple technique for relaxing at the terminal when tensions become distracting.	A variation of techniques that basically involve (a) taking a deep breath, (b) tensing different muscle groups, (c) observing the tensions and (d) relaxing the muscles while exhaling slowly.	While trainees are seated at a terminal for first time, before typing anything.
5. Feeling comfortable with error messages	Apply relaxation skills when encountering error messages.	Error messages deliberately introduced at the terminal, providing a chance to learn to relax before problem solving.	During trainees' first terminal session.
6. What your computer can't guarantee	Minimize unrealistic expectations about computers.	Mini-lecture that highlights limitations such as the impossibility of bug-free operation and solution of ill-defined problems.	While discussing capabilities of the computer. Optional.
7. Clear thinking	Teach a simple technique that supplements the relaxation skills with positive self-statements that can replace worrisome thoughts.	After using relaxation skills at the terminal, trainees repeat positive statements (e.g., "Remember, you're in control, not the computer," to themselves.	Prior to the third or fourth terminal session.
8. Why the relaxation and clear thinking skills can be helpful	Demystify the principles behind these skills so that acceptance of them is enhanced.	Mini-lecture on the vicious and productive cycles discussed in this article.	Shortly after Module 7 above. Optional.
9. A look back	Record feelings about working with computers so that (a) progress can be noted from the beginning of training, and (b) feedback about effectiveness of the modules can be supplied to the trainer.	Same checklist as in Module 2 above.	At the very end of the training course. Optional.

freed somewhat from having to address a variety of possible concerns. Anxiety management can facilitate the trainer's major task of promoting effective learning about a computer system.

■ *The approach is not time-consuming.* A trainer can present some general facts about computers, teach simple stress management skills and provide opportunities for practicing those skills without consuming a lot of time. A total of an hour

or two, split into small segments, should normally be all that is required. Brief segments would be especially appropriate at the start of training, before specific computer commands are taught, when trainees first work at a terminal, when discussing a computer's capabilities, prior to the third or fourth terminal session and at the end of the course. For a week-long technical training course, the time investment indeed may be small.

More likely than not, the time will be more than offset through reduced demands on trainers by apprehensive trainees.

■ *Needs of non-anxious trainees can be considered.* In most cases, it is a mistake to assume that all trainees have high anxiety about computers. With the spread of personal and home computers, previous exposure to computers is becoming more common. For untroubled trainees, the skill-building and practice elements of the anxiety management approach can be made optional. These individuals can sit out brief training sessions rather than be bored by learning and applying skills of little value to them. However, because the skills help one to think clearly, all trainees may benefit from them when frustration leads to distracting thoughts and tensions.

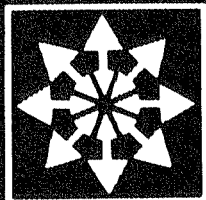
### Program prototype

Anxiety management techniques can be incorporated into most user-training programs without a major overhaul. Responses to replace anxiety probably cannot be solidly learned in a single training session. Therefore, two types of training modules should be interspersed: modules that aim to lower computer anxiety, and modules that orient users to the specifics of their computer system. Trainers should decide where and when to include the former type of module in a large program.

Table 1 outlines a suggested set of nine anxiety-reduction modules to aid the trainer. Most modules should take between five and ten minutes to cover in a group-training setting. With the exception of the last module, they would be integrated most effectively into the first few sessions of a course that lasts for several days. For shorter courses, several of the modules could be optional while preserving the essential elements.

### Reference

1. Meichenbaum, D., & Butler, L. (1980). Toward a conceptual model for the treatment of test anxiety: Implications for research and treatment. In I.G. Sarason (Ed.), *Test anxiety: Theory, research, and applications*, 187-208. Hillsdale, N.J.: Lawrence Erlbaum.



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I SEE AND I REMEMBER;  
I DO AND I UNDERSTAND.**

*Chinese proverb*

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