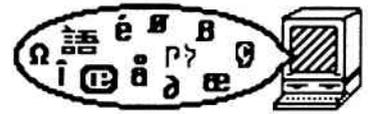


# C.A.L.L. Digest



## Computers And Language Learning

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### THE ONE-COMPUTER CLASS

This issue focuses on the theme of what to do if you have only one computer. You'll find a collection of articles that point out the possibilities of using that computer to ease the workload and increase the productivity of teachers and administrators. You'll also find articles on how to use that one computer as a valuable instructional tool in the classroom. An issue like this one might be seen by some as of interest only to those poor souls who are just starting out with computers, or those tucked away in some forsaken corner of the world. It is our intent, however, to also raise the issue again that it may not be in the interest of education to always promote the acquisition of more and better computers for students. Given the realities of funding for education in general, maybe we need to be spending more time thinking about the appropriate use of technology. We offer these articles in the hope that they will stimulate new ideas about the value of one computer as a tool for educators and learners. NJ

### MORE WITH LESS or, SMALL CAN BE BEAUTIFUL

Norman Johnson, Editor

Back in the mid '70s I picked up a cookbook entitled *More With Less*. It was more than a list of recipes; it was a call to a way of life in harmony with a world of limited resources and unjust distribution of food to many people. But the thing that endeared the book to me was its celebration of a life of simplicity. Having less for ourselves didn't need to be gut-wrenching self-denial; we could in fact experience more life by living with less. In the world of education, we also are faced with limited resources (and in many ways an unjust distribution of those that exist). Those of us interested in the use of computers in education carry a special burden in advocating the wise use of those limited educational resources. There is a natural tendency in all of us, and certainly a push from most publishers and vendors, to invest more and more of those limited educational resources in more and better computers. But that isn't always possible or desirable.

It certainly is possible to realize positive benefits from working with just one computer in a classroom. I remember five years ago when I had two computers in my classroom, how I longed for more computers as I struggled to juggle small group and individual access to the computers from the midst of my lesson plan. And yet now that the school has acquired more computers for our program, they are all in a computer lab where it is much more difficult to integrate computer use with classroom work. The one time recently when I encouraged my students to word process some essays that were going to be on public display, I found the process of teaching them how to use the word processor much more satisfying than when I taught "Word Processing for ESL Writers" to a class of students in the lab. My regular classes' motivation to figure out how the word processor worked in order to get their job done right, was much more powerful than the more artificial assignments I gave in the lab class. There also was a significant amount of peer teaching because I couldn't always be in the lab with the students using the computers. But the lab is upstairs and inconvenient for me to take my whole class to on a regular basis, so I seldom use the computers in an integrated way with classroom instruction.

A second disadvantage of the lab set-up is the fact that the computers are all tucked away in a little room. The computers are placed so close together in the lab that when I recently did *Mystery House* there, I had to make sure that every other computer was not being used so that there was room for groups of three students to work together. Since I value this ability of the computer to be a problem poser and task setter for group work, I've lost something with the current arrangement.

Now of course your lab set-ups may be much more rational, with plenty of room for small group work at the computers and a support staff to facilitate integration of computer work with class activities. But for me, I think I made better use of my two-computers-in-the-class arrangement, than I do of the present lab setting. The optimal situation may be to place two or three computers on mobile carts so they can be taken from class to class as needed for special projects. But the point I want to make in this article is that interesting and valuable things can be done with one or two computers. Sometimes, more can even be done with less.

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direction for teachers in a one-computer classroom. Database systems are powerful tools with immense potential and numerous applications yet to be explored and put to use for the improvement of teaching and learning.

#### FOOTNOTES

<sup>1</sup>We used dBase III+. Although AppleWorks was available and would have been preferable since all teachers in the program have access to it, AppleWorks was much too limited in its capacity and capabilities for the task undertaken.

<sup>2</sup>It seemed at the time that we should be able to create one large database to store all the curriculum information, but for practical reasons, like getting started quickly and easily, and also observing a basic principle of database management, we created several smaller, restricted databases which we later joined or related as needed. In the end, this was probably a sound decision.

<sup>3</sup>Our curriculum provides guidance about the level of mastery expected, ie. productive control, few accuracy errors; productive control, many accuracy errors; receptive control only. This mostly refers to the grammar curriculum.

<sup>4</sup>One of our implementation problems is that the database used to develop the curriculum is not known by the teachers in the program. This leaves the revision and report generation dependent on one individual, an obviously undesirable situation.

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## USING SYMPHONY IN TEACHER APPLICATIONS

Vance Stevens, Sultan Qaboos University

The point is often made that spreadsheets can be useful for teachers. Nevertheless, not many teachers use them. This is in part because it is not clear to teachers how spreadsheets can help them, and in part because they are unfamiliar with the operation of such systems. In this brief article, I hope to help teachers overcome both of these hindrances.

A spreadsheet is simply a ledger with criss-crossing vertical and horizontal data fields. For example, a vertical field might comprise all the scores on a given exam, and a horizontal field might comprise scores on all exams for a given student. The two fields would intersect at the entry for the given student for the given exam. Calculations can be performed either vertically or horizontally, so that the mean for all the students for the exam in question can be tabulated, as can performance on all the exams for the individual student. Furthermore, a change to the single entry in question will produce an immediate change in both class (vertical) and student (horizontal) scores.

A spreadsheet contains the same information as does a database management system; the differences are in presentation and in access. Databases typically present information a record at a time, at which point one can view all the fields in the record. It is also possible to extract related items from the database; e.g. all the fields within a given range of records. With a spreadsheet, one has windows on the entire data matrix. Access to any item of data is as easy as moving a slide under a microscope; you simply

adjust the window until the item is in view, then move your cursor to it and change it much as you would with a word processor.

Any database management system with spreadsheet capabilities will perform such operations; the beauty of Symphony lies in its power vs. relative ease of use, plus ready integration of ASCII text.

As with almost any software tool, there is a threshold level of energy that must be expended in learning the system before returns in reduced effort in accomplishing work are realized. Symphony's threshold is minimal. For one thing, there is an on-line tutorial that teaches the rudiments of cursor control, entering and editing entries, and manipulating chunks of data. Next, the commands provided from the Services and Menu command sets, used in almost every Symphony session, must be mastered. Part of the threshold in learning the system is either working through the on-line tutorial and/or consulting the manual to learn what the 19 commands in these two command sets do.

Once the threshold has been broached, setting up and manipulating spreadsheets with Symphony takes only minutes. One application is to set up a "record book" for each class being taught. I start with a list of my students plus any other data about them, created as a word processed file, or as a file provided from another program, converted to ASCII text. It is important that discrete data be in separate columns; for example, I might have students' last names in one column, their first names in another, and their student numbers in a third. This information can then be imported into Symphony.

This can also work the other way around. I can enter the data directly into Symphony and later PRINT one or several columns to an ASCII file which I can load directly into my word processor, or into another database management program. Symphony has its own word processor, but since data is so easily transferable, I find it more convenient to use my own. Either way, I avoid ever having to write out a list of students and their student numbers more than once during a semester.

Once the spreadsheet is set up, data (e.g. quiz scores) can be entered in any available column. Symphony has several statistical functions, such as sum, mean, variance, and standard deviation. Once these have been set up for one column of quiz results, the formulae can be block-copied beneath another column, and Symphony "understands" to change the wording in each formula to apply to the column it has been copied to. Columns can be moved at will (with all associated calculations; Symphony keeps it all straight) so that additional sets of scores can be slotted in while a running calculation for the whole semester can be retained as the last column over.

With Symphony, it is also possible to print all or only part of the spreadsheet. One can either "hide" chunks of data from the printer, or move parts to be printed adjacent to one another and specify this (by simply highlighting it) as the range to be printed. This is convenient if you want to print a list of quiz results against student numbers, with names left off for anonymity. Before posting such results in the class, I sort the list so that the high scores appear at the top of the list. In this way, students can't tell

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each other's scores simply by position in the list. Also, by sorting the spreadsheet against quiz results or overall averages, I can tell at a glance who is doing well in the course and who isn't.

Because of its flexibility and convenience, Symphony promotes rigor in arriving at objective student evaluations. A teacher may think something like: "Ideally, class evaluation should be based 10% on attendance, 30% on the weekly quizzes, 20% on homework, 10% on oral reports, and 30% on class performance," but balk at spending the time working out the individual calculations by hand. Symphony makes it possible for the teacher to enter a formulaic expression of the evaluation and instantaneously compute the marks for all students in the class. This is done simply by constructing the desired formula for one student's score and then copying that formula to all the rest of the students. Symphony allows copying from one cell to each cell in a specified block at a keystroke, and again, Symphony "understands" to alter each formula so that it is appropriate to the row or column it is copied to.

The point is: as computers become increasingly commonplace in places where teachers work, teachers can find ways to use them to accomplish small tasks more powerfully and efficiently than was previously possible.

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## COMPUTERS IN EDUCATION ...BUT NOT IN THE CLASSROOM

Peter Lee, University of Wisconsin, Madison

Those of us involved in CALL are fairly well aware of how these beautiful machines can enhance the classroom lives of our students. We use the authoring capabilities of the software we have to custom tailor sessions for our own teaching needs. Most of us certainly make some use of a word processor to create supplementary materials and perhaps tests and quizzes. A tad less obvious, perhaps, is how these same machines can make other aspects of our teaching and administrative lives easier. It probably won't be too long, if it hasn't happened already, before the director of your program realizes that with your expertise in computers you should know how to help him/her computerize the program office as well as your classroom. The world of data bases and spreadsheets beckons.

At the risk of boring those of you for whom this is rather old hat, I thought it might be worthwhile to just walk through the kinds of things that are possible in the program office with some of the simpler tools available for most all makes of computers. For me this means primarily AppleWorks, an integrated package for the Apple II series of computers. While I will not directly refer to any other programs, the capabilities of AppleWorks are fairly standard (some would say minimal) and should represent at least a basic set of features available with programs for other machines.

Spreadsheets and data bases are the other two general kinds of programs (besides word processors) that have been developed to allow computers to do the kinds of work that is done in most offices. Spreadsheets are essentially computerized accounting

sheets, allowing for easy calculation and reporting of financial and other numerical information. Data bases are electronic filing systems which allow for wonderfully fast and easy searching and sorting of large numbers of records. What kinds of specific jobs might these programs do for you, either as a teacher or as administrative computer guru? Let me take you through some of the things I have found to do with them. I do this realizing that we all work in different kinds of situations, mostly as a way of jogging your mind to apply some of these ideas to your own situation.

In our program (an intensive ESL program attached to a large university) we have about 80 students each semester studying four class hours a day, five days a week. Students are placed by scores on a series of diagnostic tests into one of four levels. Sometimes, depending on scores, more than one section of one level is needed. All of the placement, as well as last minute teacher assignments must be done in a two day span between testing and the first day of classes. On the first day of classes two main lists are needed. One, a master list, shows students which classes to go to at what hour of the day. Secondly, individual class lists are needed by each teacher to know the names of students in his/her class at any hour of the day. As a pencil and paper job, this was horrendous. With the data base in AppleWorks, each student has a screen where his score and level placement are recorded. All students in a particular level can then be selected and their classroom assignments for each hour can be entered as a group, once. From this then the two types of lists can be generated. For the master list, the students' names and room assignments are printed out by hour. For the teachers, the names of all the students in a particular room at a particular time can be printed out along with a grid line that can be used to mark daily attendance. It is a simple matter to add late arriving students and reprint the needed class lists. At the end of a semester, attendance information can be entered for each student as well as test scores. A new data base file can then be created by simply changing the name of the data base to refer to the new semester and deleting the names of students who have left the program. Old test results as well as level and room assignments can be erased and everything is set for the new term (Remember, the old data base is still intact under its old name on a disk). Some of this may seem unnecessarily complex, but mostly it just reflects memory and program limitations. In real life, it works fairly smoothly. None of people involved can imagine having to do this again by hand.

The other major use we have found for the data base function in AppleWorks is the care and maintenance of our international mailing list. A few years ago (when we first got a computer in our program) the director realized that it would be feasible to do a large scale mailing to institutions and individuals that might represent sources of students for us. About once a year we mail out copies of the program brochure and application forms to over 2500 addresses world-wide. Having all these addresses on a data base means that we can keep it up to date easily. It also means that we can sort quickly by zip code (for bulk mailings) or select by country or whatever depending on need.