ACADEMIC COMPUTING

University of Richmond, Virginia 23173

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Microcomputers in the Psychology Curriculum

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It is common for psychology majors at most universities to analyze data using mainframe computer packages (Butler & Kring, 1984; Castellan, 1982; Tromater, 1985). However, mainframe operating systems are not very "user-friendly". Learning these systems is like learning a foreign language. The user must translate what they want to do into cryptic "computerese" and then type this in precisely or the computer won't "understand" it. This kind of human-computer interface is prone to errors, and it is not uncommon for even the brightest students to be frustrated using these systems.

In recent years, microcomputers have moved into the psychology curricula (Stoloff & Couch, 1987). They are not only used for data analysis, but also for word processing, instruction, and testing. Many of the good programs have user-interfaces with interactive menu systems. With menus, alternative commands can be presented in English, and the user only needs to recognize which command is appropriate and then select it.

Academic Computing Hours

Office	Phone: 289-8652
Mon. - Fri.	8:30 a.m. - 5 p.m.
After-hours phone	
VAX Questions	289-8322
WordPerfect Questions	289-8773
WordPerfect, VAX, MLC Labs	
Mon. - Thurs.	8:30 a.m. - 12 a.m.
Friday	8:30 a.m. - 5 p.m.
Saturday	12 noon - 5 p.m.
Sunday	12 p.m. - 12 a.m.
Rainbow Room	
Mon. - Thurs.	3:30 p.m. - 12 a.m.
Friday, Saturday	Closed
Sunday	12 p.m. - 12 a.m.

Are microcomputer programs easier to use than mainframe programs? Recently, I had the opportunity to teach 20 students how to compute a common statistical analysis in psychology (analysis of variance) three different ways: using a hand-calculator, using the Statistical Package for the Social Sciences-Version X (SPSSx) on the University's DEC VAX 785 mainframe computer, and using a microcomputer program from Clear Lake Research (CLR ANOVA) on the Macintosh computers in our department. Students were assigned the same data sets for all three methods of computation. After completing the assignment, the students were surveyed on their preferences. The students overwhelmingly preferred the microcomputer method over the hand-calculation and mainframe computer methods. Comments from students indicated that they found the Macintosh considerably easier to use than the mainframe computer.

It used to be thought that human beings will adapt to the machine--however it was designed (Sanders & McCormick, 1987). Mistakes were blamed on the user (i.e., human error), not the designer of the machine. This perspective is changing. The present trend of computer program development is to remove the burden from the user, and instead, to place it on the computer programmer to write programs that can be used by regular folks (Shneiderman, 1987; Simpson & Casey, 1988). Since most students will not be using the same computers after they leave the University, it seems senseless to waste valuable course time having students learn technical details of obsolete computer operating systems (including those of older microcomputers). There are probably many instructors who have been hesitant in using computers in their course(s) because of the amount of time required for students (and the instructor) to use them. The quick learning rate of many of the newest microcomputer programs permits them to be added to existing courses without much disturbance. We are fortunate to have a microcomputer laboratory in our department because it allows us to teach our students sophisticated data analyses with the minimum effort.

References

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