Spring flowers aren't the only things sprouting up everywhere. We are hearing of, reading about, trying out, or becoming addicted to computers, and articles in this issue of the newsletter explore some uses of computers for instruction and for record keeping in the lab.

I look forward to hearing your reactions to these articles. Please send your comments, along with articles, reviews, announcements, names of new members, and $5 donations (in checks made payable either to Purdue University or to me), to cover the cost of duplicating and mailing, to:

Muriel Harris, editor
WRITING LAB NEWSLETTER
Dept. of English
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COMPUTER ASSISTANCE IN THE WRITING LAB

It has been widely stated that the computer will reshape our entire culture during the 1980's. It just might. Many knowledgeable people believe that by 1985 there will be millions of microcomputers in schools, colleges, universities, and homes. It seems certain that there will be a resurgence of computer aided instruction (CAI).

What is CAI? Most obviously, CAI uses a computer/cathode ray tube (CRT) or a computer/printer combination to provide drill in subject and skill areas that is logically sequenced, interactive at the student's level, and "branched" to meet his/her individual needs. Less obviously, CAI provides a potent and challenging "new medium capable of various instructional modes which can assist the student in becoming an efficient and independent learner in many fields and at all levels of education." Some of these instructional modes are: drill, tutorial, dialogue, problem solving, simulation, gaming, model building. Proper CAI requires an interactive terminal ("student-computer interface device") with visual display and graphics capacity; in addition, a hard-copy printer is desired.

Text Processing

At this point we need to look at a new development not normally part of CAI but which is of special significance to writing labs. The widest impact of the computer technology will probably be from "text processing." Whenever quantities of information have to be processed or stored, the computer will take over. This has already happened in the newspaper industry, is underway for libraries, and is on-the-mark for business offices of all kinds. The typewriter provided an extension and boost for man's arms; the computer adds an extension and boost for his brain.

What does a text processing program do? It allows one to compose, change, insert, combine, delete, edit, store, and/or print whatever material is typed on the terminal keyboard (standard typewriter board, plus additional keys). Realignment, centering, and justification of format are all automatic. All corrections can be made before a word appears on paper (at an error-free rate of perhaps 450 words per minute). Storage is on one's own "floppy disks" (small plastic "records"), so there is no security problem. Many documents can be stored on one disk, with automatic index.

The composing, redrafting, and editing functions are of special interest for the writing lab student. Also, if there are faculty members who are unhappy about the machine technology, text processing may win them over. It may be the greatest aid to the active scholar since the printing press.
Currently, a good text processing set-up is not cheap. A good basic system (micro-computer with word processing capacity and printer) can be purchased for around $1400.00; but for letter-grade printing, one would need $6300.00. In my opinion, the extra money is well worth it. A text-processing program would also be needed ($200-$300).

A more mundane use of the computer should not be overlooked -- record keeping. It is a relatively simple matter to write a program that will keep track of all student traffic: attendance, hours, lessons, tests, tutor's comments, etc. The selected data can be displayed immediately and printed out on demand.

CAI Negatives

We have indicated some good features of CAI, what of the bad points? We note that this is the third time that CAI has been offered as the greatest media aid to date: in the 1960's with the development of the big computers, in the late 60's and early 70's with the mini-computers, and in the late 70's with microcomputers. The premature enthusiasm of the 1960's, which tended to view CAI as only a drill and practice approach ("automated page turner"), alienated many people. Often, the new technology was saddled with some of the bad practices of traditional education. There has been a general recognition that many early advocates of CAI just did not understand the potential of the computer, especially its interactive capacity, with the learner controlling the computer, not the opposite.

Another common complaint about CAI is that its superiority over books, lectures, TV, etc., has not yet been demonstrated. True, but it should be emphasized that reliable studies have established that CAI is as good as other methods, adding it to the list of choices of educational tools. The complaint that CAI hardware is inefficient and prohibitively expensive no longer applies, though software is generally not readily available. It should also be noted that the more sophisticated interactive programs, such as those most apt to be effective in the writing lab, require great amounts of storage and high speed in retrieval. The cheaper mini-computers currently do not have these capacities.

be hard pressed, but the capacities are improving rapidly and the problem should not persist. Lack of knowledge and training for key people has been a problem, but is improving. Ideally, a combination subject matter specialist and computer programmer will be available; short of that, one can become adequately informed through concentrated study -- formal or informal.

CAI Positives

Lou Frenzel says that the "primary advantage of the computer over other audio/visual devices is the automatic interaction and feedback that the computer can provide. Multiple paths through the course materials can be taken, depending on the individual student's progress." In this respect, the computer is similar to the best one-on-one instruction: it provides active rather than passive learning; it provides adaptive, individualized instruction rather than lock-step learning. Also, program authors can insert effective TLC at the appropriate places in the appropriate amounts.

There is clear evidence that CAI makes the student an integral part of the learning process. Total attention and enduring enthusiasm are standard. Satiation with the novelty of it all (the "hawthorne effect") has not been a problem so far, and, at the current rate of innovative change, is not likely to be. Also, most students have been exposed to multi-media presentation devices for many years, e.g., television. They are conditioned to electronic presentations of high technical competence and, occasionally, of high educational and cultural quality. It is likely that students will for a time be more computer literate than their professors. We need to use their interest and capacity to improve their writing ability.

CAI Cost

The cost effectiveness of CAI has been clearly established at all levels of education. Dr. Ludwig Braun describes seven reputable and convincing studies, from 1972 to 1979. Even with declining enrollments and scarce funds, CAI should remain competitive with other forms of instruction.

Recently, CAI hardware costs about the same as video tapes hardware, but the price for a minimally acceptable unit is roughly the same as the recorder/projector ($400.00).
Considering the strong pressure to upgrade to more desirable peripheral hardware, it is not likely that the cost will decline further. Desirable peripheral hardware includes: a "floppy disk" storage unit (essentially a magnetic recorder that "reads" plastic disks); a CRT screen unit with keyboard; and a "hard-copy" printer. (A MODEM, costing about $200.00, is needed if one's terminal is connected to a "main frame" computer rather than part of a "stand-alone" micro-computer.)

CAI Software

Rapid advances in hardware are especially striking when compared to the slow development of software. It has been the practice to assume that many people out there somewhere are developing programs that will soon be available to all at acceptable prices. This has not proven to be true. Most of the local experimentation and development stay local, partly due to lack of standardization in both hardware and software. Programs which are available are sometimes just machine versions of programmed texts, at considerably higher cost. There are significant exceptions, however, such as the PLATO and CONDUIT projects.

The University of Iowa's CONDUIT project is a non-profit educational organization that collects and disseminates CAI information and programs. It has attempted to establish some standardization as well as some standards of quality. The only listing in the current catalogue pertinent to writing labs is: "DIALOGUE, HUM 143; topics: grammar, basic writing skills, sentence structure; author: Susan W. Wittig (Project CBE, The University of Texas at Austin), 1974." The package price is $100.00; it consists of 41 interactive programs in seven modules. The computer language is BASIC (a common language, but the program may still have to be adapted to local equipment.)

Recommendations

From the above, it could be said that lab hardware is in significant transition from various cassette recorder units to microcomputers. This is generally true, but it is likely that cost and preference and cultural lag will insure that the recorder will stay for awhile as the basic unit. Though the media technology is changing at an astounding rate, people do not change that quickly.

Since significant change is inevitable, however, it makes considerable sense to have in the writing lab now at least one good computer station for experimentation and computer literacy (plus text processing and record keeping).

Experience with full blown CAI in the writing lab is limited; it has been a time for study and experimentation. The time is right, however, for a definite stand: if one has the financial and human resources, one should install a battery of microcomputer stations for CAI in the writing lab.

Challenges

As indicated above, powerful stand-alone microcomputers are now financially feasible for virtually all educational institutions—well below $1000.00 per unit for more than adequate equipment; below $10,000.00 for top-of-the-line marvels. Problems concerning human resources have also been alleviated. People have said to me, "I'd like to get into computers, but I don't have the math." None is needed to operate the computer, or to supervise student operation. In fact, none is needed by lab personnel to produce local programs. One just finds a programmer and tells him/her what is wanted. Or, for a few hundred dollars, one can buy a commercial authoring language in English and develop one's own course.

Few writing labs will be as fortunate as the one at my university, where we have the University Simulation Lab and the Computer Sciences Department right across the hall, but there are several other possibilities: 1) virtually every school or college or university has people with some degree of computer expertise,—consult with them; 2) students taking computer courses (or with a computer at home) are an excellent source of help (work/study, senior project, etc.); 3) manufacturers of computer hardware are most helpful with information, consultation, and hands-on help; 4) retail computer outlets are similarly helpful (look for computer conventions or "faires"); 5) personal computer buffs are increasing in both number and enthusiasm.

It should be noted that many university computer centers are still oriented to "main frame" research computing, primarily for faculty and graduate students, and
are emphasizing "batch" card punch rather than interactive CRT and printers. They should soon be adding support for stand-alone units. If not, look elsewhere for help. This is not to imply that lab terminals hooked into a main frame computer (with phone modems) do not work well. They do, and have some advantages, but there are such problems as downtime, overloading, and poor security.

Getting Further Help

Once financial and human resources are taken care of, and the hardware purchased and sited, what other help is available on software? A massive bibliography of printed materials on CAI would be repetitive and dated. Three basic sources should bring all the reliable current information needed:

1) Check out or borrow or buy a subscription to CONDUIT (POB #338, Iowa City, IA 52240) at $15.00 per year. One can for free get on their list for discipline packages (e.g., "Humanities"), but with a subscription one will receive all announcements plus two issues per year of PIPELINE, the CONDUIT magazine, which contains excellent articles, book reviews, etc. (Also, order from CONDUIT The Best of PIPELINE, 1979; it contains several informative articles.)

2) Get access to BYTE, a McGraw-Hill publication. The subtitle is "The Small Systems Journal," indicating its concentration on stand-alone computers. It has been a rich source of information on software as well as hardware, and starting with the July, 1980, issue (Vol. 5, No. 7), initiated an irregular feature called "Education Forum" which presents articles by significant commentators on CAI. BYTE's "Reader's Service" section is also especially helpful. (Try to get the July, 1980, issue; besides the four writers in the "Forum," there is an excellent editorial by Dr. Ludwig Braun, Director of the Laboratory for Personal Computers in Education, State University of New York at Stoney Brook.)

3) Get on the mailing list of T.H.E. Journal (Technological Horizons in Education); Circulation Department, T.H.E. Journal, POB #992, Acton, Ma 01720. The Journal is free; just give your official title. It is published by Information Synergy, Inc., Acton, MA, six times per year. It includes information and articles from many sources concerned with both hardware and software, and emphasizes "inquiry service" cards.

Whether and Why

The point has been made, over and over, that one-on-one tutoring with a sample of the student's writing in hand is the best way to improve writing. It should not be necessary to state it again. Unfortunately, there are some who insist that that is the only method that should be allowed. Simple arithmetic says otherwise. In a class of 2000 freshmen, at least 600 individuals will need extra help with their writing; the classroom instructor simply does not have the time for this kind of individual attention. One-on-one tutoring for 600 students, one hour per week, would require about 20 full-time qualified tutors. Who can afford about 120 classes per day containing only one student?

Properly equipped self-instruction stations can provide an effective form of one-on-one, so that while a tutor is working with one student, s/he can keep many others working productively in the lab. Ample instructor analysis and student evaluation have shown the effectiveness of this approach for properly motivated students. The nay-sayers who provide doom and gloom about the machine taking over have a singular lack of confidence in themselves and in human-kind. We must meet the challenges of our day. Rather than treat self-instruction media aids as some sort of cross between a Skinner machine and Darth Vader, we should understand them, master them, and get on with our responsibilities. This is especially true about computers; if we pretend to be experts in language, then we should be vitally interested in new languages, especially languages that are certain to have such a significant impact on our culture as the computer languages will have. We should be monitoring closely the uses and abuses of computer languages. At the same time, we can maintain mastery of the technology and its applications in our special areas of expertise, such as the writing lab.
However great its potential, it is not likely that the computer will ever replace the print media, but its success as a multimedia aid appears certain. Basic education will soon be a matter of the three "R's" and a "U". Dr. James W. Johnson, Director of CONDUIT, says: "...many problems that used to be solved analytically are now solved numerically by interactive technique. It would be quite surprising if...personal computers didn't change our universally needed skills, our modes of thought, and our use of our own memories."  

Dr. Johnson also raises some questions about possible sacrifice of human qualities, but the human animal has absorbed the blows of many technologies to date and remains just as wondrously and disgustingly human as ever. Computer technology may alter our psyches as well as our culture, but the tool is not likely to overwhelm the craftsman. Will the computer culture bring some horrors into our lives? Certainly. People are not likely to change much in their capacity to produce and accept horrors. Will CAI be abused also? Certainly. But the positives win out over the negatives. Whatever, we cannot go back. It is certain that the advent of the typewriter raised hell with the practice of penmanship, but I know of no one who wants to destroy his/her typewriter. Connect that typewriter, now electric, to a computer and one is building a key part of the writing lab of the future.

Richard G. Mason  
Michigan Technological University  

NOTES  


2 "The Personal Computer--Last Chance for CAT?" BYTE, 5 (July 1980), 86.  


4 "The Impact of Personalized Computing," The Best of Pipeline, CONDUIT, University of IOWA, 1979, p. 5.
about tutoring: every student presents a new challenge. No standardized form, however sensuously written, can encompass what Whitman calls "a single separate person."

The third chapter takes up "Tutor Training," and here I wished more had been written directly for tutors rather than for administra-tors. Nevertheless, I found much of value in Lil Brannon's compelling essay, "On Becoming a More Effective Tutor." But my highest mark went to Susan Glassman for her wonderfully resourceful piece entitled "Tutor Training on a Shoestring." Given our current economy, we may all be stepping into Ms. Glassman's shoes soon.

Chapter 4, "Choosing Multi-Media and Self-Instruction," is rightly skeptical about mechanical solutions to all-too-human problems. In coming years, computers may provide what they promise today, but for now the essay to study deals with human resources, not hard-ware. In "The Autotutorial Writing Lab: Discovering its Latent Power," Mary Epes, Carolyn Kirkpatrick, and Michael G. Southwell of the COMP-LAB project reveal many practical ways in which we can create valuable autotutorial exercises to supplement one-on-one instruction.


I feared for the final chapter as well: "Maintaining and Expanding the Writing Lab." I found, however, that the editor had saved the best for last. Here lab directors wrote with passion on the topics of public relations, records, evaluation, and research--salient issues all. Indeed, if your lab has been in existence for a year or more, you might well begin reading here, since each essay marks a point of departure.

Tutoring Writing is thus a treasury of insights for now and future lab directors. But no work is faultless, and here the faults are not the editor's, but ours at large. Let this be the last anthology of writing-lab anecdotes--and of windy theory divorced from practice. Let us work to narrow the gap between the lab and the classroom, not to widen it by putting down our colleagues across the hall. Finally, let us police our own turf for the jargon we deplore in other fields. Our buzzwords--model, feedback, package, process, dialogue, heuristic, and so on--buzz as loudly as anyone else's. She who coined the barbarism "editizing" (p. 47) did us no service.

These matters aside, Tutoring Writing represents us well. Writing tutors still lack their sourcebook, but we directors can take pride in ours. As in the past, Muriel Harris has shown us not only who we are, but who we may be. Watch for sequels in these pages.

William L. Stull
The University of Hartford

A CALL FOR PAPERS

The planning committee for the IX Annual Ohio Developmental Education Conference is soliciting program proposals for workshops, panels or other formats. The conference is sponsored by Raymond Walters General & Technical College, University of Cincinnati, and will be held in Cincinnati, Ohio, November 5-7, 1982. The conference theme is "The ABCs of D.E.: Articulation, Burnout & Competencies." The deadline for submission of proposals is June 15, 1982. For additional information and proposal forms write to Dr. Tanya Judutsky or Dr. Phyllis Sherwood, Raymond Walters General & Technical College, 9555 Plainfield Road, Cincinnati, Ohio 45236 (513-745-4202). National participation is invited.
Establishing a Unified Record-Keeping System or a Writing Laboratory

Introduction

A computer firm has added to the business buzz-vocabulary a new term—"information management." While the humanistically-inclined (among whom we count ourselves) generally denounce mercenary language and motives, we nevertheless have a great deal of information to manage, most particularly if we are on the staff of a writing laboratory; and many of us are not constitutionally-pre-disposed to maintain scrupulous records or to comb them for information. A computerized record-keeping system is the ideal tool for this process, and the development of such a system is not nearly as onerous, or as complicated, or as expensive as one might fear. Using the university's resources (primarily free advice and volunteer labor), we have acquired a system that presently handles all our records. It generates the information we need from those records in order to prepare our reports, gives us individual student information such as ACT and grade point, and assists us in referring students to other learning assistance centers. In the near future it will make possible more systematic individual writing diagnosis and program design, and it will analyze data for our use in research.

Genesis of the System

In order to develop the system at a minimal cost, our Director of Student Academic Services, Carmen Richardson, secured the cooperation of the chairperson of our Department of Applied Computer Science, Art Owles.

Owle's Directed Projects course students (all undergraduates) designed a system to handle all our records, reports, and data analyses. We met with the students five times for an hour at each meeting, discussing the various forms we used, the reports we needed, and the research we wished to conduct. Using the information they had gathered concerning our needs, the students designed the system in one semester.

See Figure I for an outline of the system. A more complete description is available to the reader upon request.

| I | Student (name, instructor, etc.) |
| N | Individual Session (date, tutor, skills) |
| P | Evaluation (student) |
| U | Evaluation (tutor) |

On-line: current student profile
Weekly: summary of services with student profiles
Monthly: summary of services with student profiles
Term-End: summary of services with student profiles
Year-End: summary of services with student profiles
Occasional: data analyses as required

Figure I. System at a glance

Records and Reports

Before the project began we had used four record forms—the referral form, the appointment sheet, student evaluation, and tutor evaluation—and generated from the records on those forms two reports, one on a weekly basis to referring instructors (reporting their students' attendance at the Writing Center) and another at year's end to the university summarizing our year's activities. Without increasing the number of forms we had to fill out, the computer people were able to alter our weekly reports so that they would generate the information which we were laboriously compiling by hand for the year-end report and provide us with three additional housekeeping reports: a weekly summary of services rendered, a monthly report to department heads of the number of students from their departments we had tutored, and a semester's end summary of services rendered all across the university. Of course, these reports included a more detailed breakdown than we have had the time or patience to develop by hand. We are able to state with precision the skills most frequently tutored, the departments served, and the level of students most frequently tutored.

We are pleased to be relieved of the chore of tallying all the statistics, and
the new reports have been useful in increasing campus awareness of the extent of our services.

Demographic and Academic Information

Once we had established the computer system, we were able to tap one of the university's other information systems to gain information concerning students' backgrounds and current activities in the university. In addition, the records system for the whole division of Student Academic Services (including four learning centers, advisement, and a special admissions program) is available to us. Thus, by summoning up the students' records on a display screen, we can get an immediate profile of their activities: high school attended, entrance exam scores, courses enrolled in, centers attended, and skills received instruction in. These files are updated weekly. This information is useful in designing and scheduling instruction.

Referral

By the establishment of this web of information among the various units of Student Academic Services, we can coordinate services more efficiently. We know, for example that students who have severe writing problems usually have reading problems as well. It has been our practice to refer the student to the reading center on such occasions; the computer makes it easier for us to follow up on those referrals. This information is of interest to referring instructors and academic advisors as well, especially for students who are on academic probation. There is much unexplored potential for cooperation in development of methods and program design for individual students.

Individualized Writing Diagnosis

The central problem in the development of tutorial methods is the great number of variables in the task. We feel that a more systematic method of procedure in diagnosis and design is the only avenue whereby we will be able to obtain the information we need in order to improve our methods. Once we have done some preliminary work, we will use the computer to assist us.

Writing Center faculty are presently engaged in developing tutoring and evaluation materials which will be used by some of our tutors during the next school year. Controlling rigorously the activities of certain tutors with selected students and comparing the results by means of pre-test and post-test results and by longitudinal tracking will enable us to perceive more clearly the nature and extent of various methods' effectiveness.

As a certain method's suitability to a certain problem becomes obvious, we will engage the computer science people to develop an enhancement of our system, so that we can use the results of pre-testing to help develop the most productive program of study for the individual student.

Analysis of Data for Research

The least we can expect from the computer is the ability to correlate attendance at the Writing Center with later academic success. Analyses might include identification of traits typical of high-risk students at our institution. While the general factors of high-risk students have been studied, it seems probable that each institution will have characteristics peculiar to itself which may ease or complicate the path to graduation for its students. Among those factors may be the students' high school and choice of major. The significant fact is that with the students' records in the computer, we can investigate correlations of all kinds as their probability occurs to us.

Costs

The development of the system cost us nothing, since computer time was absorbed by the Department of Applied Computer Science and their students staffed the project.

Maintenance of the system is estimated to run $500 to $750 yearly. Leasing a CRT terminal for our private use (an optional expense) will cost us an additional $100 a month. Handling the input of our weekly traffic (approximately 100 students) requires
approximately one hour of secretarial time at the terminal.

Summary

We may seem to be placing superstitious faith in the ability of the computer to solve all our problems. While we remain convinced that a human teacher is the most effective channel through which education can flow, we also feel that our human inability to record and interpret very large amounts of information interferes a great deal more than is necessary with the effectiveness of the Writing Center. We feel that a computerized record-keeping system can help us to devote a larger proportion of our time to tutoring and can help us to improve our ability to tutor. We welcome readers' inquiries concerning the system.

Maurice Scharton
and
Janice Neuleib
Illinois State University

WHAT'S NEW?

We would like to share news of our new publications with the WRITING LAB NEWSLETTER readership. In April, Longman published The Tutor Book (a training program for all tutors), and The Writing Tutor (a guide for those tutoring writing). Both of these books are by Marian Arkin and Barbara Shollar.

Also pertinent to those reading the newsletter are 1. Tutoring ESL Students, by Marian Arkin, which is directed to those tutoring students with second language interference problems, and 2. Tutoring Reading and Academic Survival Skills by Barbara Shollar, directed to those tutoring students with reading and study skill problems. (These two were published in April as well.)

Barbara Shollar
Director, Learning Skills Center
College of New Rochelle
—and—
Marian Arkin
Director, Writing Center
La Guardia Community College

ESTABLISHING ATTENDANCE POLICIES IN A NON-REQUIRED LEARNING ASSISTANCE CENTER

Although still in its infancy, the Learning Assistance Center at Fayetteville State University is experiencing growth pains. During the first semester of the 1980-81 academic year more than 300 students enrolled for assistance in Math, English, Writing and a bevy of other subjects.

Although students were given specific hours to report to the Center, many appointments were not met. On the day before a major test, however, the Center was overflowing with students, some who had missed previous appointments and others who wanted to sign up for "immediate help." It became apparent that there had to be some equitable yet enforceable method by which attendance in the Center could be established.

We were concerned, too, about the correlation of student attendance in the Learning Assistance Center and performance in the classroom. As expected, there was a direct correlation between the number of hours spent in the Center and the grades received in the classroom. After careful study of mid-term grades of L.A. Center students and their attendance patterns, we surmised that in order for a student to benefit from tutoring, he would have to attend tutoring sessions at least twice per week or thirty-two (32) hours during the 16 week semester, give or take a few hours for illness, holidays, etc.

In effect, using the attendance report from the previous month, we were able to establish a core of students who attended the Center on a "regular" basis. These students were retained at their regular reporting times. On the other hand, students who reported to the Center occasionally despite having made appointments were placed on an "inactive" or independent study status. "Inactive" or independent status simply meant that the student could use the Learning Center whenever he wished and could receive tutoring if
and only if the tutor was not scheduled for a "regular" student at that time.

"Inactive" students quickly got the message. "If you want to be assured of a tutor, then you must report to the Center as scheduled."

Admittedly, there are those "lucky" souls who happen in before every test and miraculously find a tutor who is free. Fortunately, these are in the minority.

The future of our program leans toward compulsory attendance for the L.A. Center for all students who are performing unsatisfactorily in their classes. Until this dream becomes a reality, we'll be figuring out other ways to insure that students meet their obligations in attending the L.A. Center at FSU.

Dorothy J. Killian, Director Learning Assistance Center Fayetteville State University

Fourth National Conference on College Learning Centers May 13-15 at the Learning Center, Long Island University, Brooklyn

For additional conference information, please write or call:
Dr. Lester Wilson
Director, Office of Special Academic Services
Long Island University
Brooklyn, New York 11201
(212) 834-6054

Registration fee: $75

"Writing has got to be an act of discovery.... I write to find out what I am thinking about."

-Edward Albee

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