THEY TELL ME IT'S FUN:

HISTORY STUDENTS AND CLASSROOM COMPUTER USE

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There was time when apples were used to make friends with the teacher; there are increasing indications that Apples may replace some teachers. I refer, of course, to the long-standing but increasingly dramatic introduction of computer technology into research and into the classroom. For social and economic historians their whole disciplines have been re-arranged to meet the needs of and make use of the computer. While some of the zeal of the early converts has disappeared, computer methodology remains an important part of those studies. For some teachers the whole trend raises frightening philosophical and vocational prospects. Faced with this, historians--whether researchers or teachers or both-do not seem to know whether to ignore the developments, reject the developments, or adapt to them. The prospect is akin to the task of the computer programmer; one doesn't know whether to suppress the variables, delete the variables, or simply recode them for further analysis.

As one trained in the humanities and as one who assiduously avoided the taking of math, statistics, or similar fields as an undergraduate, I find myself tempted to "suppress" or "delete." Such an approach might conceivably apply to some of my research. Many of the Georgians whom I examine for research purposes don't easily code into computer categories; rather more traditional historians' approaches must suffice. But to suppress, delete, ignore or reject computer developments and applications for the classroom would not only be inappropriate but also unrealistic in light of national and world developments. We must, indeed, incorporate these computer understandings if for no other reason than to understand Time magazine's choice for "man of the year."

How does one introduce computer applications into the classroom? More importantly how does one teach computer possibilities without destroying the basic humanistic content of the traditional history course? What I am about to describe represents two attempts, but they are admittedly quite experimental and still in their pioneering stages. Neither distracted from the fundamental aspects of my courses; both added considerably to the student's understanding of computer possibilities. Both evoked most positive evaluative remarks from the students--it is, after all, they who gave me my title. Computers can be "fun."

In the summer of 1982, in a course on Colonial America, I experimented with using the University System computer network to introduce students to computer terminal use and some packaged learning programs. By using local access techniques--what are referred to as "log-on" procedures--students were able to ask for and then work with programmed learning packages available through the University System. These learning packages centered on colonial America and included explanations, occasional text, questions, and answers. Students were able to get full explanations on incorrect answers and were able to give attention to a number of different program possibilities. Included in the options were units on the Indians of Colonial North America, the founding of Jamestown, the social patterns of the 17th century, slavery and black history, and others. The strength of this experience is that students

were able to step through the process of gaining computer terminal access to the programs and then answer the questions. The important explanations doubtless enhanced their understanding of colonial America. The difficulty of such packaged programs is that someone else does the packaging. These particular units were developed at Notre Dame and were often tied to a set of readings used in the courses taught there. For many of my students the readings were unfamiliar and thus the questions were phrased in inappropriate language or based on understanding that they did not have. As a first step, though, the computer workshops were valuable. A next step, although still in the planning stages, will be to develop appropriate microcomputer software so that students can have the same experience but have it more directly tied to specific courses which they are taking.

A more thoroughgoing and I think more successful experiment in computer classroom application took place during the fall quarter. For an undergraduate class in American Social History, I developed a computer laboratory to coordinate with the class. The purpose of the laboratory was to have the students step-by-step learn to use the computer package called SPSS or Statistical Package for the Social Sciences. This packaged computer program offered more versatility than many programs and is, of course, the program most often used by historians for social history research. It thus has comparability, and for students majoring in history, it has important transfer skills as well. The program is easily understood and easily explained.

At the beginning of the quarter the students were introduced to a primitive historical laboratory near their classroom. The lab, though, contained the essentials--a microfilm reader, coding paper and ample supplies of pencils. The library generously loaned us the use of a reel of census microfilm for the quarter. The students then proceeded to step their way through SPSS programming with the goal of analyzing the population of Baldwin County for 1860 by the end of the quarter.

It worked. As a regular part of the classroom lectures and discussions we looked first at the census itself and then developed a coding sheet that would allow us to translate the census data into machine readable form. The students developed their own common coding sheet based on models I had put on library reserve. After developing the coding sheet, a systematic sample of the Baldwin County population was taken from the census microfilm. Each student coded a certain portion of the sample. At times they worked individually; at other times they worked in teams. The latter approach was better since it meant a common understanding of the process was obtained and the students therefore reinforced their learning. One student insisted on going the extra mile by coding not only her portion of the population but also the entire prison and hospital populations found in Milledgeville. With coding complete, the students were introduced to the key punch machine. Although cards are increasingly obsolete in much computer technology they still have a place for those who want the protection from "stolen" computer passwords or for those who are unable to enter their data in one sitting at the terminal. For all of these students the key punching experience was both frustrating and rewarding. They learned the value of patience and accuracy. There were some mistakes but somehow they had been impressed with the need for accuracy and consistency in the coding and the cards were remarkably free of error. We then went over the actual steps involved in programming for SPSS. Since we needed only one common set of program cards, I did the actual key punching and programming for the student data. They

participated in each step in the process and followed carefully as the first runs were attempted. Fortunately for the sake of learning, although frustrating from a personal standpoint, the first runs came back with error messages. The computer delicately reminded me that I could not key punch accurately and that I asked the impossible. After carefully reviewing the error messages, the students were able to spot the problems and we then cleared up deficiencies. The frequency distributions were run and then the students decided which population subgroups they wanted to analyze. Their choices included migrant populations, farmers and planters, or natives. With the substitution of one or two program cards each student obtained and was given a printout of his/her own population, complete with frequency distributions, statistics to interpret and so on.

Their final assignment in the laboratory was to subject their own printout to analysis for purposes of oral presentation to the class. All succeeded admirably in learning to read the printouts, presenting summaries of their information to the class, and engaging in limited and speculative explanations. Given that the whole process was most time consuming, students were not asked to write formal analyses nor to read widely in the secondary literature to support their suggestions. Rather they used their lecture materials and supplemental readings to support their conclusions. Thus the last days of class were not only attempts to read and interpret printouts but also chances to review other classroom materials. It gave them a document to interpret in light of the learning that had taken place all quarter.

Student evaluations of the SPSS experience were most positive. One student has followed the formal course with enrollment in an independent study in which she will subject her special population to further analysis and read more widely in secondary literature to gain a better understanding of the materials. Since she is looking into the unique hospital populations of Milledgeville the analysis is potentially most exciting. Other students have expressed a desire to follow up on the project. My own experience suggests that it should be expanded to include other courses. As a consequence a graduate seminar in the spring will undertake the same laboratory process with the hope that our graduate students (many of whom are in-service teachers) can learn how to do it so that they can in turn extend the learning to students in their classrooms.

The whole laboratory use of SPSS is not without potential problems. For the instructor the whole business is most time consuming, since it involves numerous trips to the computer center, frequent individual conferences, and a great deal of informal out-of-the classroom work. Fortunately my class was small and thus the burdens were not unusually great. This is particularly true if one relies on the campus computer personnel for advice. They are more than willing to aid instructors in helping students, but do not expect the computer center to do the students' work for them. They serve--as our computer center director reminds me often--and the instructors teach. With their cooperation--and they love to have non-traditional users of the computer show an interest--the frustrations are minimized and the teaching of these relatively new techniques becomes a positive experience. For the students, the frustrations of a new situation and a new kind of homework are there, but these were lessened by locating the history lab in their classroom building. Thus students were not competing with others for use of microfilm readers and the like. Key punching is a potential frustration, too, because many campuses are beginning to regard key punch machines as out of date and discontinue their use. Although useful, they are not

"state of the art" technology. Check in advance to insure that your key punch machines are available for student use.

The computer laboratory offers tremendous teaching possibilities. The programmed access described here and the SPSS programming are but two of those possibilities. Indeed the latter lends itself in many important ways to the other teaching techniques we are discussing in this session. In recent meetings of the GAH, local history has had considerable emphasis as a teaching technique. While I have had occasion to discuss those possibilities before and so will not reiterate my philosophical insistence on their importance, I might point out that the use of an SPSS program on a local census opens the way to prepare a data base for the use and interpretation of a host of local records. The court houses are filled with materials that could not only supplement the census data but also could be subjected to computer processing as well. The material culture of a local area can be sorted and classified using computer techniques. The programs offer a most useful tool to help us manage the information so important to understanding local developments. Indeed a computer program not described here is proving essential to the processing and development of an index to the Milledgeville Southern Recorder. Without it, the massive cross-referencing needed would be almost impossible. I cannot help but encourage computer use and urge its application to those areas of local history and local emphasis which historians are beginning to address in their classrooms and teaching techniques.