PERSONALIZING MULTIMEDIA APPROACHES IN EDUCATION

Edgar L. Metcalf,
Plant Science Department, New York State University at Delhi

Faculty Resistance

Normally deviations from commonly accepted procedures raises questions. The use of media formats different from traditional lecture approaches in some cases has resulted in faculty resistance. The role of the educator changes from that of star billing in the classroom to that of a manager of educational experiences. He loses the "ego trip" associated with the fountain-of-knowledge approach in exchange for becoming a clever manager of meaningful educational experiences.

Lack of Understanding

A second source of resistance may stem from a natural fear or lack of understanding of audio-visual-machines and their operation and capabilities, and the erroneous belief that teachers might eventually be replaced by machines. Perhaps we should ask the following question, "If a machine can do the job of teaching better than the teacher, is the teacher needed?" Frankly, it is the role of the teacher that is changed and seldom, if ever, indicates his replacement by machine. It takes far more teacher effort to use the technologies available for teaching than it does to stay with a traditional lecture approach. The success of such an endeavor will be only as good as the teacher makes it.

Large Numbers of Students

Administrators may question the capability of various technological approaches in serving large numbers of students. The erroneousness of this conclusion can be shown by the efforts being carried out at several institutions such as Purdue where the audio-tutorial system is used with hundreds of students in biology. Contrary to frequently expressed opinions, individualization of instruction can also be imposed on audio-tutorial systems and audio tapes are often informal and on a first person basis.

Humanistic Concerns

A concern expressed by teachers, students and administrators alike indicates the possibility that the use of machines and modern technology will inhumanize education. One could also argue the inhumanness of large mass lectures whereby students are reduced to numbers on IBM cards. With the proper use of machines it is possible to take into account the fact that people learn in different ways and at different rates. This may be a very human approach compared to a mass lecture system without discussion time. The use of flexible technologies frequently enables students to proceed at their own rate in a manner suitable for them and at a time when they are receptive to learning.

Personalizing Education Efforts

It becomes apparent when examination is made that one must always be aware of the element of humanness. Students are people and a humanistic approach is essential if successful use of technology in education is to be realized. Even computer assisted education can be personalized if one is willing to sacrifice a few milliseconds of computer time. We have personalized a computer program used by students in calculating shade tree values which is part of a course in Grounds and Park Maintenance.

> The original formula was designed by the International Shade Tree Conference and it involves squaring the diameter of the tree 4½ feet above the ground and multiplying this value by .7854 and then by $10.00. The resulting value is then multiplied by a value group percentage figure and a condition class percentage figure giving the final adjusted value of the tree. We are fortunate in having a very capable programmer who personalized the program so that students can readily check their own answers against the computer without knowing about data processing or majoring in math. To illustrate, one must visualize the computer terminal which looks like a typewriter. After dialing the computer by phone the student simply types the code number and the name of the program desired which in this case is Calctree. The computer responds by typing out a question which asks for the student's first name. The student enters his or her first name and the computer then addresses the student by typing out his first name, typing a brief explanation of the purpose and the capability of the program and by typing a question asking for the diameter of the tree. The student enters the diameter and the computer then requests the value group percentage figure for the tree. The student enters this and the computer then requests the condition class percentage figure. The student enters this value and the computer prints out the final adjusted value of the tree along with a question asking the student if he wishes to do another tree. If the student answers yes the process is repeated. When the student finally answers no, the computer prints out the total value of the computed trees and thanks the student for allowing it to be of assistance. The computer then prints out a statement saying that it has enjoyed working with the student and that the student should not hesitate to call again when help is needed, followed by a good-bye.

Currently we are developing a personalized computer program to aid students in shade tree fertilizer problems.

Conclusion

The psychology of personalizing technologies available for improvement of instruction is important to the success of eduational efforts. It is not a difficult task to accomplish and it simply requires the instructor to put himself, as much as possible, in the position of the student. It is important to recognize differences in the way people learn and the rate at which they learn. The use of the considerable array of technological tools as aids in the educational effort, can remain humanistic.

It is left to the educator to personalize even the computer program.

INTERNATIONAL AGRICULTURE — A NEW INNOVATIVE PROGRAM*

Wilbur P. Ball
Professor of International Agriculture and Education
California State University, Fresno

A question frequently asked by agricultural educators in colleges and universities is "How can we increase our total student enrollment?" One way to accomplish this objective is by offering new and innovative courses that attract and meet the needs of students. One success story in this area is the international agriculture program offered in the School of Agricultural Sciences at California State University, Fresno.

In 1969, three agricultural student leaders inquired about the possibility of having a course taught on the subject of world agriculture. Five years later nearly 100 students are enrolled in three international agriculture classes being offered during the Spring Semester of 1974. Approximately 35 percent of this number are students representing practically every major other than agriculture that is offered on the University campus. International students constitute nearly 15 percent of the total enrollment.

The purposes of this co-educational, non-degree program in international agri-