Various facts and activities of the Centre for Learning and Development (CLD) at McGill University in Quebec are described in this annual report, 1973-74. The main goals of CLD are to offer services and support to faculty in matters of course design, development, and evaluation; to seek out and introduce new developments in educational theory and method to the campus; and to conduct research relevant to learning and development. The activities of CLD are divided into those that serve the campus, both continuing activities and special projects, those pertaining to research, those part of the professional activities, and those academic. The staff of the Centre for Learning and Development are also introduced. (WH)
CENTRE FOR LEARNING AND DEVELOPMENT

ANNUAL REPORT

1973-1974
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I. GOALS
CLD's general goals are:

1. To offer services and support to faculty in matters of course design, development, and evaluation, and to serve as a resource centre, providing literature, workshops, and personal and group consultation to interested faculty members.

2. To seek out and introduce to the campus new developments in educational theory and method, and to investigate their feasibility and usefulness at the university.

3. To conduct research relevant to learning and development.

4. To maintain the Centre's professional status, and to continue the scholarly activities of its members.

5. To become involved with the teaching process at all levels and to function in other ways as university academics.

6. To interact with other universities on matters of educational innovation, presenting McGill's activities and becoming knowledgeable about similar efforts on other campuses.
II. STAFF
The People at CLD

The Centre has a core professional (academic) staff and a small support staff. In addition there are part-time research assistants and graduate students, mostly supported by research grants or special project funds. Professional staff for 1973-74 consisted of:

George L. Geis received his doctorate in Psychology (Columbia University) in 1965. He has had extensive experience in designing, developing and evaluating self-instructional systems in higher education at Hamilton College (New York), the University of Michigan and McGill. He has published about two dozen papers in the area. He has formal teaching experiences (Introductory Psychology, Psycholinguistics, Instructional Design, Behavior Modification) he has conducted innumerable workshops for college faculty on various aspects of instructional design, learning, and teaching. A past president of the National Society for Programmed Instruction (now the National Society for Performance and Instruction), he is an active member of several professional associations (e.g., Canadian Psychological Association, American Educational Research Association). He has been the director of CLD since June 1973 and is an Associate Professor of Education.

Charles E. Pascal received his doctorate in Psychology and Education (1969) and his MA in Psychology from the University of Michigan. At Michigan he worked at the Center for Research on Learning and Teaching doing both research and consultation. Dr. Pascal has been with the Centre for Learning and Development since its inception in 1969 and currently has an affiliation with the Department of Psychology and an appointment as Associate Professor in the Faculty of Education. His current research and teaching interests include (1) adapting instruction to individual differences of students, (2) development and evaluation of instructional systems, and (3) behavior modification.

He has produced more than fifty articles, papers, presentations and books on these topics, has been invited to conduct numerous workshops and seminars on teaching and learning for college faculty, industrial training departments, and government agencies.
A member of the Quebec Corporation of Psychologists, the American Educational Research Association and the Canadian Society for the Study of Higher Education, Dr. Pascal also serves on the Board of Directors of several Montreal organizations including the Mackay Centre for Deaf and Crippled Children and the Society for Emotionally Disturbed Children. He acts as a consultant to the Montreal Children's Hospital and the Saidye Bronfman Centre.

Bruce M. Shore received his PhD in Educational Psychology from the University of Calgary in 1971. He had previously worked for two years as a high school mathematics teacher, and was active in teachers' professional and syndical affairs. Since joining McGill in January 1971, he has held a joint appointment in the Centre for Learning and Development and two departments in the Faculty of Education: Educational Research and Educational Psychology, now as an Associate Professor.

His major activities at McGill have included participating in the further development of graduate programs in Educational Psychology, where he has also done most of his formal teaching and supervising; research and development work, including consulting with colleagues, mostly in the development and dissemination of educational practice; and service on several levels of committees on and off-campus. His work has resulted in more than twenty publications and presentations. He is a member of eight professional associations in psychology and education, and Vice-President of the Canadian Educational Researchers Association.

Janet G. Donald received her PhD in Educational Theory (major in Psychology and minors in Sociology and Curriculum Development) from the University of Toronto in 1968. Her professional experience includes research into cognitive processes at the University of Western Ontario, educational research for the Toronto Board of Education, lecturing at the Ontario College of Education in Educational Psychology, research in computer applications to education at the Ontario Institute for Studies in Education, consulting for the Protestant School Board of Greater Montreal in special education, testing, and research and teaching, coordinating the Department of Psychology, and research and development at Vanier CEGEP.
Her special interests include research and development in the area of higher mental learning, human/verbal learning processes, individualized instruction, and instructional techniques. She is a member of the Canadian Psychological Association, the Canadian Society for Studies in Education and the Canadian Educational Researchers Association. She is an Assistant Professor in Education, as well as a member of the Centre, working particularly in the CEGEP certification program.

Gilles G. Nadeau is spending his sabbatical year with CLD, commencing April, 1974. Dr. Nadeau is an Associate Professor in Educational Psychology, Université de Moncton. During his sabbatical he will be involved in two major activities of particular interest to the Centre. He will conduct a study of various institutional research centres in the U.S. and Canada, and he will pursue his interest in evaluation of instruction, offering consultations and workshops for our faculty.

Lawrence Shulman will join the CLD staff June 1, 1974. The Centre will be sharing him with the McGill School of Social Work, where he is an Associate Professor. Dr. Shulman has special expertise and interest in small group discussion techniques and in methods of providing university teachers with feedback and guidance aimed at improving their instruction.

Glenn F. Cartwright, presently Assistant Professor in the Department of Educational Psychology, will also join CLD in a joint appointment during 1974-75. Dr. Cartwright received his PhD in Computer Assisted Instruction from the University of Alberta, and will bring this special interest to his work at the Centre. He is also interested in more general questions of instructional design, educational media, and personality as it affects learning and teaching.

Secretaries:

Wedad Assaf Administrative Secretary (until Feb. 1, 1974)
Anne Sage Administrative Secretary (as of Feb. 1, 1974)
Linda Fitzhugh Publications Secretary
Mary Cerre Research Secretary
Librarian:

William Mucikowsky, (BS, Buffalo; MA, Fordham)

Assistants:

Flo Brown, (Diploma in Education, McGill) Research Assistant
Joetta Browns, (BA, McGill) Research Assistant
Anne Dychtenberg, (BA, Toronto) Research Assistant
Jack Filipczuk, (BA, Loyola) Research Assistant
Paul Schnall, (BA, Brooklyn College) Research Assistant

Graduate Students:

Dr. Jonathan Borak, Clinical Scholar Program (Medicine)
Janice Klaassen, (Diploma of Science, Queensland Teachers College; Certificate of Physiology, Queensland Teachers College; MEd, McGill) Educational Psychology
Fred Rosenzveig, (BA, McGill; MA, McGill) English/Communications
Shirleen Schermerhorn, (BA, Stanford; MA, McGill) Psychology
Ron Smith, (BA, Loyola of Montreal; BEd, Toronto; MSc, Toronto) Mathematics (Loyola)
Dorothy Thomas, (BSc in P & OT, McGill; Diploma in Education, McGill) Physio-Occupational Therapy
Hyman Weisbord, (BA, McGill; MA, McGill) English/Communications
Martynas Ycas, (BA, Berkeley; MA, McGill) Psychology
David Zussman, (BSc, McGill; MA, Florida State) Psychology
III. SERVING THE CAMPUS

"To offer services and support to faculty in matters of course design, development, and evaluation, and to serve as a resource centre, providing literature, workshops, and personal and group consultation to interested faculty members."

"To seek out and introduce to the campus new developments in educational theory and method, and to investigate their feasibility and usefulness at the university."
A major activity of the Centre is consultation with the faculty. These encounters may be as short as a telephone call or stretch on over the year with regular weekly meetings. The content of the consultation similarly covers a wide range: from a request for specific information or help in redesigning an examination to guidance in the course re-design or advice on carrying out an experimental test of a new teaching method.

More than 350 hours of staff time were devoted to consultations with members of the following departments, faculties or groups:

Anthropology
Biology
CEGEP Certification Program (Education)
Chemical Engineering
Classics
Computing Centre
Counsellor Education
Dentistry
Educational Psychology
Elementary Education
English
French
German
Graduate School of Nursing
Graduate Society of McGill

Human Communications
Law (VTR Project)
Management
McLennan Library
Medicine
Montreal Children's Hospital
Occupational and Physiotherapy
Pathology
Philosophy
Political Science
Psychology
Redpath Library
Religious Studies
Social Work
Technical-Vocational Education
Special reports are often prepared by CLD during the year. These are either drawn in direct response to a request or in answer to a need perceived by the Centre. Three examples of this year's output are:

1. Designing Self-Instruction: A Selected Annotated Bibliography;

2. Teaching Methods: Taxonomy and Definitions; and

3. A Brief Look at Course Evaluation.

**Designing Self-Instruction: A Selected Annotated Bibliography**

This is the first of a series of annotated bibliographies on instructional design. It directs its attention to general books on design, overviews, outlines of a systematic approach, etc. Later bibliographies will deal with specific elements of design such as: Goals and Objectives; Task Analysis and Taxonomies; Evaluation.

**Teaching Methods: Taxonomy and Definitions**

This document is the result of a project described in detail elsewhere (page 22). It is a list of seven major categories of teaching methods (e.g., "lecture," "field work") and 35 subtypes along with definitions of each category and subtype. Although designed primarily for use by the universities and the provincial government, xeroxed copies of the taxonomy can be obtained from the Centre.

**A Brief Look at Course Evaluation**

This short paper was prepared for a Faculty of Education workshop on course evaluation and revised for the Senate Committee on Educational Development. It reviews recent McGill activities in course evaluation and summarizes what is happening elsewhere in Canada.
CLD produced six issues of its newsletter Learning and Development during 1973-74. This newsletter is distributed free to more than 1500 faculty members, administrators and students at McGill. We also have about 900 off-campus paid subscribers.

As in previous years we attempted to bring a variety of topics to the attention of our readers; the list of titles demonstrates this. In addition to the lead article, each newsletter contained short items describing specific innovations taking place on and off-campus.

Learning and Development, Vol. 5

No. 1 Encouraging Effective Study Habits. G. H. Roid

No. 2 P.S.I. An Annotated Bibliography on an Innovative Teaching Method. Anne Dychtenberg & George L. Geis

No. 3 Peer Teaching. Shirleen Schermerhorn

No. 4 Imparting Teaching Skills to Graduate Students. C. E. Pascal

No. 5 An Outline of Methods of Grading Student Performance. C. E. Pascal & G. L. Geis

No. 6 Pedagogical Services: CLD's Friends and Relatives. B. M. Shore & Janet G. Donald

CLD maintains a library of several dozen newsletters from other universities with which it has exchange agreements.
Members of the CLD staff continued to conduct workshops and seminars for McGill faculty. This year we emphasized seminars tailored to the specific requests of departments.

### 1973-74 Workshops and Seminars

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<td>Continuing Education</td>
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<td>McGill Libraries</td>
<td>Writing Objectives for Libraries</td>
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<tr>
<td>School of Graduate Nurses</td>
<td>Evaluation</td>
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<tr>
<td>Department of Pathology</td>
<td>Modular Instruction</td>
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</table>
CLD's small but specialized library continues to offer important services to our staff, other faculty, students and visitors. In addition to maintenance of the library, our part-time librarian engages in activities specifically designed to answer faculty requests such as bibliographic searches for faculty and staff. He also provides a media search service for authors of modularized courses, searching out audio-visual materials that may be of use to them as they develop instructional packages.
Over the past few years McGill has annually increased its commitment to improving current approaches to instruction and exploring new promising teaching methods. Concurrently, strategies for improvement and innovation have become clarified and more systematic; methods of implementation are increasingly better organized and coordinated; attention is being paid to long range plans as well as short term projects.

Diverse strands have slowly joined together. Coordinated by the Office of Educational Development (OED), a variety of needs and problems come in contact with resources designed to alleviate them.

We are pleased to note how much closer OED, the Instructional Communications Centre (ICC), the Senate Standing Committee on Educational Development and CLD have grown. Last year saw numerous projects jointly worked out by OED and CLD. ICC and CLD are currently cooperating on a specific project designed to offer a new service to our faculty. The Committee on Educational Development (of which the CLD director is a member) and the Centre have joined to study (1) several alternatives to traditional university structures (e.g., the Open University, Campus without Walls) and (2) alternative grading systems (e.g., pass/fail.)

Planning was begun this year on methods by which CLD could increase its assistance to faculty members interested in securing funds for innovative projects. (CLD's director is a member of the Grants Subcommittee of the Committee of Educational Development.) The Centre plans to offer earlier and more detailed aid in writing grant proposals.

Many other examples could be cited of cooperation among these various units but these are sufficient to illustrate that the year produced closer ties among them, and a clearer focus of the picture of educational development at McGill.
SPECIAL PROJECTS

Formative Evaluation of Modularized Courses

In 1973-74 the Centre for Learning and Development, in conjunction with the Office of Educational Development, continued its efforts in evaluating several of McGill's newly developed modular courses. During the Fall and Spring terms nine Modular Instruction courses underwent two types of evaluation. The first provided feedback to the author on management and technical problems connected with the physical administration of the course. The second gathered data on the effectiveness of the course in achieving some of the author's teaching goals.

The evaluation project, for which funds were provided by the Office of Educational Development, was both a formative and cooperative one.

Formative evaluation is aimed at correcting and improving the ongoing instructional process. Its purpose is one of development rather than selection or rating.

Cooperative evaluation means that a team works together to plan the design and goals of the evaluation and to interpret and utilize the data obtained. The team in this case was a member of CLD, the Modular Instruction author, a coordinator (based at CLD), and a student observer-evaluator appointed with the approval of the Modular Instruction author. The team model of cooperative evaluation was first implemented in CLD's evaluation of Modular Instruction last year. The team model was selected as a means of optimizing the advantages of both internal and external evaluation schemes. It was assumed that student observer-evaluators, by working continuously with the program staff and students, would be in a good position to gain insight into course problems and issues while their contact with CLD staff would encourage appropriate objectivity.

Testing the model. While the system seemed to work well last year, we were interested this year in obtaining systematic feedback on the efficacy of the model. An evaluation of the model was conducted which assessed the professor's satisfaction with the procedures and results of the evaluation, and probed the evaluators on any difficulties they encountered in their mediating roles.
Implementation of suggested revisions. Since the aim of the project was instructional development and improvement we felt that the process should not stop with the final evaluation report. CLD offered further individual and practical assistance to Modular Instruction authors in the implementation of revisions suggested by the evaluation.

A research assistant was attached to the project this year. Her job was to produce one-page summary handouts on evaluation techniques for both evaluators and professors, and to search for material which would aid evaluators with any special problems they encountered. The research assistant also compiled a questionnaire item bank from which evaluators could choose appropriate items to construct their individually tailored course questionnaires.

A final report on each project was provided to each author at the conclusion of the project. While these evaluations remain the property of the authors, a report of the project ("Modular Instruction Evaluation 1973-74") is available from CLD.

Courses involved in formative evaluation, 1973-74:

- Greek Civilization, Classics 200
- General Entomology 330A
- Social Services in Canada, Social Work 352A, 352B
- Organic/Inorganic Laboratory, Chemistry 392B
- Introduction to Language Study, Linguistics 200, 201, English 233, 234, 238
- Methods of Biblical Criticism, Religious Studies 303, 310
- Communications, Literature and Society, English 202A, 202B
- Biophysical Aspects of Cell and Molecular Biology, Biology 201
- Foreign Policy in the Third World, Political Science 247B
In conjunction with the evaluation of modular instruction, CLD undertook the production of an evaluation questionnaire item bank. The purpose of the bank was to provide evaluation teams with a source of readily obtainable pre-constructed test items which could be used to construct a questionnaire to suit the needs of the individual course evaluation. The bank contains rating scales and possible formats to be used, in addition to sets of items in the areas of Objectives, Class Interaction, Content, the Professor, Course Organization, Grading, Facilities, and Satisfaction. Once the evaluator has determined the factors on which he needs to obtain information, the bank provides an open file of suggested items. Assistance is available to guide him in the selection of items and the mechanics of producing and using a questionnaire.
Index to Pedagogical Services in Canadian Universities and Colleges

Work on an Index to Pedagogical Services in Canadian Universities and Colleges began in the Fall of 1973. Approximately 150 questionnaires were sent to the senior academic officers of every Canadian university and college, as listed in the 1973 directory published by the Association of Universities and Colleges of Canada. These officers were asked to indicate whether they had a service or individual appointed to carry out such functions as staff development, workshops on teaching methods and consultations on educational innovations. Of the 150 institutions surveyed, 105 replied. On the basis of this information and information obtained from other sources, the first "Index to Pedagogical Services in Canadian Universities and Colleges" was compiled.

This Index is the first of a series of documents to be produced by the Centre for Learning and Development on the growth of centres and offices catering to the improvement of learning and teaching in higher education. Its aim is to open channels of communication among the people involved in pedagogical services in Canada. We hope that this will also be useful to those institutions that are now considering the establishment of centres.

The Index has been mailed to all those listed in it, i.e., those replying that they had a service unit, individual or committee; those replying that they didn't maintain such a service; and those that did not reply at all. A new questionnaire was sent with each copy of the index. Those institutions which had indicated that they maintained a service unit or individual were asked to supply additional information. Those which had no such service were asked if they intended to establish one. All recipients of the Index were asked to comment on the Index and to indicate if they wished to remain on our mailing list. (At the time of this writing we have received many replies, and on the whole the response has been favorable, even enthusiastic.)

We are presently in the process of compiling the additional information we have received and writing an annotated version of the original Index.
The documents to follow will be (1) the annotated version of the index, incorporating the information from the follow-up questionnaire, (2) a descriptive summary of the development of these centres since 1969, and (3) directories to similar major centres outside Canada. It is also hoped, in about a year or so, to organize an occasion for representatives from Canadian pedagogical services to meet together.
Seminar for Teaching Assistants

In late 1972, the Graduate Faculty Council established a committee to examine the "imparting of teaching skills to graduate students" at McGill. In January of 1973, this committee, chaired by Professor Valerie Pasztor, produced a report which recommended the following proposals:

1. The Graduate Faculty should endorse the principle that the acquisition of teaching skills is an important (but optional) part of any Master's or Doctoral program.
2. Departments should examine their present graduate programs to maximize the opportunities given graduate students to become better informed and proficient educators.
3. Each Department which prepares students for academic positions is urged to make available to interested graduate students a comprehensive program of activities specifically designed to enable them to improve their teaching abilities. These programs would include seminars on the problems and techniques in teaching the subject matter of that area, and would also provide opportunity for the graduate student to gain experience in all aspects of course design, delivery and evaluation. Such a program should be given a graduate course number and satisfactory performance should be indicated on the student's transcript.
4. Full information regarding these programs should be included in the Graduate Calendar.

These proposals have been approved by the Graduate Faculty.

CLD was involved in this matter since its inception having representation on the Pasztor Committee. After the proposals were formally approved, the Centre, in addition to aiding others in setting up within-department activities, offered a seminar on teaching and learning for interested graduate students from any departments. This "course" was intended to be a "resource seminar" on topics related to teaching college and university students.

CLD has often suggested to faculty members that the first step in course design is to establish specific needs. In this case, we followed our own advice. The content of such an experience has been determined by suggestions provided by graduate students and faculty representatives, who attended planning sessions and responded to a questionnaire.
The topics included in the course were:
- Student Motivation
- Seminar and Discussion Group Skills
- Lecturing Skills
- Evaluation: grading, designing tests, evaluation of instructional methods
- Instructional Design
- Audio-visual Teaching.

As part of their experience in the course, students working in small groups, each with a group leader from the CLD staff, generated original instructional material and were responsible for planning and conducting a seminar for the entire group.

Eighteen students completed the first course. They represented ten departments (Chemical Engineering, Educational Psychology, Entomology, Physiology, Management, Mechanical Engineering, Biochemistry, Physical and Occupational Therapy, Anthropology and Biology.)

CLD is planning to develop a "Drop-In" resource to be available to graduate students as well as faculty members. It will include both self-instructional learning packages on topics related to teaching and learning and a process for arranging experiential activities as well (e.g., giving a seminar on how to run seminars). CLD has already received some seed money for this project through the Office of Educational Development and by next Fall "experiences" or "packages" will be available on such topics as Student Motivation, Seminars, Lecturing, and Evaluation.
Teaching Taxonomy

In early January, CLD undertook the preparation of a taxonomy of all teaching methods in undergraduate and graduate study in conjunction with the Office of Research for Planning and Development (ORPAD) at McGill. A preliminary list of teaching methods was drawn up and a set of descriptors was produced for each teaching method. In a series of pilot studies 29 representatives from various disciplines at McGill and at other universities in the province were asked (1) to define the key descriptors in the teaching method list, (2) to name or classify the teaching method, given the sets of descriptors, and (3) to test the applicability of the key descriptors in the revised version of the taxonomy. With the results from these studies a taxonomy was developed for the use of professors in outlining the methods which they used to teach in their discipline. Over thirty professors and department representatives tested the taxonomy in applying it to describe courses in their disciplines. The results of this investigation led to the production of a final revised edition. This version was translated into French. The taxonomy has undergone further tests in general use throughout the province.

The Office of Research for Planning and Development has submitted the information derived from this study to the Ministry of Education (Québec). The taxonomy has been incorporated into a teaching methods distribution form which is being used to gather data from campuses throughout Quebec. These data, in turn, will be utilized in a new budget formula in order to provide what the government hopes will be a more rational distribution of funding for higher education.
Faculty of Law Project

In the Summer of 1973, Dean Durnford of the Faculty of Law contacted CLD with a request for some advice and help for those faculty members seeking to improve their classroom teaching methods. We had previously been in close touch with the University of Massachusetts Clinic to Improve University Teaching. Over the past few years the Clinic has been developing a technique for videotaping the teacher in his classroom and reviewing the tape under the guidance and the advice of a specially trained "diagnostician."

We proposed to Dean Durnford and to the Office of Educational Development that a diagnostician from the Clinic be brought to McGill for a short period of time (1) to carry out the specific tasks Dean Durnford had in mind and (2) to demonstrate to us the techniques the Clinic had evolved. The Office of Educational Development agreed to supply funds for the project and Dr. Michael Melnik of the Clinic agreed to release a diagnostician for an extended visit here.

Luckily the plans resulted in the arrival of Michael Jackson, a graduate student at the University of Massachusetts. He proved to be an excellent choice, acting not only as a consultant to the Law Faculty for the month of October but also as a resource person to CLD while he was in residence here.

He had daily consultations with members of the Law Faculty, observed their classes, discussed their teaching problems as they perceived them and reviewed videotapes of some of their classes.

Five members of the Faculty used Mr. Jackson's services and the reaction of the staff was positive, indeed. The whole experience was exciting not only because of the contributions Mr. Jackson made but also because of the initiative exhibited by the Law School and the willingness of its faculty members to engage in extensive self-examination aimed at improving their teaching.

Unfortunately we were not able to carry out a follow-up week planned for Spring 1974 during which we would have evaluated the effectiveness of Mr. Jackson's intervention and consultation.
We plan to repeat this kind of project during 1974-75 drawing heavily upon the experiences and skills of Dr. Shulman who is in the process of developing a similar method of videotaping and consulting. We also plan to maintain close contact with the Clinic at the University of Massachusetts and perhaps arrange another exchange with them.
IV. RESEARCH

"To conduct research relevant to learning and development"
Research

The Direction Générale de l'Enseignement Supérieur (DGES) of the Government of Quebec renewed its grant to CLD in the amount of $23,000. This grant under the heading of the "Individualization of Instruction in Higher Education" supports a number of projects and activities.

In past years the research has concentrated on four major aspects of individualized instruction: sequencing and self-management of instruction, feedback, instructional options, and dyadic learning. Current studies can be grouped under the following headings:

1. **Individualizing Instruction and Teacher Role:** The purpose of the study is to examine the data base or cues teachers utilize in making decisions about students (e.g., recommending remedial work, suggesting enrichment materials.) Data from elementary and high schools have been collected. A preliminary report based on this data has been completed. The data, mostly transcriptions of programmed interviews, are very rich and offer new insights into the ability of teachers to deal with students on an individual basis. This study will be extended to the university level, and comparisons will be made of teachers' decision-making on individualizing instruction at different levels.

2. **Methodologies for Individualizing Instruction:** Much has been completed in this area. The review of the literature on peer teaching is complete and has been submitted for publication. The Learning Cell study is complete. This resulted in a thesis, two papers, a publication submitted and a final report. The Learning Cell has remained as a continuing innovation at the university and outside, and at different levels. The individualized, self-paced course on the in-service training of teaching assistants has begun on an experimental basis (see: Seminar for Teaching Assistants.) CLD is now concentrating on the development of instructional materials and general course design and implementation. The research on self-study procedures has also been completed, as well as a paper and a monograph-report. During the coming year CLD intends to implement the self-paced individualized course based on the principles investigated.
3. **Individual Variables and Teaching Methods:** Investigation of this subject has been in two forms. First, a literature search of cognitive structure including research on cognitive style, individual learning methods and organizing principles as well as general principles of cognitive organization. Second, preliminary interviews with curriculum and instruction experts were held and a working questionnaire for the purposes of data collection has been prepared. In the area of student learning variables, CLD is evaluating a variety of solutions for problems in studying and test making and is obtaining information about the efficacy of each method for each problem.

4. **Individual Differences in Requesting and Using Information:** CLD has produced a number of bibliographies on student choice and individualized instruction, e.g., modular instruction, contingency management, and personalized systems of instruction (PSI). Research has centred around feedback, which naturally leads to placing the student more centrally in the instructional episode. The data collected from a number of in-depth interviews with a variety of students have been analyzed and a report prepared.

**Additional Research Grants during 1973-74**

Dr. Pascal continued to administer a grant from a private foundation for the Parent Involvement Project at the Montreal Children's Hospital.

The project is a program of research and development being conducted in conjunction with the Day Treatment Centre of the Montreal Children's Hospital. The main thrust of the project is to train parents of children with emotional, behavioral, and educational problems to teach and guide their own children.

Dr. Shore, together with Dr. Ronald H. Tali (Educational Administration) and Professor Gillian Rejskind (Educational Psychology and Sociology) received a series of grants for evaluation studies concerning school learning and organization. The awards were made through the Protestant School Board of Greater Montreal by the Elementary and Secondary Education Branch of the Quebec Department of Education.
The major part of the program consisted of the development and validation of measures of openness in teaching-learning interactions. This part of the study has received extended funding from the Higher Education Branch for 1974-75, and the project team has expanded to include Professor Robert Jones (Educational Media) and the Montreal Catholic School Commission.
V. RESEARCH ACTIVITIES

"To maintain the Centre's professional status and to continue the scholarly activities of its members"
Conference Participation

Canadian Psychological Association, Victoria, June 1973. Mr. Martynas Ycas and Mr. David Zussman (graduate students at CLD) presented papers based on their doctoral and masters research on convergent and divergent thinking. Drs. Donald and Shore also attended.


Congress on Methodology of Research in Higher Education of the European Association for Research and Development in Higher Education, Rotterdam, December 1973. Dr. Goldschmied presented a paper by himself and Dr. Shore on their research on the learning cell.

Conference on the Open University, Ottawa, March 1974. Dr. Donald attended.


Banff International Conference on Behaviour Modification, Banff, April 1974. Dr. Pascal presented a paper on his research on parent training.

National Society for Performance and Instruction, Miami, April 1974. Drs. Cartwright, Donald, Geis, Pascal, Shore, Shulman, and Mr. Ycas participated in a Symposium entitled "Planned Change in Higher Education," organized by Dr. Shore.

Kansas State University Conference on Faculty Evaluation and Development, Manhattan, Kansas, April-May 1974. Dr. Nadeau attended.

French-Canadian Association for the Advancement of Science, Quebec City, May 1974. Dr. Nadeau presented two papers.
Invited Addresses

In addition to participation and attendance at formal conferences, members of CLD were invited to deliver talks at:

Council for Exceptional Children of Montreal
Dalhousie University
Dawson College
Hofstra University
Loyola of Montreal
Sir George Williams University
University of Massachusetts
Vanier College
Members of the CLD staff participate actively in numerous professional organizations in Psychology and Education.

Dr. Janet G. Donald

Member: Canadian Psychological Association (CPA), American Educational Research Association (AERA), National Society for Performance and Instruction (NSPI), Canadian Society for the Study of Higher Education/Canadian Educational Researchers Association (CSSE/CERA)

Dr. George L. Geis

Past President, Member of the Executive Board and Director of Publications: NSPI

Member: CPA, AERA

Dr. Charles E. Pascal

Member: AERA, NSPI, CSSE, Corporation of Psychologists of the Province of Quebec, Phi Delta Kappa, Council for Exceptional Children

Dr. Bruce M. Shore

Member: AERA, CPA, CSSE/CERA, McGill Association of University Teachers, NSPI, Phi Delta Kappa.

Foreign Contact - Canada: Society for Research into Higher Education (SRHE), London
Publications and Papers

CLD has produced many papers this year, covering a wide range of topics. Several of these papers were presented at the various conferences and meetings which the staff attended.


Pascal, C. E. Behaviourism as cocktail party conversation. *NSPI Newsletter*, 1974, 13(4), 1, 4-5.


Shore, B. M. A commentary on the commentary. Invited address on the evaluation of university teaching to the Dalhousie Faculty Association, Dalhousie University, Halifax, November 1973.


Shore, B. M. & Donald, J. G. Index to pedagogical services in Canadian universities and colleges. Centre for Learning and Development, McGill University, Montreal, 1974.


Shore, B. M., Organizer. Planned change in higher education: Putting it all together. Symposium presented at the Annual Meeting of the National Society for Performance and Instruction, Miami, April 1974.


Shore, B. M. The state of course evaluation at McGill University. Centre for Learning and Development, McGill University, Montreal, 1974.

Visitors

Each year CLD hosts many visitors from other campuses and other countries. This year was no exception. A complete record of visitors would be too lengthy for inclusion here. A representative sample includes visitors from:

Algonquin College, Ottawa
Carleton University, Ottawa
Centre for Continuing Education, University of British Columbia, Vancouver
Eastern Mennonite College, Harrisonburg, Virginia
Oklahoma College of Liberal Arts, Chickasha, Oklahoma
St. Cloud State College, St. Cloud, Minnesota
St. Francis Xavier University, Sydney, Australia
St. Lawrence College, Kingston, Ontario
Technion Centre for Improvement of Teaching, Haifa, Israel
University of Manitoba, Winnipeg
University of Massachusetts, Amherst, Massachusetts
University of Melbourne, Australia
University of Papua, New Guinea
Worcester Polytechnic Institute, Worcester, Massachusetts
York University, Toronto

In addition we have weekly visitors from Montreal and elsewhere in Quebec (see also the section on Services pédagogiques).

We invited a special visitor, James Johnston, to join us for a few days in early summer. Professor Johnston is the organizer of an annual conference, Behavioral Research and Technology in Higher Education at Georgia State University, Atlanta, and his visit provided the occasion for an interesting exchange not only with CLD and Instructional Communications Centre staff but also with a number of members of various faculties at McGill.
VI. ACADEMIC ACTIVITIES

"To become involved with the teaching process at all levels and to function in other ways as university academics"
Teaching by CLD Staff

CLD staff members are involved in a wide range of teaching activities. In addition to such activities as consulting, workshops, and information dissemination in the newsletter, they were responsible for these regular courses, seminars, and colloquia.

Courses taught:

1. Educational Psychology 414-431B (General Methods in Special Education)
2. Educational Psychology 414-446B (Special Topics in Special Education)
3. Educational Psychology 414-492A (Psychology and Instructional Design)
4. Educational Psychology 414-602D (The Uses of Statistics in Educational Procedures)
5. Educational Psychology 414-603D (Reading Course)
6. College Level Programs 449-581-XY (Approaches to Collegial Learning and Teaching)
7. Educational Psychology 414-654B (Applied Behavioral Analysis)
8. Educational Psychology 414-646C (Diagnosis and Assessment of Learning Problems)

Graduate Students:

CLD staff members supervised the work of 13 graduate students from five departments in the University. In addition, we have read and evaluated comprehensive examinations in Psychology and Educational Psychology, and served on advisory committees for several other students.

We also had doctoral students directly attached to the Centre during 1973-74. They have been supported through our research grants, a Canada Council Doctoral Fellowship, a scholarship from the Department of Education, Quebec, and departmental assistantships, and have available a unique opportunity on this campus to participate in a wide variety of activities involving the application of theory to educational practice.

Seminars, Colloquia, and Workshops (on and off-campus):

1. Thesis Preparation. Part of 414-621D - a series of seminars and presentations on research methodology and research in progress in Educational Psychology.


6. "Evaluation by Objectives" at Centre for Continuing Education in cooperation with the Department of Educational Psychology and Sociology.

**Joint PhD Program:**

During 1973-74, CLD and the Department of Educational Psychology and Sociology prepared a series of draft proposals for a joint PhD program in Educational Psychology. The proposal includes three specializations: (1) Instructional Development, (2) Special Education, and (3) School Psychology. The Instructional Development option would be centred primarily at CLD. The specific aims of the Instructional Development program are to advance knowledge and practice in the conduct of staff development programs, consulting on instructional problems, initiating, developing, and evaluating instructional programs, and methodological study of the conduct of research on instructional development. The emphasis is on university and college levels. Particular attention will be devoted to the work of formal instructional development services (such as CLD) where it is expected most graduates will likely be employed. All three options would be served by advanced study of developmental psychology, individual differences, human learning, measurement and evaluation, and statistics and research. All three would include research, apprenticeship, and formal course work.

The program is expected to be small - about eight students - and to normally require three years of full-time study. While such a new program can require up to two years to complete all the stages of formal approval from the University and the Ministry, ad hoc provisions of the Faculty of Graduate Studies and Research make it possible for qualified students to be considered at any time. Enquiries should be addressed to the Director of CLD regarding the program in Instructional Development.
Committees

CLD members serve on a wide range of committees on campus and off, ranging from departmental to provincial and federal levels.

Dr. Janet G. Donald

Member:  
- Faculty of Education CEGEP Advisory Committee  
- Comité interuniversitaire des services pédagogiques  
- Sub-Committee on the Campus Free College (Senate Academic Policy Committee)

Dr. George L. Geis

Chairman:  
- Sub-Committee on Information and Retrieval Systems (Senate Committee on Educational Development)

Member:  
- Committee on Promotion and Tenure in Service Centres  
- Senate Standing Committee on Educational Development  
- Grants Sub-Committee (Senate Committee on Educational Development)  
- Senate Committee on Continuing Education  
- AUCC Learning Effectiveness Committee

Dr. Charles E. Pascal

Chairman:  
- Education Committee, Mackay Centre for Deaf and Crippled Children

Member:  
- McGill Community Family Centre ("Day Care")  
- Communications Program Steering Committee, Department of English  
- Senate Committee on Instructional Communication  
- Board of Directors, Society for Emotionally Disturbed Children  
- Pass-Fail Crading Sub-Committee (Senate Committee on Educational Development)  
- Principal's Advisory Committee for the Selection of the Dean of Education  
- Communications Program Advisory Committee, Department of English
Advisor: - Day Treatment Centre, Montreal Children's Hospital  
  - Mackay Centre for Deaf and Crippled Children  
  - Saidye Bronfman Centre - Continuing Education

Dr. Bruce M. Shore  

Chairman: - Teaching Effectiveness Sub-Committee  
  (Committee on Internal Relations), Canadian Association of University Teachers

Member: - Program Committee, Phi Delta Kappa Montreal - Quebec chapter  
  - Ad Hoc Committee to Report to the Dean, Faculty of Graduate Studies and Research, on the Roy-Turmel Report concerning Professional Doctorates  
  - Comité interuniversitaire des services pédagogiques  
  - Faculty of Education Committee to Prepare a Comprehensive Response to the Planning Commission Report to Senate on the Faculty of Education  
  - Faculty of Education Graduate Studies Committee  
  - Faculty of Education Program Evaluation Sub-Committee (Academic Policy Committee)
VII. SOME FINAL OBSERVATIONS
CLD has always tried to look outward as well as toward its own campus constituency. It does so for numerous reasons which include, for example, the benefit to our own campus of maintaining open channels of information with a variety of other campuses. In the past we have been successful in disseminating information about McGill's (and CLD's) innovative activities in higher education. The Educational Development group (Office of Educational Development, Instructional Communications Centre and CLD), its personnel and its products (e.g., publications) are often cited elsewhere as exemplars of innovation at the university level. For example, the Modular Instruction projects at McGill, the development of which CLD has constantly contributed to, are known throughout Canada and the U.S.A.

The Centre has kept in close contact with other instructional improvement agencies elsewhere. For example, once or twice a year representatives of a dozen or so Centres meet informally (usually during the Annual Meeting of the American Educational Research Association). Within the Province we are active participants in a group of pedagogical services. 

Comité interuniversitaire des services pédagogiques:

In May 1973 representatives from the Pedagogical Services of Quebec Universities and the Universities of Ottawa and Moncton met to consider the possibility of working together to provide greater service to the universities. An information exchange of projects underway, services provided, and questions of pedagogy in the university was begun. Workshops on university teaching, evaluation, and the organization of pedagogical services have been organized and are available through members of the Committee. The Committee has agreed to act as consultant on teaching and learning to the Conference of Rectors and Principals of the Universities of Quebec (CRPUQ) and in return has obtained the coordinating services of CRPUQ's executive offices. Members of the Committee are:

Université d'Ottawa
Jean-Marc Beauchesne
Adjoint au Vice-recteur
Enseignement et recherche

Université de Moncton
Léandre Bourque
Adjoint au Vice-recteur
Enseignement
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<th>Université de Montréal</th>
<th>Jean-Marc Cyr</th>
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<td>Service de pédagogie</td>
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<td>Responsable de la mesure et de l'évaluation</td>
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<td>Philippe Duchastel</td>
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<td>Université de Sherbrooke</td>
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<td>Université du Québec</td>
<td>Jacques Lapointe</td>
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<td>à Rimouski (UQAR)</td>
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<td>Université Laval</td>
<td>Mariel Leclerc</td>
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<td>Henri Saint-Pierre</td>
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Quebec Educational Community:

More specific contributions by CLD to the Quebec educational community were made in 1973-74 through our contacts with the CEGEP's and their faculties.

CLD members were involved in a number of consulting activities with the Quebec CEGEP's (Collège d'enseignement générale et professionelle). Dr. Donald served as a member of the McGill CEGEP Advisory Committee and planned and coordinated the course "Approaches to Collegial Learning and Teaching" for college teachers, as well as consulting on the Vanier Goals Survey and consulting on the evaluation of the College Program. All members of CLD have been involved in providing workshops at the colleges and in consulting in pedagogical matters with them.

Further cooperation with French-speaking campuses is being pursued. For example, we have set up an exchange arrangement with our sister Centre at Laval; it involves the Laval staff translating certain CLD newsletters, distributing the French version on its campus and permitting us to use the translation for distribution elsewhere. (On a more personal note, we can record that during 1973-74 about half of our anglophone staff enrolled in the McGill staff French courses and intend to pursue these studies.)

Relevance

The cry for "relevance" is almost the theme song for the 1960's and '70's. We urge faculty members to consider the matter in their own teaching. It is only proper that we follow our own advice. It is not always easy to get
in touch with (or keep in touch with) the variety of people who might be interested in using CLD as a resource. But we think progress has been made over the years toward bringing the Centre closer to campus needs and interests.

This year has seen close cooperation with the Senate Standing Committee on Educational Development and with the Office of Educational Development. Increasingly CLD is seen as a resource to the Senate Committee (recently, for example, CLD has acted as a source of personnel and information for EDC's sub-committee on the Open University.) The Office of Educational Development has helped to secure funds for projects of joint interest (e.g., the evaluation of modular instruction courses.)

In April 1974, in order to obtain feedback on the needs and preferences of the McGill faculty for services in different areas of pedagogy, a survey requesting professors to rate the importance they attached to educational topics and services was undertaken. Results showed that certain areas (course design and evaluation, instructional methods, student motivation, and obtaining and using student feedback) were considered of greater than average importance to McGill professors. The most important services were those of supplying resources, small group discussions on selected topics, individual consultations, and the evaluation of teaching. In one response to these requests, CLD is planning a series of small group discussions on topics considered of value to professors beginning in the Fall of 1974.

Personnel

In 1973-74, CLD laid the groundwork for an important group of joint appointments.

Already mentioned in Section II were the appointments of Gilles Nadeau, Lawrence Shulman, and Glenn Cartwright. Special funds provided by the University made possible the extended visit of Professor Nadeau. Unlike traditional sabbatical visits, this one involves service work at the host site. Professor Nadeau will be applying his considerable expertise in matters of evaluation to problems brought to him by members of the McGill Faculty while he is in residence with us. He and CLD see rich rewards both in terms of growth for him and service to us in this arrangement.
Professor Shulman engaged in an informal "internship" at the Centre before taking up a joint appointment with us. For several years he has voluntarily acted as a resource person to whom we have referred other faculty members. He has a continuing interest in effective procedures in conducting classes. He has analyzed the group discussion method (which he sees as an illustrative example of problems and principles in any teaching method) and has offered workshops and articles on the topic. His research and faculty consultations centre around an analysis of teacher-student interactions at the micro-level. He is particularly interested in developing techniques which allow an instructor to view (by means of videotape) his own classroom performance and, perhaps with guidance, to improve the aspects of his teaching that he sees as needing buttressing.

Mention should be made of another pending joint appointment. In the Winter of 1973, the chairman of the Chemistry Department approached CLD with an exciting question: would the Centre be interested in sponsoring jointly with Chemistry a cross-appointed chemist who was also a specialist in science education. We rushed at the opportunity to do so. Here was a chance to have an innovative "agent" with full status as a chemist, contributing to CLD and expediting CLD's services to the science departments, a chance to have a member of a large department in residence at CLD. A search took place along with numerous meetings (at one of which the Vice-Principal (Academic) and the Dean of the Faculty of Science, importantly, gave the proposal their blessings and support.) Hopefully in the next annual report we will be able to announce the appointment of someone to this new position.

Another new appointment was made possible through the creation of a new position: Publications Secretary. CLD was permitted to set up this job when it demonstrated how central publications are to its dissemination efforts on and off-campus. The CLD newsletters are distributed to more than 2500 people six times a year. Dozens of monographs, reports, annotated bibliographies, etc., are available through CLD and are ordered by faculty at McGill (free of charge) and elsewhere (at cost). It became clear in 1973-74 that someone had to take over the production, storage and distribution of these materials. The Publications Secretary will be Linda Fitzhugh who begins her new job on June 1, 1974.
Along with new appointments we should note changes in status of old ones. In early 1974, Bruce Shore (effective June 1, 1974) and Charles Pascal (effective January 1, 1974) both received promotions from Assistant to Associate Professor of Education.

The Frost Report

In 1973-74 the Planning Commission issued a report (locally called the "Frost" Report after the Vice-Principal who acted as the chairman of the committee which developed the document). The report concerns the Faculty of Education; it recommends major restructuring and a change in emphasis. Among the recommendations was one urging that the Office of Educational Development and CLD be moved to the Faculty of Education. There they would serve as the nucleus for a new Department of Higher Education, one of whose functions would be to serve as a resource for McGill faculty members interested in improving their instruction.

Although debates can be heard on campus about almost every recommendation in the report there is agreement about one thing: the report generated a great deal of re-examination of the goals and structures of education (and Education) at McGill. CLD was no exception. We have been discussing at length the pros and cons of having the Centre located with a faculty (and specifically with Education). The results of these discussions are still being clarified and made specific. Since the Report's recommendations are still under consideration, it would be premature to discuss them in this report.

The Faculty will be providing a Comprehensive Reply by November, including alternative recommendations where appropriate. Dr. Shore is one of the committee of three drafting that Reply during the Summer of 1974.

Evaluation

In last year's report we predicted that Evaluation would have a central role in CLD's 1973-74 program. Not surprisingly, that prediction was correct. Several relevant activities have already been mentioned earlier in this report, e.g., course evaluation, evaluation of modularized courses. Other examples might be noted since we see Evaluation as a continuing dominant theme for the Centre in '74-'75.
The Evaluation of Instruction:

"Course Evaluation" is an ambiguous term. It may mean use of a course questionnaire in an attempt to determine how effective a course (or, more often, a professor) is. In 1973-74 we expended a great deal of energy (1) preparing a course questionnaire item bank, (2) consulting with dozens of professors interested in using course questionnaires, (3) collecting literature on course questionnaires, and (4) developing "routines" which teachers can use in constructing their own questionnaires.

We plan to continue and expand all of these activities. We expect to increase dramatically the size of the item bank, to index it for easy use, to relate each item or set of items to remedial skill-building packages, and to link the bank to classroom observation activities (such as those to be carried out by Professor Shulman.)

In addition, "course evaluation" may involve other measures of effectiveness. For example, it may call for the development of achievement tests. CLD plans to expand in this area by providing increased human and library resources. For example, our collection of books, manuals and articles on test constructing has expanded considerably in 1973-74 and will continue to do so in 1974-75.

Mention should also be made of the major contribution CLD is making to an important new book, due out in early 1975. Professor C. Knapper (of the University of Regina) is senior editor, together with Professors Geis, Pascal, and Shore, of CLD, of a volume on the evaluation of university and college instruction, entitled Scaling the Ivory Tower: Appraising University and College Teaching. They and Professors Donald and Nadeau are also contributing. This book should be of great use on our own campus as well as elsewhere.

Modular Instruction Project Evaluation:

In the Spring of 1974, CLD undertook a cooperative project with the Office of Educational Development. Its purpose is to index and review all of the individual projects in the area of instructional development, proposed and carried out by the faculty members and supported by funds from the Office of Educational Development. (This is to contrasted with the continuing evaluation of each Modular Instruction course. The present project will be looking
at the overall effectiveness of the strategy and the criteria used in selecting and supporting innovative activities.) This "taking stock" is designed to supply valuable information to the Office of Educational Development, the Instructional Communications Centre, and the Senate Committee on Educational Development enabling these units to improve decision making, criteria setting, and planning in the area of instructional innovation at McGill.

**Gilles Nadeau:**

As we discussed above Professor Nadeau is visiting CLD for the year 1974-75. His interest and expertise in matters of evaluation made his appointment especially attractive to us. We expect that Professor Nadeau will act as an important resource person for those faculty members interested in how they might better evaluate their instruction and their students. Thus he will advise both in evaluating techniques involving the course questionnaire and those utilizing achievement tests. Indeed, he will help us with problems concerning any aspect of measuring the effectiveness of teaching.