

learning systems

audience of professional educators in Canada with the initial NRC work and the second phase of the program, involving cooperative, evaluative work with a selected group of educators, now is in progress.

The establishment of the central research facility required a much larger and more up-to-date computer than the experimental equipment which was the vehicle for the first phase of development. The PDP-10 computer system includes 32K words of core storage (36 bits per word) and a 500,000 word fixed-head disc store. This initial system configuration will permit the development of system control programs and also the development of course materials by the cooperating agencies. As the program proceeds, it is planned to add storage capacity to meet the demands placed on the system by field testing and the expected

increase in the number of users.

One of the objectives of the research program is to develop a facility which will permit great flexibility in the design of student terminals. In some cases the student terminal may only be a teletype. However, in other cases it may be desirable to study the benefits obtained from additional communication equipment connected to the centralized computer. Such equipment would include television displays, slide projectors and audio recorders.

The first educational body to be linked to the computer by on-line terminals will be the Ontario Institute for Studies in Education, Toronto. A number of other educational research groups will be linked to the system later.

The NRC program is concerned with the problems involved in the application of the digital computer as an

aid to teaching. It will include the assessment and subsequent development where necessary of input and output equipment, information storage and retrieval methods and the systems programming required to make computer-aided learning systems effective at all educational levels.

"The over-all objectives of this research are to provide impartial assistance nationally in the evolution and evaluation of computer-aided learning systems and to increase educational productivity through the introduction of an acceptable Canadian system," Mr. Brown says. "The program to be followed will make it possible for one central research facility to be employed optimally by educators from all provinces at minimum cost while contributing to the orderly evolution of standards on a national basis."

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W. C. Brown



Mr. Brown was born in St. John's, Newfoundland, and graduated from McGill University in 1941 with honors in Electrical Engineering. After serving on the staff of McGill University in 1941-42, he joined the Canadian Army in 1942 where he was engaged in radar design and production engineering until he joined the Radio and Electrical Engineering Division of NRC in 1946. Mr. Brown, Head of the Division's Information Science Section, directed many military radar development programs from 1943 to 1946. In recent years he has directed the development of weather satellite ground stations used by the Department of Transport and NRC's current program on computer-aided learning.

Né à St-Jean, à Terre-Neuve, M. W. C. Brown est un ingénieur électricien sorti de l'Université McGill en 1941 où il a enseigné en 1941-42. Il a servi ensuite dans l'Armée canadienne où on lui a confié des travaux sur le radar et les méthodes de fabrication. Il est entré à la Division de Radiotechnique et d'Electrotechnique du CNRC en 1946 et il y est aujourd'hui Chef de la Section d'informatique. Ces dernières années il a dirigé la mise au point de stations au sol liées aux satellites météorologiques et utilisées par le Ministère des transports; il dirige maintenant les études visant à appliquer les ordinateurs à l'enseignement.