

Appendix C

Memorandum*



To: The personal computer industry
From: Malcolm S. Knowles
Subject: Some suggestions for serving personal
and professional owners

From my own personal experience, and the experience of scores of other personal and professional users as reported to me in numerous workshops on adult learning around the country—and the world—I can testify that the modern microcomputer industry is facing a serious problem in its attempt to enter into the relatively untapped market of personal and professional computer owners. The problem arises because current software producers and manual writers are basically computer engineers (or have been trained by computer engineers) who understand how the machine works but have no idea about how adults learn. Consequently, their software and manuals are geared to teaching us how a machine works rather than helping us learn how to use the machine to perform the real-life tasks we buy it to perform for us. As a result, we independent users find the instructions we get from the manuals, software, and—I would like to emphasize, local representatives—to be confusing, irrelevant, and frustrating in learning to use a computer for *our* purposes. Unless something is done to correct this situation, I am afraid that the computer industry will suffer a backlash. The word will get around that hundreds of personal and professional users have invested hundreds of thousands of dollars in computers that don't do what they bought them for. Suddenly a

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crescendo of "computer for sale" ads could appear in the classified ad sections of our newspapers. As an adult educator, I would view this to be a tragedy, since I perceive the computer to be the most potent tool for adult learning to appear in modern history.

In the past decade or so we have learned more about how adults learn—and how different this is from the way we have assumed children learn—than we knew in all previous history. Here are the most important things about adult learners that the people in the computer industry need to know if they are to serve us effectively:

1. Adults have a deep need to know why they need to know something before they are willing to invest the time and energy in learning it. You need to explain to us why we need to know how to format, to move the cursor this way and that, etc., before asking us to memorize the commands.
2. Adults are task-oriented in their learning. We learn those things best which we learn in the context of using them to do what we want to do. So don't ask us to memorize commands—even if you explain why we need to know them. Ask us what we want to use the computer for first—to write letters, to write reports, to keep accounts, to play games to maintain mailing lists—and then guide us in learning what we have to tell the computer to make it do these things for us. Start with us where we are in our interest, not with the computer where it is in its operation; teach to the person, not to the machine.
3. Adults come into any educational situation with a wide variety of backgrounds of experience. So don't assume that we all are coming to the use of computers with the same experience. Give us choices that will enable us to tie into the use of the computer from different experiential bases. Some of us have had experience using typewriters, others have not; some of us have had some previous experience with computers—at least in game arcades, others have seen their secretaries using word processors, others are complete neophytes. Write your manuals and software programs so that we can enter them from our different experiential bases. Perhaps each manual could be divided into different sections according to different backgrounds of the users.
4. Adults have a deep psychological need to be self-directing; in fact, the psychological definition of "adult" is one who has developed a

self-concept of being responsible for one's own life. We resent being talked down to, having decisions imposed on us, controlled, directed, and otherwise treated like children. So let us figure things out for ourselves—but with caring help. Give us good indexes, using everyday English words, in your manuals so that we can find the instructions we need without reading the manual through several times. We are going to make mistakes; so help us find out why we made them and how to correct them, both in the manuals and in the software programs.

Other things have been discovered about adult learners through research in the last few years, but these are the most critical things you people in the computer industry need to know. In the light of these facts about adult learners, here are the suggestions I would like to make to the computer industry to gear itself up to serving us better:

1. The single most important thing to have happen is for the relevant elements of each computer company's system—particularly the writers of manuals, the producers of software programs, and the local representatives ("salespeople")—to become infused with a knowledge of how adults learn. This could be best accomplished through a series of one-day regional workshops (the design and materials for which I would be glad to provide as a public service). But if this is deemed to be not feasible, then at least these people should be provided with a set of guidelines—which could be an elaboration, with a variety of illustrations, of the information in the first part of this memorandum.
2. The most popular existing software programs should be subjected to a simple field test as follows: Recruit a small sample of several levels of users (two or three beginners, two or three with some experience, and two or three with considerable experience); ask each one to use the computer for a variety of typical purposes, such as to write letters, reports, or articles, to keep accounts and mailing lists, and the like. Have each one be observed by a manual writer to make notes on the mistakes they make and the problems they can't solve. Then have the writers produce supplemental instruction sheets describing precisely how to perform these tasks and solve these problems. These instruction sheets could then be made available to present owners at a price and could automatically be added to the packages to be sold in the future. This procedure should be followed on all new software programs developed.
3. Somewhat along the same lines, an index should be provided for all existing manuals and be made available to present and future

owners. It is important that these indexes contain the words the users employ when they want to look something up, cross-referenced to the computer jargon.

4. All existing and future manuals should be carefully copy edited before being released for sale. I lost my confidence in the *Letter Perfect* manual, for example, when I found so many typographical and editorial errors in it.
5. All software endorsed by Apple or sold by Apple dealers should use a common command language. So far in my Apple career, I have four software programs that I bought from an Apple dealer: Applesoft System Master, Letter Perfect, Apple Writer II, and The Mailroom. Each one has different commands for moving the cursor, formatting, and otherwise operating the programs. I have found it onerously time-consuming to have to learn a new language each time I buy a new program; and I have found that when I have learned a new one, it is most awkward to go back and compose something on a program I had learned previously.
6. Local dealers should be forbidden to sell a new software program until at least one of their local representatives has mastered it. I found it terribly frustrating after I bought my Apple Writer II to ask the salesperson from whom I had bought it how to solve a problem I was having with it only to be told that he didn't know the program (and that nobody else in the shop did, either), and that therefore they couldn't help me.
7. Local dealers should be requested to refer to their Apple experts as "representatives" or "helpers" or "coaches," or something other than "salespeople." Some time ago I called my local Apple dealer and asked to speak to their "Apple expert" about a problem I was having. I was told that "our salespeople are all tied up with customers, but one will call you when he is free." I felt put off, because I had long ago bought my Apple, and so didn't need a salesperson. I needed someone to help me solve a problem.
8. Local dealers should be required to have at least one person in the store at all times who can help owners solve problems. It is frustrating to be in the middle of a report or an article and be stumped by a problem and be told that it will be a day or two before the person who can help me will be back in the store. If this solution is not feasible for a given location, then Apple should have a "HELP" 800 number available.
9. Apple owners should be provided with better linkages to one another, perhaps through a newsletter or lists of local Apple clubs or owners.