Interactive Video: Using Technology for Instruction

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In the first program of its type anywhere, education students at the University of California, Irvine, are linked through two-way cable television—interactive video—to schools and offices of the Irvine Unified School District.

The equipment used to broadcast and receive at a given site consists of one camera, two TV sets, one microphone, two channel converters, and a three channel modulator. This basic setup is portable within each school and can be delivered to any classroom; there is no need for students to journey to a central campus studio. The equipment is inexpensive and simple enough to be entrusted to the eager hands of supervised second graders.

The UCI students use interactive video to observe demonstration lessons in 22 schools in the system. Groups of future teachers can view the teaching/learning process and discuss it with the master teacher without the inconvenience of a group visit to a classroom. In this way, UCI students observe classroom instruction regularly at both elementary and...
been initiated among UCI students and Irvine administrators, principals, teachers, students, and resource personnel. Educators from the school district make direct input into what future teachers are learning, while the link between the university and the school district is strengthened by UCI instructors who are available as resource persons, via interactive video, to interested parties in the school district.

Plans are being made to connect the entire UCI campus to the existing network. One may ask what a university physics professor will have to say to a second grader. There can be no certain answer to this question as yet. If, however, communications across such a wide gulf of age and knowledge can be accomplished with sufficient ease, that answer may prove surprisingly positive. The usefulness of such a system will be limited only by the needs and imagination of those whom it links together.

A survey of television viewing habits and academic performance verified that the two groups were reasonably comparable. Other than the television lessons, their curriculums were equivalent.

Although each of the lessons focused on a different half-hour of programming of such shows as Gomer Pyle USMC and Laverne and Shirley, the format was always the same: (1) a brief summary of the program; (2) a major and minor theme; (3) seven vocabulary words related to the program; (4) directions for interrupting the program at approximately five-minute intervals; and (5) nine questions, three for each skill level, per interruption. First-level questions required students to recall information; for instance, "What was the job the Sergeant told Gomer to do?" Second-level questions required students to interpret and make inferences: "How did Gomer feel about the job the Sergeant gave him to do?" Third-level questions required students to analyze and evaluate: "Does the government have the right to take the farmer's land for the Marine Corps base? Why do you feel that way?"

The same test of television observation skills was given to all of the students following the 30 lessons. Although the experimental classes did better than the control classes, the variance of the differences between the groups was not statistically significant. However, a subgroup of the experimental group did have gains significantly greater than the control group. This subgroup, approximately 40 percent of the students, did not have library cards, were not doing well in reading or math, and had low scores on the pretest of television observation skills. These students showed a gain of 20 percent.

One explanation for the skewed impact of the lessons is that the cognitive skills of this latter group were less developed than those of their peers, so they were not doing well in the basic subjects. They were thus particularly receptive to the television observation laboratory.

Students can learn to read TV if they are willing to think about what they are seeing and hearing on television.