Program Design for Interactive Video

Dr. Diane M. Gayeski, Dr. David V. Williams, Ithaca College

"Computers are adept at pacing and sequencing information, branching to different points in a program, and responding to individual students, but computers cannot present the real-life images which video can."

"An interactive video program is interspersed with stopping points which often contain questions. Based on the way a viewer responds to those questions, the program branches to a different point. The viewer watches at his own pace, and can proceed more quickly if he understands the information. Misconceptions can be corrected very early."

Levels of interactivity-

"The first level of interactivity is that in which the program addresses the viewer or calls attention to a particular aspect of the program. For instance, in a television program you might say, 'We'll now be watching a demonstration of a sales call. Count the number of questions the salesman asks as you watch this segment.' You also can intersperse rhetorical questions into the script itself. This makes viewers feel as though they are being adressed directly and gives them something to do other than sit passively while watching a program."

"The second level of interactivity is implemented by asking the viewer to pause and answer questions."

"The third level incorporates at least some amount of branching in the program." (either by using fast forward, reverse, scan, or random access feature) "For instance, if the questions were in an A-B-C-D multiple choice format, the workbook would say, 'If you answered A, enter 100; if you answered B, enter 200; if you answered C, enter 300,' etc. The viewer would then enter the number that corresponded to his answer, and a segment addressing that particular response would appear. It might acknowledge a correct answer or provide additional information, as appropriate."

"The fourth level of interactivity links a slide projector or video player to some sort of multiple-choice responding device. The student himself presses A, B, C, D or 1,2,3,4, based on his response to a multiple-choice question."
"Again one of the challenges in this technology is writing multiple-choice questions which effectively diagnose the student's state of knowledge at a given point in the program. Unlike the multiple-choice question which forms part of a 50 or 60 question test, each multiple choice question in an interactive program is used to make an important decision which determines the learner's path through a particular program."

"The fifth level of interactivity integrates a videotape player and a microcomputer. This allows the viewer to respond via a keyboard, so that, intstead of merely answering A,B,C or D, the viewer can type in a word or a sentence in response to a question. The microcomputer can be programmed to recognize the correct word, or one of acorrect series of words, or a correct combination of letters, and on that basis, continue, skip ahead, or branch to a remedial segment."