In my Opinion

Alberta Invests in Apples: A Commentary

Richard Kenny

In a speech to the Alberta Society for Computers in Education, the Honourable David King, Alberta's Minister of Education announced, as part of a Computer Technology Project, the conclusion of negotiations with Bell and Howell, Ltd., to purchase 1,000 Edumod Apple Microcomputers. This was intended to be an initial purchase, a minimum number which would be the beginning of an effort to "triple the number of microcomputers in Alberta's classrooms within 18 months". This would occur, Mr. King stated, because the government's computer technology project would "allow school boards to purchase a microcomputer system through the (Alberta Education) School Book Branch, at a lower price than would ordinarily be available to boards". (King, 1981).

By mid-April of this year, the School Book Branch had sold fewer than 50 Systems. What went wrong? Why are Alberta's schools not beating down the doors to snap up this "bargain"? There is more than one answer to these questions but the most obvious is, quite simply, the price. The package consists of the following:

1. One 48K, Bell and Howell Edumod Apple Microcomputer with Control Card, Clock Calendar Card, and Integer Card,
2. One panasonic, 11 inch, Colour Monitor,
3. Dual Disk Drive,
4. One Centronics 739 Printer,
5. A software package consisting of Apple Pilot, Shell Games, Apple Plot, Visicalc, Line Editor, and 20 Diskettes.
6. An extended warranty, (15 months labour and 24 months parts), and
7. Inservice by Bell and Howell.

The price of the total package, according to the School Book Branch price list, is $5,905.40 and reflects the government's costs (i.e. no subsidy). Up until April of this year, a school could cut the price to $3,680.00 by opting for single disk drive and omitting the printer and the software. There has been much debate in Alberta about how much of a bargain this package really is and about whether or not a school can purchase a "comparable" set-up on the commercial market. Regardless, $3,600.00 is a substantial amount of money for a school to spend on any single piece of equipment and may

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well be a, if not **the**, major reason for the small number of sales of the package. Alberta Education has apparently recognized this point and will be allowing (as of April, 1982) a further splitting of the package. A school may now purchase the Edumod 48K microcomputer, single disk drive with control card, and 11 inch Panasonic monitor, for $2,517.00.

The other answers to the question of the lack of interest in the microcomputer package stem from more pedagogical considerations. Why would a school be interested in a microcomputer in this price range? The Bell and Howell Edumod is certainly a useful and flexible machine (especially as part of the total package listed above). But to what use would a school be putting it? Teaching computer literacy? Administrative purposes? Computer-managed instruction (CMI)? As an instructional device (CAI, CAL)? Mr. King justified his department's bulk purchase on a basis of a reduction in cost and on standardization, that is, in this case, to allow the tranferability of software and courseware. In this respect, he has likely been influenced by the success of the Minnesota experience in particular and seems to want to establish a large scale project of the MECC sort; i.e. based on one particular microcomputer.

But do Alberta's schools really need microcomputer systems and are they ready to embrace computers as instructional and management devices right now? The answer to this comes from Mr. King's own speech in which he stresses the importance of computer literacy and notes that it must be addressed first. It is the opinion of this present writer that Alberta's schools are looking to computer literacy as their primary instructional focus in this area and that they question the need for as sophisticated and expensive a system as is offered by Alberta Education. Computer literacy could be taught using a much less expensive machine. An inservice program on computer literacy currently offered by the Calgary Board of Education makes use of a hand-held microcomputer, the Sharp PC 1211, to introduce teachers to programming in BASIC. This program certainly teaches a level of computer literacy (albeit very elementary) and, for this

aspect of the program, has no need for an elaborate machine. While definitions of computer literacy vary widely, most contain the following elements:

To be computer literate, one must be able to define, demonstrate, and/or discuss, how computers are used; how computers do their work; how computers are programmed; how to use a computer and how computers affect our society. (Brumbaugh, 1980).

These definitions vary, to a large degree, on the basis of the particular author's idea of how much knowledge (e.g. of computer programming) constitutes computer literacy. A report of the Ad-Hoc Committee preparing the Alberta Education Computer Literacy Curriculum stressed that computer literacy should be "both functional and flexible; that is, the specific skills, knowledge, and values required to be computer literate will vary with time and the student's level of expertise". (Computer Literacy Report and Recommendations, September, 1981). Surely, the selection of hardware would also be based on circumstance and, especially, on the level of student need.

Indeed, it is interesting to note that MECC itself decided to support a second microcomputer option last summer and signed a purchase contract with Atari. This contract will supply the Atari 400 microcomputer with disk drive and monitor for under $600.00 U.S. and will put "classroom computing hardware in a price range that will allow districts to place computers in every school and create computing laboratories in which whole classes of students can receive direct hands-on- computer experience". (Rawitsch, 1982). The justifications for this contract were two-fold:

1. Price: educators were interested in cheaper machines (than the Apple) "even at the cost of fewer features or less capability," and
2. Applications: the recognition that "some applications do not require large computer memory, file manipulation, or sophisticated graphics." (Rawtsch, 1982)

Although its Apple II purchase contract expired last fall, MECC felt that a need for a system at this level still exists and is "cur-

rently exploring the possibility of establishing a new agreement." (Rawitsch, 1982). In other words, they have recognized that educators have varying computing needs and are attempting to achieve a balance between large scale support and supplying a variety of computer models according to those needs.

Should Alberta Education be considering this variety of needs as well? The opinion was expressed earlier that computer literacy appears to be the priority application for Alberta educators at present. Other applications, however, are prominent as well. In the Calgary Board of Education, computers are being used for many instructional purposes from data processing and business education to mathematics and education for the gifted, not to mention two, well-established CMI projects which make use of mini-computers. Each application is substantially different and has its own requirements. And, of course, there are many other possible applications. Watts (1981) has suggested twelve general categories of uses for computers in education including Administration, Testing, Instructional Management (CMI), Computer-Assisted Learning (CAL, CAI), and Computer Literacy. Good instructional design incorporates needs analysis and task analysis before proceeding to the stage of selection and/or production of media. While Alberta Education may well have carefully considered the province's varying educational needs and while it has selected a flexible machine, it surely could never find one microcomputer that meets all these needs. The question then follows: why didn't government support several options and allow educators to make the choice?

To be fair, it should be noted that the Alberta Education purchase contract was intended to be a part of an inclusive, on-going computer technology project which was to include such support as a clearinghouse of computer materials, which would evaluate commercial materials and assist the production and distribution of locally-developed courseware; a Computer Literacy Curriculum; and the development of computer orientation and inservice for teachers and administrators. Such support is certainly necessary and would be an incentive for

school systems to invest in microcomputer hardware. The elementary version of the Computer Literacy Curriculum will be piloted this fall but, to date, a clearinghouse has not been established (a director is currently being hired) and teacher support has been limited to inservice by the manufacturer.

Subsidized Apple microcomputer systems (perhaps up to 40 per cent as are textbooks in Alberta?) would certainly be very useful in schools, but so would Commodore Pets, Atari 400's. and sharp 1211's, depending on the instructional need. While schools are not prevented from purchasing these other machines, neither are they encouraged (financially or through support) as they are to buy the Bell and Howell Edumod. Standardization is important, but good instructional practice also requires choice. Hopefully, Alberta Education will see the light and provide Alberta's schools with a variety of computers from which to choose, at a reasonable price, and with readily available support materials and services. Then, perhaps, a much greater number of Alberta's teachers will choose to have an electronic apple on their desks!

References

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