EDITORIAL

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Guest Editor

With this issue the Canadian Journal of Educational Communication begins its twenty-fifth year as a journal concerned with the use of technologies for learning and teaching. This seems to me a considerable accomplishment, both by the former editors of the publication, and by the Association for Media and Technology in Education in Canada (AMTEC) as well. It is to the credit of AMTEC that while the Board of Directors has always been amenable to compromise and to new approaches which have allowed the journal to continue and to flourish even during difficult times for the association. On behalf of all the former editors, thank you, to all of the Board members who have agonized over the issues involved in publishing a scholarly journal.

I would also like to thank those scholars and researchers who write for CJEC in both of Canada's official languages. Your active imaginations and diligence in your academic pursuits has helped make CJEC an interesting and vibrant publication.

Thank you, as well, to the members of the CJEC editorial board. These scholars work far harder than most people realize to provide a fair and in-depth analysis of the draft manuscripts which are sent to them. Finally, a thank-you to the Social Sciences and Humanities Research Council of Canada both for the financial support they have provided for CJEC in past years and will be providing for the next three, and for the peer comments received as part of the application process which help us to improve.

It is likely that CJEC will see some considerable changes between its silver anniversary and whatever anniversary some future editor may choose to celebrate. With an increasing focus on a networked world of electronic information it is only a question of when and in what form it will make most sense to put this journal entirely in an electronic form. However reluctant I might be, on an emotional level, to see that happen, there is no doubt that it must as all of us find and draw information from the prodigious stores that are developing and presenting themselves to our search engines, and soon, our search agents. I hope readers will work with us as we begin to form our ideas of an electronic journal. We ask that you provide feedback as to how you think access to the journal, peer review, and the editorial process might work. We expect to formally involve you in the process in the early fall when we send you a short survey asking for your opinions on receiving CJEC in an electronic form. Please watch for it and send in your comments.

As a celebration of what CJEC and the field of instructional technology/ educational communication have become, it seemed appropriate to mark our first quarter century by offering something of a retrospective on the field and the journal. We invited former editors to write short articles dealing with the field and/or CJEC during their term as editor. In this issue we present three pieces from the former editors Dr Richard Lewis, Dr. Denis Hlynka, and Drs. Robert Bernard and Stephen Shaw. I hope you will find it as intriguing as I did to reflect with them on where we have been and where we might be going.

From Magic Bullet to The Adaptive Learner

Richard F. Lewis, Ph.D.

In 1980, I started a term as editor of the *Media* Message. Early articles during this period focused on producing better messages and using media more effectively. As the name of our field changed from audiovisual media to educational communication and technology, the AMTEC Board and I felt that the magazine should change as well. The Association for Educational Communication and Technology had changed its title from *Audiovisual Communication Review* to the *Educational Communications and Technology Journal.* Beginning with the 1982 issue, we changed the name of the Journal to the *Canadian Journal of Educational Communication.* With the name change came a change in format and editorial procedures. We strengthened the procedure of peer review which encouraged the publication of better articles. This brief article reflects my perceptions of the field during the period when I was editor of the Journal.

The sixties and early seventies saw tremendous growth in all aspects of the education sector. A record number of children filled school classrooms. Universities all over Canada became established or expanded significantly. The late seventies showed signs of an economic slowdown and harder times coming. In our field, now being called instructional technology or educational technology instead of audiovisual media, change was also coming. During the sixties, Scarborough College had established its television campus. D.O. Hebb taught psychology to hundreds at McGill and the University of Windsor placed a TV in every classroom. Technology was the hope for dealing with the increased numbers of students. Individualized instruction had become a buzz-word. It really meant that students could work through material at their own pace.

The Search for the Magic Bullet

Three very similar theories of communication underlay the field: the mathematical theory of communication (Shannon and Weaver, 1954) and the Source-Message-Channel Receiver model (Berlo, 1960) and the work of Schramm's notions of the receiver as interpreter and two-way flows. Communication theorists have called this era the search for the Magic Bullet, which was a message designed so well that it could overcome noise and channel limitation to communicate with all who heard/saw it (Lowery and DeFleur, 1983). The well-designed message theory also formed the basis for university, college and probably late high-school instruction. If the teacher could only get the lecture right, all

students would learn. If they didn't, we just flunked them out. At first, communication and instructional media efforts were concentrated on faithfully reproducing instructional effects using new technologies. Well-researched, designed and produced instructional effects would achieve desired objectives with the students.

Evaluation Uncovers Shortcomings of the Magic Bullet Theory

Federally-funded programs both in the U.S. and in Canada called for evaluations. Every new initiative contained an evaluation component to determine whether the objectives had been achieved. Funding agencies wanted to make sure that money spent resulted in increased learning or efficiency. Goal-based evaluation, used standardized tests and other objective methods. But change was in the wind. Goal-based techniques gave only a partial picture of a phenomenon, measuring only what they thought should happen. Goal-free evaluation by contrast measured change without knowing anything about the intervention. Morin (1980) used anthropological methods to develop an evaluation system. His techniques focused on involving students at every phase of instruction and evaluation. He made extensive use ofjournals and participant observers to collect evaluation information which was used to improve instruction. Piaget's theories yielded another evaluation method which Baron (1982) used to research children and television. In La Method Clinique, the child's responses were used to guide the collection of information used to do basic research or to evaluate. These later methodologies revealed that we could not simply focus on the medium but had to consider the mental world of the learner.

Using Additional Learning Theories

Pioneers in the field used behavioural psychology as a theoretical base in which the response is the key element. The purpose of instruction is to achieve the desired response by reward and punishment and shaping. The teacher had to define the required response and then create minuscule instructional steps to lead the learner to the desired behaviour. Instructional technologists developed programmed instruction which used small units of information requiring a response. These small units were chained to form complete lessons and have the learner perform complex learning tasks. Fear of failure and encouraging words were two of the most commonly used control mechanisms to help students learn. But despite their comprehensiveness and obvious effects with most learners, programmed instruction and most other instructional materials did not work for all learners. Blaming the learner for failing to learn began to be questioned. Evaluations ofvarious programs at all educational levels had demonstrated that we had not discovered the magic bullet. Ball (1970) conducted the evaluation of *Sesame Street,* one of the first evaluations of a television series. *Sesame Street* had also incorporated formative evaluation to improve segments before they went to air by suggested changes to production variables. The early *Sesame Street* evaluations found that despite the program's success with middle and upper class children, it failed to achieve its

objectives for its primary audience: the inner city poor. Instead of focusing on producing better media programs, we needed explanations and so searched for other theories which would explain how students learned (Salomon, 1974). By the mid-seventies, we began to explore other theories of learning such as social learning theory, information processing theories and attitude change theory.

Tremblay (1982) improved on traditional instructional design models by using theories of Salomon and Schramm to suggest that we needed to examine how the learner processed information when designing instruction. Different learners needed instruction presented using different instructional strategies; some needed pictures before principles, others the reverse. Winn (198 1) suggested that since learners might be more flexible than originally thought, the learner could be cued to the learning task, in preparation for instruction. Schwier (1980) suggested a number of techniques to improve self-instructional models, based mainly on motivation theories. Fleming and Levie (1978) presented effective message design principles drawn from theories of perception, memory, concept learning and attitude change and motivation.

To the Future

The early 80s formed the basis of most of the principles we practice in the field today. Communication theorists like Fiske (I 990) suggested that a student be seen as a reader, making unique meaning from each text he/she sees. As Winn (198 1) suggested, learners can be taught how to learn because we need not assume that a learner's traits are immovable but changeable. I have always wondered why advertisers succeed in communicating much better than educators. I think it is because they know their audience much better than we know ours. They continually research this audience, charting its every mood and altering the message to meet latent and expressed needs.

As educational technologists moving towards the millennium, we need to learn more about our target audiences. We need to find out what they think and feel. We need to help them learn how to learn by preparing them for the instruction we provide, and for life. Tools like the World Wide Web will require us to teach students how to find, understand and interpret information instead of just remembering and regurgitating it. But while teaching students how to learn, we will still need to produce effective instruction, incorporating all the early emphasis on message design and the production of excellent mediated messages.

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