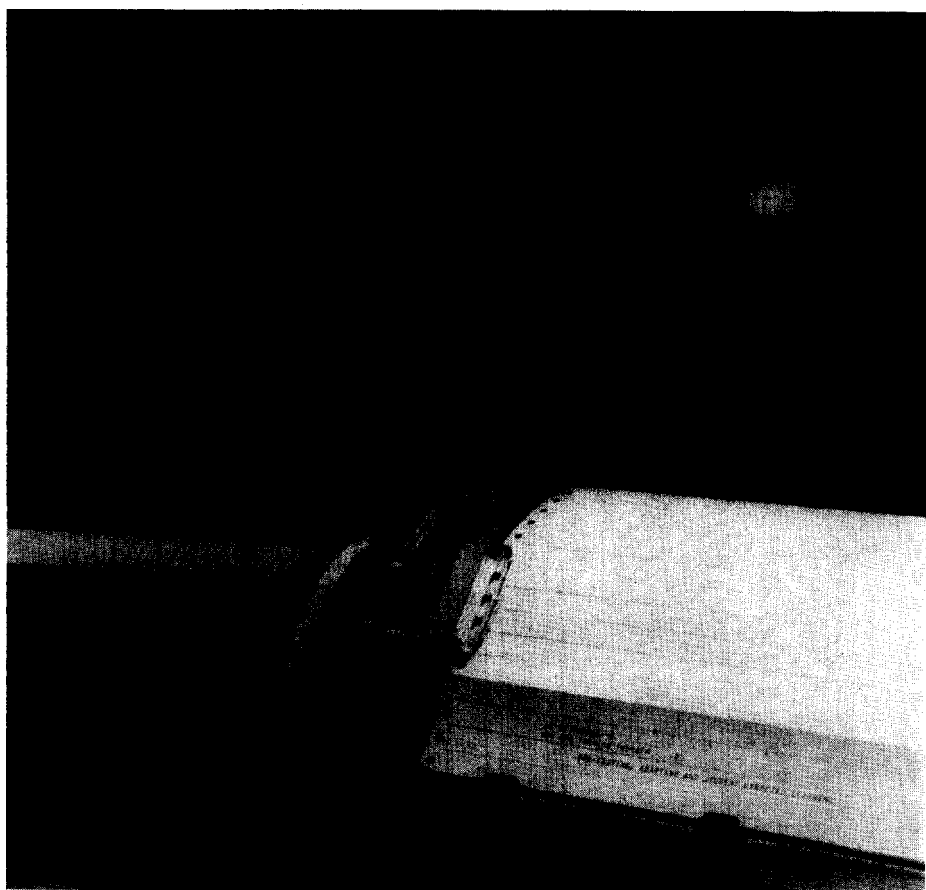


IBM's Computer Assisted Instruction

Computer assisted instruction is a relatively new educational technique presently undergoing investigation. In IBM's Field Engineering Division, each customer engineer, working at a student terminal, is questioned and responded to *individually* by the centrally located computer. The speed and memory capacity of the computer enables it to accommodate many students in various stages of many courses simultaneously. This permits each student to proceed at



A question is presented to an IBM customer engineer on the screen of a computer-controlled display during a coast-to-coast pilot study on the use of Computer Assisted Instruction in IBM's Field Engineering Division. Screen shows reflection of student seated at typewriter-like terminal, which is linked to a computer in Poughkeepsie, N. Y. by telephone lines. Students use terminal to respond to programmed questions stored in the computer. The experiment is the first of its kind in industrial education.

his own rate so that the slower student does not become lost or retard others. The faster student is not bored by material below his level of capability.

The Field Engineering Division experiment will be conducted under the direction of H. S. Long, manager of Instructional Devices at the division's Advanced Maintenance Development facility in Poughkeepsie, N. Y. "The logical capabilities of the central computer," Mr. Long said, "permit it to make numerous decisions based upon each student's background and progress in the course. Thus, for a given course, there are numerous possible paths."

Students can, at a given point in the course, be sent on to the next question, sent ahead to a later section of the course, given remedial or enrichment material, directed to a textbook or to reference material, or directed to consult with an instructor or counselor on a specific topic.

The student is kept informed, at every step along the way, of the accuracy of his response. The student may also be permitted considerable freedom of choice. For example, at various points during the course he may ask to see a glossary of terms, request help, skip an area by demonstrating proficiency, or even express his satisfaction or dissatisfaction with the course by typing his comments on the terminal. The author of the

course can obtain from the computer a complete record of each student's responses, as well as the student's personal comments, at any time. This information provides feedback to the course author so that he can identify points of error or ambiguity in the course and make the appropriate corrections.

The terminal, in addition to its educational function, also serves as the instrument for course construction and revision. Courses are written for computer assisted instruction in a fairly simple language known as Coursewriter, which requires no computer programming experience. Thus, the author of a course need undergo no extensive training and, furthermore, need not be located near the central computer. Coursewriter was originally developed by IBM's Instructional Systems Development Department and has been made available to educators interested in experimenting with computer assisted instruction.

The ability to revise courses quickly and from remote terminals makes this instructional technique extremely well suited for courses in rapidly changing areas of technology, where the time, expense and trouble of reprinting and redistributing more conventional course materials would be prohibitive.

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