

THE UNIVERSITY OF MANITOBA

A SURVEY OF THE INDEPENDENT LEARNING
PRACTISED AND PLANNED IN NON-UNIVERSITY
POST-SECONDARY INSTITUTIONS IN CANADA

BY

CYRIL H. HOWARD

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the University of Manitoba in partial fulfillment of the requirements
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ABSTRACT

The objective of this study was to conduct a survey of the independent learning practised and planned in non-university post-secondary institutions in Canada. The data collected were to be compiled in a manual which would become a resource document and form a communication link among the institutions.

The study was undertaken because of the expressed desire of many educators to meet individual student's needs. Presently there are few known sources of information on current practises and planned activities on independent learning in Canada.

The data for the manual was solicited by the survey questionnaire technique. The questionnaire was mailed to one hundred sixty-five non-university post-secondary institutions in Canada. The survey instrument collected information related to:

1. demographic characteristics of the institutions;
2. current independent learning along with identifiable features; and,
3. projected independent learning along with planned features.

The current independent learning was solicited to determine which activities were presently occurring. This section of the questionnaire requested methods information on all subjects and courses which were operating on a format that was related to the given independent learning definition.

As well, the study collected data related to projected activities

in independent learning over the next four years. This component of the study was undertaken to "open the door" to inter-institutional cooperation and sharing in the development of independent learning.

The data were submitted by sixty-five institutions and were tabulated into Tables I, II, and III in Appendix C. The manual lists the independent learning by subjects, courses, and institutions.

The analysis of the responses indicated that the overall return rate of the questionnaire was below the anticipated level. This was due largely to the:

1. extremely poor response rate from the largest potential source (Quebec); and,
2. because of the relatively weak response rate from one other source (Saskatchewan).

The findings indicated that the participants had a positive attitude toward the study. The respondents identified three hundred sixty-nine different subjects and courses from a broad range of academic and skill development disciplines as those being designed or planned for independent learning.

Empirical definitions, based on actual and planned practises for independent learning were gleaned from the data. The functional definitions for subjects and courses were based on the popularity of features identified in the survey instrument.

The study concludes with recommendations for:

1. modification to the study;
2. further development of the methodology; and,
3. the desirability of further studies of this type to complete and update the kinds of information solicited.

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CHAPTER I

THE PURPOSE OF THE STUDY

This study was motivated by two primary concerns that are raised when community college educators meet to discuss effective learning processes.* These are:

1. The latent questions that have been of pressing concern to many faculty and administrators in community colleges about how to meet the individual needs of students in an academic setting geared to masses of students.
2. The dearth of information about the independent learning activities in community colleges across Canada. Fragmented amounts of information have become available when educational/vocational journal articles are published. However, a comprehensive and readily accessible compilation of current and planned activities on independent learning is not available.

It is probably safe to assume that most, if not all, Canadian community colleges have provided learning opportunities by independent learning. However, the magnitude of these activities has been an unknown quantity.

*Though the terms are not synonymous in Canada, the name "community college" will be used interchangeably with "non-university post-secondary institutions" in the body of this document.

Therefore, this study undertook to produce a manual of independent learning. The identified activities are designed to meet the individual needs of students within educational institutions that have had the task of providing educational and training opportunities to a complex and diverse population.

SIGNIFICANCE OF THE STUDY

The study dealt with the many different techniques used by educators in Canadian community colleges to facilitate educational and training opportunities for adults. New delivery approaches are constantly being sought to meet effectively and efficiently the training objectives of students. This is a never ending task since the personal characteristics and expectation profile of the students varies so much that the efforts to meet the needs of some falls significantly short of the goal of meeting the individual needs of all.

The education and training of community college students is a complex problem for many reasons. The following list, although not inclusive, identifies some of the difficulties. The community colleges are working with:

1. Adults who have, in many cases, previously rejected the traditional educational system and the educational process.
2. Adults who are socially and economically disadvantaged and who are skeptical of the ability of any educational process to assist them in changing their plight.
3. Adults who have a goal in mind and are searching for the shortest practical route to achieve that goal.

4. Adults who wish to learn only what is necessary to get a "good" job.
5. Many faculty and administrators who have developed with the community college movement yet only understand the group instruction approach and resist instructional process changes designed to meet the special needs of the individual.

The gap which exists between the traditional group instruction process and the methods which would serve students on an individual basis is, in many cases, very wide. Recent years have seen demands by society for an improvement in educational performance and in the productivity of the educational system.

The notable growth of the community colleges in Canada over the past 15 years and the support provided this movement by the federal and provincial governments is ample evidence that the two senior levels of government felt some dramatic "in-roads" had to be made in the upgrading of the human resources within our country.

All forecasts estimate that the notable growth of community colleges (from an enrolment of 53,000 to 239,000 in 15 years) will continue at least until 1980.¹

Educational analysts and critics such as John Goodlad refer to the years 1957-1967 as the "education decade".² Goodlad's description of this decade was a general statement; but, it is very appropriate to the growth of the community colleges. The major growth in Canada occurred in

¹The Organization for Economic Co-operation and Development (OECD) External Examiners' Report on Educational Policy in Canada. (Toronto: Canadian Association for Adult Education and the University of Toronto Students' Administrative Council, 1976), paragraph 270.

²John I. Goodlad, Speaking on Change. (New York: Educational Resource Associates, Inc., McGraw-Hill Book Company, 1973), First tape of a 5 tape Audio Cassette Album.

the latter half of this decade in response to the desires of governments to have an adequate supply of workers in all segments of our industry and commerce.

Clearly the greatest and most expensive achievements during the last 15 years have been in the tertiary (post-secondary) sector. There are.....140 community colleges (many with satellite campuses). The practical work-oriented training courses of the community colleges are enjoying a growing popularity, especially.¹

Community college educators, with this mandate, have responded to the federal and provincial governments' desires to develop a well-trained work force from within Canada in a variety of ways. New efforts to reform educational and training programs in various fields have been and are being initiated. In fact, in many institutions extensive program development exercises are being undertaken to revamp the entire delivery approach. A great deal of time and effort is being expended in the study of such matters as discipline structuring, diagnostic testing, objective setting, module building, individualizing instruction, educational television (mediated group instruction), team teaching, peer teaching and many other modifications too numerous to mention.

Another response has been the involvement of many outside agencies in the field of education. Dr. Frank Keppel who states that "..... the business of education is too important to be left to professional educators,"² probably never suspected the degree to which economists, trade unionists, social psychologists, businessmen and industrialists

¹OECD report, op. cit., paragraph 61.

²Emil J. Haller, Strategies for Change, quote from Frank Keppel. (Toronto: Department of Education Administration, Ontario Institute for Studies in Education, 1968), p. 8.

would turn their attention to the training institutions. The contributions made to the development of practical training by supportive members of society is reflected in the degree of refinement and relevance of the courses to the field of work. This sense of direction provides a source of assurance to the individual trainee and the training institution that the offerings are current.

Some educators have responded to demands for renewal by turning their attention to the design of models for innovation, the preparation of materials and equipment to facilitate new programs and the organization of in-service programs to prepare instructors to handle these programs. New methods of training instructors, new university courses and new methods of professional development for instructors in innovative design have been some of the concepts used to improve the learning environment in community colleges.

To varying degrees innovative changes designed to accommodate the individual have been undertaken at every community college in Canada. In many instances this activity has gone unnoticed, and in other instances the activities are being duplicated in other community colleges at a high price in human resources and related research and developmental costs.

The isolation of experienced individuals from each other at the different community colleges, and of communications, is a disturbing under-utilization of our resources. Communication links must be established which will assure more efficient use of shared experiences and available resources.

This study attempted to identify the efforts of community college educators who have used non-educational agency experts and transformed staff development and program development activities into environments

which are conducive to the learning needs of the individual students. As well, in some cases, these efforts have resulted in opportunities for students to learn away from institutions and within their own time frame using correspondence courses.

STATEMENT OF THE PROBLEM

This study was undertaken because of the:

1. lack of organized and compiled data which described independent learning in Canadian community colleges;
2. desire to facilitate independent learning for the diversified community colleges population.

To overcome these two problems this study attempted to collect and record in manual form the independent learning from each community college in Canada. The collection is current because past, present and projected activities, for four years into the future, were solicited.

The information is compiled in accessible tables shown in Appendix C. The first two compilations were made under the title of "Subjects" and "Courses" and are presented in Tables I and II. In these tables the subjects and courses treated are listed alphabetically at the top. The institutions which use independent learning for the subjects and courses are listed in rows in the body of the table. The independent learning features are listed in the column headings. An indicator in the grid identifies the independent learning characteristics which are unique to the subject or course at each institution.

The contents of Tables I and II can be cross-referenced with the complete course/subject listings of each institution in Table III. When

a researcher has located a particular subject or course, the institution which practices independent learning in this area, can be identified and a reference can be made to Table III. In addition to providing relevant independent learning activity features in the body of the table, the contact person, the telephone number, the size of the student population, the operational divisions, and the mailing address of each institution are provided.

The information presented in Tables I, II, and III should provide adequate data for any researcher to follow-up on the lead provided. The information in Appendix C provides a communication link among community colleges and should result in a sharing of expertise and a reduction in duplication of effort in developing independent learning.

LIMITATIONS

1. The primary data collection vehicle in this study was a mail-response questionnaire survey. The major portion of the questionnaire was structured so that responses could be objectively compiled. More reliable results could possibly have been obtained if a team of observers and interviewers could have been provided to visit each institution.
2. All factors that would normally be limiting factors in a study involving the gathering of data by means of a mailed, structured questionnaire survey, would apply to this study.
3. Conclusive generalization based on the recorded data should not be made. Each program design that was reported to the

researcher has unique characteristics which were incorporated to meet a specific need in a specific setting. Any adaptation or implementation of a design into a new environment would probably require at least minor revisions.

DELIMITATION

1. The independent learning systems at each community college will be regarded as being equally effective.

DEFINITION OF TERMS

Independent Learning: This term is used to define any instructional delivery system which provides for the students to enter regularly a learning situation at his/her developmental level and progress until a pre-set learning criterion has been reached. In this setting the student relies on the teacher mainly as a resource person.

The term independent learning as used in this document could be replaced with other commonly used terms such as individualized instruction, individualized program, individual instruction, audio-tutorial, self-paced instruction or continuous progress.

John Goodlad's statements that "all learning is individual" and individualization "seeks to make learning as meaningful as possible"¹ assists in clarifying the intended meaning of the term independent learning as used in this study.

¹John I. Goodlad, Speaking on Individualization. (New York: Educational Resource Associated, Inc., McGraw-Hill Book Company, 1973), First tape of a 2 tape Audio Cassette Album.

Innovation: This concept is described as "any creative and risk-taking process by which new ideas, values, standards, methods or procedures are conceived, developed, introduced, and/or followed up for the purpose of meeting certain existing or possible future needs"¹; a deliberate, specific change which is thought to be more operative in accomplishing a desired objective.

Non-University Post-Secondary Institutions: This term excludes all public and private degree-granting institutions. Degree granting institutions can give academic credit for approved course content delivered at non-university post-secondary institutions. Also, non-university post-secondary institutions can give credit for approved training offered in some high schools.

Subject: That part of the learning experience which represents one of the components of a student's total planned undertaking (eg. Business Education English). Success in an approved collection of subjects would be required in order for a student to complete a course.

Course: The total academic and/or related skill learning experience which a student would normally complete in order to receive a certificate or diploma (eg. Electrical Technology). A course would subsume several subjects.

ORGANIZATION OF THE STUDY

The thesis is divided into five chapters. In addition, Appendix C consists of the manual which delineates the independent learning

¹Ivan S. Banks, The Dictionary of Administration and Supervision. (Los Angeles: Systems Research, 1971), p. 65.

activities in Canadian community colleges. Because the objective of the study was to develop this manual, Appendix C makes up a significant part of the document.

Chapter One consists of the introduction, explains the significance of the problem and gives the statement of the problem.

Chapter Two reviews the pertinent literature and research activities related to independent learning. The focus is mainly on independent learning in Canadian community colleges.

Chapter Three describes the methodology of the study. This chapter describes the procedures used in the collection and treatment of the data.

Chapter Four offers an analysis of the data that was submitted by the respondents in the institutions. As well, this chapter extracts empirical definitions of independent learning from the submitted data.

Chapter Five is the summary of the study. It considers the modifications the author would undertake if the study was duplicated. The chapter also contains conclusions derived from the analysis done during the study, on the basis of which recommendations are made.

CHAPTER II

REVIEW OF THE LITERATURE

A review of some of the written and recorded material on the status of independent learning in educational settings with particular reference to the Canadian community college movement is presented in this chapter. The objective of this review will be to explain the conditions in the community college which make independent learning a viable method of providing learning opportunities to a heterogeneous community college student population. The review relates to five main areas.

First, the development of Canadian community colleges since 1960 is outlined. In addition to outlining the Colleges' physical growth, the changes that have occurred in the community college philosophy and the expected educational role are reflected.

Second, the general characteristics of the students who make up the community college population are noted. The population characteristics must be identified and understood if a learning environment which is compatible with the students' needs and with the community college philosophy is to be provided.

Third, to match a meaningful learning process with the needs and abilities of the student population approaches which researchers have found to be appropriate are considered. Some of the arguments and concerns presented by proponents of independent learning approaches to learning are noted.

Fourth, the challenges facing faculty, administrators, and community advisors to provide learning opportunities for the given population are reviewed. In the community college setting participation in program development and delivery from this educational team is essential. The planning and output must be consistent with the students' abilities and needs, society's requirements, and with the college's philosophy.

Fifth, the case is made for a better method of sharing information about independent learning. The available sources of information on independent learning in the community colleges in Canada are identified. The limitations of each source are noted. Finally, based on the review of literature the desired criteria for the establishment of the manual are listed. The criteria delineates what information the published manual will compile in the resource document.

Canadian published literature on independent learning is quite limited. Since 1960 several of the provinces, including British Columbia, Alberta, Manitoba, and Ontario, have undertaken studies on their post-secondary educational systems. These studies, as well as published research papers on community colleges, mainly from the University of Alberta and the Ontario Institute for Studies in Education (OISE), appear to be the main Canadian contributions. However, extensive research studies have been undertaken in the community college movement in the United States, and most of the United States findings can be closely related to the Canadian scene.

The 1973 post-secondary study of education undertaken in Manitoba recognized the similarity of community colleges in the United States and Canada when it stated that:

The dominant prototype as these institutions have evolved in the United States and Canada is that of a comprehensive, post-secondary institution offering programs in both academic and vocational-technical training.¹

The community college and junior college movement in the United States has been the focus of many studies. Because of the similarity between the community colleges in the two countries, some of the United States studies which relate to student characteristics, faculty, and administrative, features and delivery systems were reviewed.

THE DEVELOPMENT OF CANADIAN COMMUNITY COLLEGES

The community colleges in Canada, as known today, were virtually non-existent until about 1960. Prior to that time most provinces had trade schools, marine schools, agricultural schools, and technical institutes. These institutions trained Canadians to be skilled tradespersons for agriculture and for some facets of industry and commerce. In general, they did not provide for learning experiences in preparatory upgrading programs, health training or post-secondary level training in the fields of business, health, social science, or technology. At that time an increasing number of work places in Canada were requiring workers with new or highly sophisticated skills. The existing educational and training institutions were not offering training which would meet this need. Consequently, many Canadian employers were relying largely on immigration to fill their technical, technological, supervisory, para-professional, and mid-management positions.

¹Manitoba Department of Colleges and Universities Affairs, Post-Secondary Education in Manitoba. (Winnipeg, n.p., (1973)), p. 39.

In order to open the doors to these jobs for Canadians, the Federal government enacted the Technical and Vocational Training Assistance Act in 1960. This act provided direct financial support to the provinces and made it possible for the provincial governments to develop human resources to fill many "new jobs" which were opening up because of the changing job scene and technological advances.

The Technical and Vocational Training Assistance Act was very specific in identifying which forms of training were to receive assistance.

"technical and vocation training" means any form of instruction, the purpose of which is to prepare a person for gainful employment in any primary or secondary industry or in any service occupation or to increase his skill or proficiency therein.....generally, any primary or secondary service occupation requiring an understanding of the principles of science or technology and the application thereof, except where such instruction is designed for university credit.¹

This act provided for generous financial assistance for the construction of many institutes of technology during the early 1960's. Shared capital construction and equipment agreements under this act were extended to 1968 by which time most of the provinces had established a network of public-non-university post-secondary institutions. Ryan quotes 1968 Statistics Canada data to illustrate the growth of Canadian community colleges in the following way:

¹Canada, Laws, Statutes, etc., Technical and Vocational Assistance Act, 1960. 9 Eliz II ch. 6, sec. 2d, Statutes of Canada, 1960, p. 37.

Community College education experienced tremendous growth during the last decade. From 1960 to 1970 the number of institutions offering post-secondary instruction outside of the universities increased from 29 to 133, enrolments grew from 9,000 to 134,000 and expenditures for colleges increased from \$16.3 million in 1960 to \$293.9 million in 1970.¹

The institutions were identified by many names, but college and community college were becoming popular components of the titles.

The descriptive name change was prompted by the evolving change in the expected role and philosophy of the public non-university post-secondary institutions. The provincial governments were no longer designating the institutions solely as training institutions for persons seeking employment or a career in agriculture, industry and commerce. They were looking to the institutions to provide the training and education needs of their people in a much larger community.

Franklyn focuses on the philosophy of equal educational opportunity for an increasing number of citizens when he states:

Practically, the colleges were designed to cope with three fundamental vocationally-oriented problems facing post-secondary education: (i) the lack of trained technicians to fill the new jobs created by technological change; (ii) the emergence of, and the need for para-professionals in the Social and Health Sciences; (iii) and probably most important, the challenge to the concept of equal educational opportunity as a result of the way a large percentage of high school graduates were unable to continue their education.²

¹Doris W. Ryan, "The Community College: Some Philosophical Issues", Clientele and Community: The Student in the Canadian Community College, ed. by Abram G. Konrad. First Yearbook of the Association of Canadian Community Colleges, (Willowdale, Ontario: Association of Canadian Community Colleges, 1974), p. 19. (ERIC document ED100460.)

²Dr. Gaston Franklyn, "Academic, Social and Value Orientations at a Community College in Ontario", Journal of the Association of Canadian Community Colleges, Vol. 1, No. 1, (Spring, 1977), p. 15.

The need to provide equal educational opportunity for all citizens within the community was a high priority challenge placed before most Canadian community colleges.

Since education in Canada is a provincial responsibility, each province developed its non-university post-secondary institutions to suit its unique needs or philosophy. Some provinces left their institutes of technology in place and added colleges or community colleges to complement. Other provinces, such as Manitoba, changed the title of their institutes of technology to community colleges. In Alberta, the government would not permit the use of the term "junior" and encouraged "community" in college titles. Colleges of Applied Arts and Technology in Ontario were not allowed to use "community" when the names of the individual colleges were being considered. Whatever the name, the non-university post-secondary institutions were given the mandate to serve the needs of the individuals in the community and to develop skilled workers for industry, business, commerce, and the service industries.

From the point of view of programming, "community" cannot be interpreted to mean that learning opportunities have been designed to meet local needs alone. Campbell supports this point when he states that:

To a degree not formerly anticipated, Ontario colleges have developed distinctive programs attractive to people outside a local vicinity. Indeed, many colleges across Canada offer instruction in subjects where no local employment possibilities exist. In Saskatchewan it is estimated that one out of every three technical institute graduates every year leaves the province in search of employment. In sum, all colleges have a community dimension, however interpreted. Some institutions may specialize in programs of local interest. For others, the community may be the province or beyond.¹

¹Gordon Campbell, "Community Colleges in Canada", Clientele and Community: The Student in the Canadian Community College, ed. by Abram G. Konrad. First Yearbook of the Association of Canadian Community Colleges, (Willowdale, Ontario, Association of Canadian Community Colleges, 1974), p. 4. (ERIC document ED100460.)

Obviously, Saskatchewan and Ontario are respecting the needs and desires of their people along with meeting the training needs of their provinces.

Since 1973 both Saskatchewan and British Columbia have developed regional community colleges. These colleges have made community college education accessible to most people in each province. The educational resources have been taken to the people.

Faris states that Saskatchewan community colleges were:

Conceived as brokers of educational services, the colleges perform a two-fold co-ordinating function. They bring to the region the formal educational services of established provincial resources... the universities, technical institutes and various government departments, institutions and agencies. Second, they co-ordinate informal adult learning at the community level.¹

The community colleges commitment to all of their constituents is not restricted to a few locations. Campbell stresses the outreach role of Dawson College in Montreal when he states:

Many college administrators in Quebec would reject outright the implication of the term colleges communautaires. Nonetheless, Dawson College in Montreal pays nearly one million dollars rent annually for over one hundred different facilities in order to serve its community.²

The needs of the citizens in the field of adult basic education, social science, health science and avocational services are being provided by the community colleges. As well, the institutions have reached out to where the clients are being provided with education and training particularly in the areas of adult basic education, basic skill development and avocational programming. Campbell explains the role played by the community colleges in his statement:

¹Faris, Ron, "The College in Saskatchewan where Community is Campus", College Canada, Vol. 2, No. 4, (April, 1977), p. 4.

²Campbell, op. cit., p. 4.

Community colleges exhibit, in varying degrees, ease of access, comprehensiveness, community outreach, emphasis upon the teaching learning process and a commitment to flexibility.¹

To provide opportunities to virtually everyone who was interested meant that in many instances the traditional course pre-requisites had to be waived. This admission policy change in post-secondary education has meant that incoming learners demonstrate an extreme range of competencies. The diversity of abilities has made the lock-step group instructional approach impractical in meeting the individual learning needs of the students. Many institutions have attempted to adjust and now generally accept their role as being one of providing mass education, while at the same time, providing for individual needs.

The community colleges provide comprehensive services. However, this term is not uniformly defined across Canada. Campbell explains his applied meaning of comprehensive as it relates to Canadian community colleges.

The term "comprehensive" although employed extensively in College literature has no uniform meaning across Canada. In some provinces (Alberta and British Columbia for instance) it implies a curriculum including: two years of university-level studies; career programs leading directly to employment; remedial developmental programs and a variety of recreational, thematic and general educational studies. Elsewhere, as in Ontario, colleges explicitly provide a vocational alternative to universities. Here comprehensive suggests a range of remedial, general, and technical studies and training leading to almost every destination other than university. In Quebec, colleges are considered stage three of a comprehensive four-tiered total system (primary, secondary, college, university). In other provinces institutes of technology, agriculture colleges, and marine schools are sometimes not included in legislation governing post-secondary education. However specialized they are, certainly comprehensive vocational colleges.....²

¹Ibid., p. 3.

²Ibid., p. 4.

Community colleges practise flexibility in a number of ways. Primarily it is practised by open student access, location of campus operation and innovation in the teaching learning process. Campbell describes flexibility in community colleges operation as follows:

In their commitment to flexibility, colleges have set for themselves formidable and lofty goals; to generate motivation among students whose previous experience may have turned them off learning; to serve effectively new economics and social classes; to establish classrooms anywhere in the community; to break the lock-step time bend in the traditional pacing of education; to offer persons of all ages the means of self-fulfillment. Thus dedicated, colleges must search out fresh approaches and serve new constituents with zeal and imagination. Short term study, remedial development programs and opportunities for re-entry of all age groups into vocational and general studies demand sensitive and often unprecedented mechanisms for adult learning.¹

The growth which has occurred in the Canadian community college movement highlights two major thrusts.

1. There has been an increase in institutions from 19 to 164 between 1960 and 1977 which represents significant physical growth. Many of these institutions have extensive "off-campus" activity. As well, several of the community colleges, particularly in Saskatchewan, do not have a main campus, but serve the citizens wherever they can be accommodated in their home communities.
2. Significant expansion of philosophy and role has occurred by providing equalization of educational opportunities. Considerable progress has been made toward extending post-secondary learning opportunities for all members of our society. Based on arguments similar to those put forth in the Ontario Draft

¹Ibid., p. 5.

Report on Post-Secondary Education many community colleges have accepted the challenge of providing public post-secondary education.

Accessibility to post-secondary education must be made universal simply because most of it is possible by the expenditure of public funds. The methods of financing post-secondary education is such that recipients of it are heartily subsidized by the public, and public subsidies of privileges limited to small segments of the population are both undesirable and in a democracy untenable over a prolonged period of time.¹

Compared to 1960 a dramatic change in learning opportunities has been provided.

STUDENT POPULATION CHARACTERISTICS

The equalization of educational opportunities within the community colleges has provided openings for Canadian human resources to be more fully developed. The provincial governments unilaterally supported this philosophy. If meaningful learning experiences were to be provided to meet this undertaking the characteristics of the potential "trainees" would have to be identified and understood. This review of selected literature will glean the characteristics of community college students from various studies.

With the exception of the Collèges d'enseignement général et professionnel (CEGEP) in Quebec and community colleges which function as junior colleges, most non-university post-secondary institutions in Canada serve a student population with similar characteristics.

The CEGEP are unique in Canada in that they not only provide vocational training, but are a mandatory level of academic education for those wishing to proceed to Quebec universities.

¹Draft Report on Post-Secondary Education in Ontario, (Toronto: Queens Printer, 1972), p. 19.

A Manitoba study, on the other hand, identified the clients served by the community colleges as including:

.....a great many people who would have been most unlikely candidates for a university, but who have apparently benefited from community college attendance. Education levels are lower (31.8 percent with grade ten or less). According to Canada Manpower estimates, 52.7 percent of those referred to full-time public training courses had incomes below poverty level. Many community college students have experienced unemployment before attending college.¹

Some of the characteristics of community college students which were identified in a British Columbia study revealed that:

College students are not merely duplications of the students who have traditionally attended the universities and vocational schools in the past. Their general feature is heterogeneity in age, background, socio-economic characteristics, academic achievement, aspirations, goals and plans for the future.He or she may be young or old, from a wealthy home or otherwise, a top high school graduate or a grade seven drop out.Based on the data obtained college students may be described in some important way as a "new breed" of post-secondary student.

Furthermore, colleges have shown themselves to be "second chance" institutions for many students whose academic records would have given them little educational opportunity in the past. Colleges have proved to be accessible in a financial and geographical sense and have provided opportunity for adult students to undertake part-time education in a variety of formats.²

In the United States, Roueche and Pitman characterized the community college student in the following way:

¹Manitoba Department of Colleges and Universities Affairs, op. cit., p. 41.

²John D. Dennison, "Characteristics of Community College Students", Clientele and Community: The Student in the Canadian Community College, ed. by Abram G. Konrad. First Yearbook of the Association of Canadian Community Colleges, (Willowdale, Ontario: Association of Canadian Community Colleges, 1974), pp. 46-47. (ERIC document ED100460.)

Community college students have different needs from those of their four-year counterparts. "Poor" students are in the majority. They cut across racial, ethnic, and class lines. The open-door policy produces a heterogeneous student body, representative of the total population. Community colleges must expect and provide for students from the lower two-thirds of the academic spectrum - an important yet frequently ignored fact.

Since the mid 1950's, educators have become increasingly aware of the problems of non-traditional or disadvantaged students in community colleges.Although the disadvantaged students are by no means a homogeneous group, they do have some characteristics in common such as low economic status, low social status, low educational achievement, marginal or no employment, limited participation in community organizations, and limited potential for immediate upward mobility.¹

Before concluding this discussion it must be noted that not all community college students are "poor" students. A false impression would be transmitted if a more complete picture of the background of students was not conveyed. Dennison gives a breakdown of the academic background of community college students in British Columbia when he states:

In general, approximately 50% of the students entering the first year college level presented a high school record sufficiently high to admit them to the university.....²

These figures highlight that for some students the community college made a choice available while for others it was an only chance.

Dennison goes on to state that:

It would be an error to assume that college attendance is limited to "high academic risk" students. This mistaken view has been promoted by poorly informed critics of the community college who have characterized colleges as havens for "intellectual have-nots". In all British Columbia colleges, for example, over twenty percent of entering students are "A-B" achievers as high school graduates.³

¹John E. Roueche and John C. Pitman. A Modest Proposal Students Can Learn. (San Francisco: Jossey-Bass Inc., Publishers, 1972), p. 7.

²John D. Dennison, op. cit., p. 42.

³Ibid., p. 43.

The foregoing discussion illustrates that community college students are not traditional students. Hence, they cannot be effectively treated as such. Learning environments must recognize their heterogeneous backgrounds and circumstances.

INDEPENDENT LEARNING

The two former sections of this chapter have explained the growth and philosophy of the community college movement in Canada and presented some typical characteristics of the community college student population. If the community colleges are to provide appropriate learning opportunities for their diverse student populations then they have to have diverse learning delivery approaches.

Independent learning is one approach which can provide diversity to the equalization of learning opportunity for many community college students. Some of the literature which supports this approach is presented in this section.

A limited historical perspective quickly reveals that many educational researchers over the years have recognized the worth of the individual and have stressed that the learner should be active and involved in the learning process. If a meaningful learning atmosphere for the heterogeneous community college student population is to be provided, the colleges must do so by methods which appeal to the learner and which recognize accepted learning theories. Although numerous arguments have been presented regarding the most appropriate approach to learning there is considerable agreement among researchers about essential ingredients to all learning situations. These common areas of agreement are reflected in the findings of Tyler, Dale, Rogers, Shumsky, and Bruner.

Tyler reviews the state of research in learning and concludes that "the picture of the human individual which is now emerging is one of a dynamic organism, acting in ways which will help him attain his values as well as seeking to meet his basic biological needs".¹ He adds further that much of the behavior formerly thought to be some type of stimulus and response activity may be explained "as an active effort on his part (that is the individual) to manipulate his environment to attain his values".²

Dale, in considering individual versus group instruction, and while discussing instructional resources, states that the purpose of education and the "goal of all learning is to develop the independent learner - the mature individual who no longer needs the protective counsel and guidance of the school or college".³ We may well expect, therefore, that instructional materials and methods will be used "to decrease dependent learning and increase independent learning".⁴

Dale goes on to state that:

Every individual must be prepared to meet new developmental tasks. He must be able to read, listen, and view critically and thoughtfully. He must be able to use a library of books, films, and recordings. He must have methods of study and attitudes which will enable him to learn and relearn at all age levels. Self-direction is the goal, and instructional resources should be selected with this end in view.⁵

¹Ralph Tyler, "The Behavioral Sciences and the Schools". The Changing American School, ed. by John I. Goodlad. (Chicago: University of Chicago Press, 1966), p. 201.

²Ibid., p. 200.

³E. Dale, "Instructional Resources". The Changing American School, ed. by John I. Goodlad. (Chicago: University of Chicago Press, 1966), p. 108.

⁴Ibid., p. 108.

⁵Ibid., p. 109.

Rogers, writing on self-initiated learning, states that:

I see the facilitation of learning as the aim of education, the way in which we might develop the learning man, the way in which we can learn to live as individuals in process.¹

Shumsky feels that "the greatest challenge for education is to make knowledge a part of the lives of students and to make subject matter personally meaningful".² Bruner contends that the curriculum "should involve the mastery of skills that in turn lead to the mastery of still more powerful ones, the establishment of a self-reward sequences".³

In an attempt to meet the learning needs of the community college student population described earlier the findings of general educational research can be adapted and utilized.

Speaking at a community college conference on individualized instruction, Hunter capsulized general educational theories on learning offered by four researchers in an address when he stated:

Educational psychologists have also consistently reminded us that learning is an individual phenomenon. Gagne states that "Learning is in the students' head"; Dewey stressed learning by doing; and Thorndike reminds educators of the laws of readiness and effect. Finally, to complete the case for individualized instruction, Robert Dubin published his little monograph "The Teaching-Learning Paradox" which clearly validates that method doesn't make any difference....it's up to the individual student. Therefore, if students vary significantly with respect to learning styles, readiness to learn, time for learning, motivation to learn, prior learning experiences and so on, individualized instruction appears to be a most logical choice.⁴

¹Carl Rogers, Freedom to Learn. (Columbus, Ohio: Charles E. Merrill Publishing Company, 1969), p. 105.

²A. Shumsky, In Search of Teaching Style. (New York: Appleton-Century Crofts, 1965), p. 17.

³Jerome S. Bruner, The Process of Education. (Cambridge: Harvard University Press, 1965), p. 35.

⁴Walter Hunter, "Individualized Instruction in Community Colleges A Status Report", Proceedings of Second Annual Three-Site National Instructional Assessment Conference on Individualized Instruction: Its Status in Community. (St. Louis, Missouri: Community College Association for Instruction and Technology, 1972), p. 5. (ERIC document ED072777.)

The Manitoba Post-Secondary Education Report was critical of the lack of innovative teaching methods within the Manitoba community colleges.

This report states that:

.....We are critical that there has been an excess reliance on one method, the lecture, and that not enough time and resources have been devoted to the experiments and the innovations that will enlarge the range of teaching and learning options and adapt them to differing circumstances.¹

In commenting on traditional versus individualized forms of instruction Connolly and Sepe states that:

The most observable difference in the two systems is in their emphasis, the one approach focusing on the individual learner, and the other on the learner in a group. This seemingly obvious distinction in orientation has far reaching effects on the learning environment and places very different requirements on the instructor and the student. Individualized instruction requires that the learning outcomes - the goal to be achieved by the learner - be specified in detail prior to instruction. While both instructional modes may establish objectives, the essential difference is the greater specificity required with individualized instruction.²

In considering this same topic Giroux states that:

Recent changes in educational philosophy clearly suggest that teaching students how to learn on their own must replace the practice of presenting set bodies of content at fixed rates. This philosophical approach will place the teacher in a role as a manager of learning, not as a dispenser of information.He must become a specialist in designing instructional materials which allow individuals to progress at their own rates. Self-instruction replaces group teaching. The primary role of the teacher is to encourage and facilitate independent study. The teacher is not all things to all people. He is concerned with improving the ability of each student to meet a set of learning objectives and to progress as far as he is able.³

¹Manitoba Department of Colleges and Universities Affairs, op. cit., p. 77.

²John J. Connolly and Thomas Sepe, Do Students Want Individualized Instruction? (Los Angeles, ERIC Clearing House for Junior Colleges, 1972), p. 6. (ERIC document ED063931.)

³Roy F. Giroux, "The Instructional Revolution: Implications for Educational Leaders", Journal of the Association of Canadian Community Colleges, Vol. 1, No. 1, (Spring, 1977), pp. 2-3.

Most educators would readily agree with Burns when he states that no two learners:

- achieve at the same rate;
- achieve using the same study techniques;
- solve problems in exactly the same way;
- possess the same pattern of interests;
- possess the same repertoire of behaviors;
- are motivated to achieve to the same degree;
- are motivated to achieve the same goals;
- are ready to learn at the same time;
- have the same capacity to learn.¹

If one accepts these general educational premises and subscribes to the researched data regarding the characteristics of community college students such as socio-economic, educational, and background differences, then it is obvious that the learner has to be treated as an individual if we are to meet his needs.

Since community college students are so different with respect to learning styles, readiness to learn, time required to learn, motivation to learn, prior learning experiences and so on, independent learning appears to be a very logical learning alternative.

The findings of numerous other recognized educational researchers could be cited. However, most of them basically conclude that the traditional philosophy of education is too narrow and too group-centered. The community college learning process philosophy has to be student-centered and framed in dynamic guidelines for assisting, but not restricting educators in developing relevant educational experiences rather than static educational programs.

When considering the merits of independent learning versus traditional instruction, it is reasonable to note at least one researcher's

¹Richard W. Burns, "Methods for Individualizing Instruction", Educational Technology, Vol. II, No. 6, June, 1971, p. 55.

comments regarding costs. According to Hunter, independent learning compares favourably with the traditional approach. He states that:

Quite interestingly the costs of individualized instruction appear to favor that method over conventional group instruction. Given the same student-teacher ratio more students using individualized instruction procedures appear to complete the course with higher achievement than students using the traditional group format. Thus even though the apparent input costs are equal the apparent output costs favor individualized instruction. If highly motivated, well prepared students, populate both the individualized instruction and the group instruction courses the writer would predict no difference between output costs. The apparent superiority of individualized instruction is clearly a function of the heterogeneity of the student population.¹

Independent learning, as defined for this study, offers an approach to learning which gives adequate recognition to some of the learning needs of individuals. This assertion leads to the logical conclusion that a greater degree of effort and commitment of financial and college resources should be directed to this end.

COMMUNITY COLLEGE FACULTY, ADMINISTRATORS, AND ADVISORS

Faculty, administrators, and advisors must work together to develop acceptable and functional learning experiences for community college students. The educators have expertise, but must be supportive of one another and search for delivery techniques beyond traditional approaches to learning. The students' abilities and needs must be understood and receive paramount attention when learning experiences are being developed.

Faced with a heterogeneous student population, demands for comprehensive programming, and open-door admissions, community college educators are presented with a lofty challenge. Dennison describes this challenge with the following words:

¹Walter Hunter, op. cit., p. 5.

The diversity of students in terms of academic ability, age, and years away from formal education presents a considerable challenge for community college faculty, staff, and administrators to prepare and offer courses and programs relevant to their existing and potential clients. Curriculum development will pose a particular problem if the community colleges are to satisfy the objectives of those seeking to broaden equality of opportunity in post-secondary education. The relatively small percentage of academically disadvantaged students entering community colleges, despite "open door" admission policies, suggests the need for colleges to extend remedial and basic skill development programs beyond present commitments.¹

It is clear from Dennison's assessment that a greater effort must be directed toward attracting the academically disadvantaged to the community colleges. Glaser stresses also that educational systems must be designed to recognize the individual differences and ultimately strive to create equality of opportunity. He states that:

A central problem of educational systems is the need to design and provide environments that adapt to individual differences along all the various dimensions in which they are manifested--differences in backgrounds, interests, abilities, talents, and styles of learning. The fundamental educational task is to design settings for education that are flexible and adaptive enough to handle these differences. An educational environment that is not capable of adjusting to these differences inhibits the development of individual potential, becomes elitist and selective, is heavily biased toward a mainstream culture, and perpetuates inequality.²

Real quality of educational opportunity will only be realized when the entire college staff collectively understand the extent of their mandate and unite to meet the expectations of their constituents.

Some community college faculty and administrators find it difficult to recognize that change to meet the needs of their constituents is

¹John D. Dennison, et al. The Impact of Community Colleges - A Study of the College Concept in British Columbia. (Vancouver, B.C. Research, 1975), p. 153.

²Robert Glaser, "Models of Adaptation to Individual Differences", Proceedings of the Second Canadian Symposium on Instructional Technology. (Quebec City, National Research Council, Ottawa, 1976), p. 600.

essential. Many educators are oblivious to the direction society is taking. Society is caught in what Toffler refers to as "the roaring current of change, a current so powerful today that it overturns institutions, shifts our values and shrivels our roots".¹ Just as society is caught in the "roaring current of change", the citizens of our society who populate our community colleges are affected by:

.....the flow of poverty and cultural deprivation, of changing manpower needs and allocation; of the vast explosion of knowledge and the restructuring of many of the academic disciplines; of the format in the study of education and the encouragement of experimentation and innovation; of the unrest among minority groups, students, parents, and teachers who no longer submit to being passive on-lookers of the decision-making processes which affect them.....²

An appeal for access to equality of educational opportunity from the Manitoba Post-Secondary Education Report is also clear. It states that:

.....community colleges will be called on to adapt their teaching to large numbers of part-time studies, to work-study combinations, to external delivery of courses, and to a broad age spectrum and social variety in their student body.³

The challenge and uncertainties which face the community colleges are many and the expectations of the constituents are high. Faculty and administrators will have to be innovative and forward-looking if they are to imaginatively and satisfactorily meet the "roaring current of change".

Unfortunately, some of the research findings are not encouraging. Roueche and Pitman express their concern on this matter when they state that:

¹Alvin Toffler, Future Shock. (Toronto, Bantam Books, 1970), p. 1.

²K. Goldhammer, et al, Issues and Problems in Contemporary Educational Administration. (Eugene, Oregon, Center for Advanced Educational Administration, 1967), p. 2.

³Manitoba Department of Colleges and Universities Affairs, op. cit., p. 77.

The noble aim of two-year colleges - to provide high calibre instruction for all citizens - is being blunted by traditional teaching procedures. Yet faculty members and administrators continue to be highly traditional. Drastic modifications in the traditional teaching learning process are still badly needed.¹

Some faculty envisage equalization of educational opportunities as the destruction of learning excellence. Any change is considered by some to be change for the sake of change. As difficult as it may be to alter past thinking, community college educators must accept that their primary task is to provide a functional learning setting.

In addition to being innovative, the setting must have an atmosphere in which the learner feels the warmth, support and empathy of the entire organization. Rogers emphasizes this point when he states:

.....the initiation of such learning rests not upon the teaching skills of the leader, not upon his scholarly knowledge of the field, not upon his curricular planning, not upon his use of audio-visual aids, not upon the programmed learning he utilizes, not upon his lectures and presentations, not upon an abundance of books, though each of these might at one time or another be utilized as an important resource. No, the facilitation of significant learning rests upon certain attitudinal qualities which exist in the personal relationship between the facilitator and the learner.²

Additionally, the learning setting has to be one which provides recognition for past learning, establishes an appropriate position on the learning scale and also provides the most direct route for the learner to achieve his ultimate goal.

Unfortunately, some research indicates that the facilitation of learning for all is not considered by many community college faculty to be their primary role. According to Ryan:

¹John E. Roueche and John C. Pitman, op. cit., Book Jacket.

²Carl Rogers, op. cit., pp. 105-106.

A study in the United States however, found that community college faculty in the country expressed reluctance and non-responsive attitudes toward teaching low-ability and inadequately prepared students, and they favoured remedial or compensatory instruction in separate courses rather than having to deal with it through individualization of their own courses.¹

Roueche and Pitman portray a rather negative picture about the reluctance on the part of community college instructors to adapt their instructional approaches to the needs of their students.

The typical community-college faculty member is like his colleague in the four-year college, an academic specialist. He derives his greatest satisfaction from transmitting the knowledge of his chosen discipline to able students.Simply stated some community-college instructors want to teach students who are easy to teach.²

The research of Medsker and Tillery indicates that the facilitation of learning is of little importance to community college instructors. They indicate that status is more important than the teaching of non-traditional students.

Both community college and university instructors are concerned about "status" and being properly identified with higher education. Teaching remedial or developmental courses does not identify the instructor with higher academia. In fact, some teachers assert that non-traditional students and special programs are of little or no concern to them. They are interested in academic rank, tenure and teacher rights.³

Harlacher is much more positive in his statements regarding the forward movements made by community colleges. In referring to community colleges in the United States he states that:

¹Doris Ryan, op. cit., p. 33.

²John E. Roueche and John C. Pitman, op. cit., p. 10.

³L.L. Medsker and D. Tillery, Breaking the Access Barrier. (New York, McGraw-Hill, 1971), pp. 91-92.

Nowhere in the world of the last decade have progress and change in higher education been more marked than in the American community colleges. Prompted by the growing conviction that merely to make education beyond the high school available is not enough, it has sought ways by which to make further learning also attractive. And because there is no one way in which all people learn, much time, effort, creativity, and money have gone into developing new paths to learning.¹

As mentioned earlier, a crucial factor in innovation is the establishment of an atmosphere in which change is promoted and can take place. Chin refers to this as "...inculcating a posture for 'changingness'--a state of readiness to change, to venture and take risks."² This posture must be prevalent throughout the entire organization.

Frymier stresses that, if a particular innovation is to succeed, there is a strong need for the central administration to be committed to change.³ This need for commitment is substantiated by Leskiw, who feels that administration will continue to play a vital role in encouraging and co-ordinating educational improvement. He stresses the need for the chief administrator to create a climate in which change can occur.⁴

Hill's case study at one community college outlined that most instructional staff are content experts and are not trained in developing new delivery methods. Hill emphasized that research support staff must be

¹Erwin L. Harlacher, "Forward", In Arthur Berchin, Toward Increased Efficiency in Community Junior College Courses: An Exploratory Study. (Los Angeles: University of California Student Store, 1972), p. IX, (ERIC document ED063915.)

²Robert Chin, "Basic Strategies and Procedures in Effecting Change", in Designing Education for the Future, No. 3, Planning and Effecting Needed Changes in Education, ed. by Edgar L. Morphet. (New York: Citation Press, 1967), p. 49.

³Jack R. Frymier, "From Now to Tomorrow", A School for Tomorrow, ed. by Jack R. Frymier, (Berkley, California, McCutcheon Publishing Corp., 1973), p. 291.

⁴R. J. Leskiw, "Educational Improvement--a Joint Responsibility", Achieving Educational Improvement, ed. by W. Ghyn Roberts, (Calgary: Department of Educational Administration, The University of Calgary, 1971), pp. 25-26.

provided to assist and encourage faculty in their innovative undertakings. Hill also found that support provided by the college president was of paramount importance in stimulating innovation. His research states that:

A first pre-requisite for developing an innovative faculty is a desire by the President to improve the quality of instruction at the community college, and an awareness of some approaches to improving it. The President, more than any other individual sets the tone of the college through selection of deans, building an organizational structure, building the budget, setting personnel policy, and his performance of many other functions.¹

Glendenning also stresses the importance of administrative support for better curriculum development. He points directly to senior educators and supervisors.

The delay in moving toward better curriculum development is usually at the supervisory and administrative level. There is an increasing intellectual acceptance of the need for change in curriculum design at this level, but not a great deal of commitment, and even less understanding. At present, great studies are being made by people in the front lines of instruction, however the impact of these developments would probably be greater if they were supported enthusiastically by more senior educators and trainers.²

Co-operation, support and understanding between faculty and administration is essential if faculty are to "unshackle their creativity" and confidently undertake innovative ventures. Giroux feels that we can take advantage of the pending instructional revolution if a supportive environment can be created.

¹Malcolm D. Hill, et al. Faculty Readiness for Innovation: A Case Study. (Harrisburg, Pennsylvania: Harrisburg Area Community College, 1971), p. 19, (ERIC document ED057767.)

²Don Glendenning, "Essentials of Curriculum Development: A Managers Perspective", Adult Training, Vol. 2, No. 4, 1977, p. 7.

If educators are to test and implement the new technologies, techniques and conceptual frameworks discussed in this article they will need to encourage an educational environment that is adaptive, flexible and bold. This environment must be totally supportive, for staff will not risk if administrators are not willing to accept failure as a possible alternative. Only in a rich environment of mutual trust of professional regard will the instructional revolution truly unfold.¹

If the education and training in the community colleges is to meet the needs of the learner then the experiences provided must be relevant to society's needs. Relevance in an educational system may be achieved simply through involvement of the user in the planning. Some writers refer to this as participatory planning or community involvement. Whatever the role of the student and the community in curriculum planning and design, the very fact that they are consulted will likely become a factor contributing to the acceleration of change. In the Worth Report, the effects of the involvement of a concerned society are described as follows:

People must be more than mere clients of the educational system. They must share in determining it. If education truly is to benefit society, it must draw on all of society's strengths. Expertise then, can be mobilized without granting educators' and bureaucratic dominating roles because of their special credentials or strategic positions.²

There is very little written about the valuable role played by course advisory committees in the Canadian community colleges. However, these committees are widely used. A review of the annual college calendars reveals a listing of local citizens who participate in the planning and development of the various courses.

¹Roy F. Giroux, op. cit., p. 13.

²W. Worth, A Choice of Futures, A Report of the Commission on Educational Planning, Alberta Department of Education, (Edmonton: n.p., 1973), p. 6.

The method of curriculum development known as DACUM (Developing a Curriculum) has effectively used advisory committees in the task analysis process for years. Coffin explains their role in this process as follows:

The program input was obtained from a committee varying in numbers from 8 to 15 people who either worked in the occupation or were responsible for supervising persons who worked in that occupation. Committee members were well versed in the field and in their specialty, willing to share ideas in discussion, and open to innovation. They were led in their task analysis by a co-ordinator who was an expert in task analysis.¹

The Manitoba Post-Secondary Education Report makes reference to the role played by advisory committees when it states that:

Course advisory committees were set up in various ways to assist the instructors and administrators to modify their programs in keeping with the rapidly changing conditions in industry and the community at large.²

Many community colleges take advantage of local commitment and expertise to realize this essential educational ingredient - community involvement.

For a community college to achieve its role of serving the community, support and commitment are required from the community, from administration, and from the faculty. General support must be provided, but the faculty are the group that work directly with the learners and consequently are the group who can be innovative or apathetic. This conclusion is supported by Roueche et al when they state that:

¹Lawrence Coffin, "In STEP with Holland College", Clientele and Community: The Student in the Canadian Community College, ed. by Abram G. Konrad, First Yearbook of the Association of Canadian Community Colleges, (Willowdale, Ontario: Association of Canadian Community Colleges, 1974), p. 52. (ERIC document ED100460.)

²Manitoba Department of Colleges and Universities Affairs, op. cit., p. 105.

Experienced observers agree that a basic condition of innovation in education ultimately rests with the willingness and ability of faculty to accept and implement change.¹

Some general needs and characteristics of community college students have been clearly identified. As well, some thoughts of a few researchers about the tasks confronting community college faculty and administrators have been pointed out in this section. The non-student participants in the community college picture must realize, with increased zeal, that they are employed to serve the students. It is clearly the community college educators' and managers' responsibility to look beyond traditional learning approaches and take whatever steps are necessary to provide appropriate learning environments for the clients they profess to serve.

INDEPENDENT LEARNING IN CANADA

If independent learning is to be expedited the community colleges have to become aware of one another's involvement in these activities. Practices and plans have to be identified so that developed activities can be shared and duplication of development can be minimized. The compilation of current and imminently planned independent learning activities into a manual would assist developers in knowing what is available and what can be used as a resource.

The author's personal experiences and communication with instructional developers at other Canadian community colleges convinced him of the merit of conducting a survey of independent learning and preparing a manual. However, in order to confirm this perception, the author surveyed

¹John E. Roueche, et al, Accountability and the Community College, (Washington, D.C.: American Association of Junior Colleges, 1971), p. 16.

a stratified random sample of Canadian community colleges in January, 1977.*

The needs assessment survey contacted twenty-one institutions from across Canada. From this selection seventeen institutions responded and of these, fourteen or sixty-seven percent of the sample offered support for the study.

These results indicated that a majority of the institutions were willing to participate in the development of and support for the compilation of an independent learning manual.

A compiled manual of independent learning in non-university post-secondary institutions in Canada has not existed in the past.

The need for the compilation of this data has been expressed on numerous occasions. A recent expression of this need was made by Giroux when he stated:

In the past decade, community colleges have grown and developed at such a rapid pace that little time has been devoted to research or to the exchange of effective practices. There is an obvious need for a variety of forums for Canadian practitioners to share experiences if the Community College Concept is to achieve its full potential.¹

This lack of adequate communication among practicing educators was recognized on a world-wide basis when The General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO) meeting in Nairobi recommended that:

*Letter and survey form are included as part of Appendix A.

¹Roy F. Giroux, op. cit., p. iii.

Measures should be taken in order to encourage exchanges of experiences and compile and disseminate statistical and other information on the strategies, structures, content, methods and results, both quantitative, qualitative, of adult education.¹

Terry expressed his concern about accessing information on innovative educational practices when he states that:

Teachers and administrators should have access to a data bank of new methods of doing all those things related to the teaching-learning process, already referred to earlier. They must also learn to assess the information.

.....What is needed is a means of collecting and storing this data on an on-going basis and in a system that makes the information readily retrievable for potential users.²

A limited number of Canadian independent learning projects have been detailed in professional magazines and journals. The most readily available sources of information are published by the Federal Department of Manpower and Immigration, the Canadian Vocational Association and the Association of Canadian Community Colleges. Other sources which offer information on research are the Association of Universities and Colleges of Canada and the Humber College of Applied Arts and Technology.

The Manpower and Immigration publication, Adult Training, has detailed some independent learning as it relates to Canada Manpower (CMC) sponsored clients. As well, this quarterly published journal lists the Training Improvement Projects (TIP) from across Canada which have been approved by the Department of Manpower and Immigration for federal assistance.

¹United Nations Educational, Scientific and Cultural Organization (UNESCO), Recommendation on the Development of Adult Education. (Ottawa: United Nations Educational, Scientific and Cultural Organization, 1976), paragraph 38 (d).

²J. E. Terry, "Innovation in Vocational and Occupational Education", Canadian Vocational Journal, Vol. 12, No. 3, November, 1976, pp. 23-28.

The independent learning information contained in the Adult Training publication is useful, but very incomplete because:

1. It does not provide a listing of any innovations in courses which have a duration of more than 12 months.
2. It deals with only a few of the innovations related to one year or less offerings.
3. It does not describe how the TIP projects are structured.

Over the years the Canadian Vocational Association Journal has published information on a few independent learning projects. The CVA articles have been detailed and very informative, but the published information has only been a small sample of the independent learning which has been undertaken in Canada.

The Association of Canadian Community Colleges (ACCC) has recently begun to publish two community college communication vehicles:

1. Since October, 1976, the Association has published a monthly periodical called "College Canada" which has printed a few articles on independent learning. This periodical publishes pertinent community college information, but it does not stress subject or course delivery techniques.
2. Since spring, 1977, the ACCC has published a quarterly journal on issues relating to community colleges. This Journal has not undertaken the responsibility of publishing information on all independent learning in Canada. The Journal's editorial guidelines are:

There are presently in Canada a growing number of empirical studies as well as philosophical treatises, college produced research and development reports and studies related to community colleges produced by provincial authorities, graduate students and related agencies. No means exists for the distribution of these works on a national basis.

The Journal will publish topical articles, and research-based articles that have developed the findings for practical educational application in Canadian Community Colleges.¹

Using the present approach the Journal will not be able to identify current and future independent learning within the Canadian community college movement.

The Association of Universities and Colleges of Canada annually publishes a document titled Inventory of Research into Higher Education in Canada. The 1976 issue outlined about 250 research projects. However, only about 12 of these projects were directed toward independent learning at Canadian Colleges and Universities. This document has very broad scope and outlines research activities from institutional governance to value assessment. This document identifies research activity at all levels of the educational system and does not profess to serve isolated interests.

Humber College of Applied Arts and Technology (Toronto) has co-ordinated project ARISTOTLE (Automated Retrieval Information System to Track and Optimize the Teaching and Learning Environment). The objective of this project has been to collect and disseminate curriculum development information which is structured along the Developing-a-

¹ ACCC Launches New Journal, College Canada, Vol. 2, No. 3, March, 1977, p. 2.

Curriculum (DACUM) format. The latest ARISTOTLE listing identifies some 400 DACUM charts which have been prepared and are available to interested practitioners.

This project provides a continuing service to the Canadian community colleges. A number of projects from Africa are also included in this listing. However, it is not intended to identify all independent learning, it identifies only those subjects and courses which are structured on the DACUM format.

From information and research noted, there appears to be a definite need by faculty and program developers for a manual on independent learning. The manual prepared in this study will make all independent learning information supplied through the survey questionnaire available to participating institutions.

CRITERIA FOR THE MANUAL

The study was undertaken because of:

1. a lack of organized and compiled data which described independent learning in Canadian community colleges; and,
2. the desire to make existing and planned independent learning in the community colleges more widely known.

To solve these two problems this study will survey independent learning in Canadian community colleges and from the collected data prepare a comprehensive manual.

The two needs identified above and noted early in this study were reinforced in the section on the review of available information on independent learning in Canada. On the basis of this review the following are the criteria by which the preparation of the manual are advanced.

1. The manual will be a vehicle for the identification of information and will have the potential to assist in a sharing of resources among institutions that have the desire to provide similar learning experiences.
2. The manual will make it possible to identify the extent of independent learning in the Canadian community colleges which respond to the questionnaire. Each responding institution will be identified along with all of its independent learning activities. Unique applications of independent learning will be noted.
3. The manual will provide a source in which subjects and courses which are offered, or will be offered by independent learning, can be identified. Also, the compiled data will identify the most popular subjects and courses.
4. The manual will make it possible to identify how independent learning is designed at each institution for each subject and course. This will be made possible by using a list of pre-determined independent learning activity features and noting the positive responses in the grid of the body of each table. This detail will provide enough information to make the reader well aware of the key ingredients of each design.
5. The manual will have a format that will be designed for clarity and utility. Information desired by a reader will be organized and readily accessible.
6. The manual will be organized to facilitate the analysis of the data to determine the popularity of the independent

learning features being practised and planned by the various institutions. Empirical definitions for subjects and courses offered by independent learning will be made from the observations.

SUMMARY

In this chapter, a review of literature related to the development of the Canadian community colleges, community college student characteristics, the appropriateness of independent learning for community college students, the educational challenges facing community college faculty, administrators and advisors, a summary of Canadian publications which deal with independent learning, and the criteria to be used to assemble the manual, were presented.

The community colleges have experienced phenomenal physical growth in the past 15 years. As well, in this period, the provincial governments have established broad new skill training and educational objectives for the community colleges. Growth and role changes of this magnitude represent society's needs for the type of education and training being provided.

The general characteristics of community college students were reviewed. The researchers have found that community college students are featured by heterogeneity in background, age, socio-economic levels, academic achievement, aspirations, goals, and plans. The community colleges have had to struggle to provide equalized educational learning opportunities for this diverse student population.

Educational researchers have recognized the worth and uniqueness of the individual. They have also stressed that the learner should be active and involved in the learning process. Following this educational

philosophy to its logical conclusion clearly suggests that teaching students how to learn on their own must be considered as an alternative to the practice of presenting set bodies of content at fixed rates. Independent learning provides an approach for the student to learn with minimum instructor input.

The community colleges are providing post-secondary learning opportunities for a diverse student population. To effectively provide this service the educators and advisors are presented with a serious challenge. The student bodies consist of non-traditional students who require non-traditional learning methods if equality of educational opportunity is to be realized. Administrators, advisors and faculty must recognize their mission and responsibility to look beyond traditional learning methods and design relevant learning experiences for their unique clients.

Published information on independent learning in Canada was reviewed. The review indicated that the published information is fragmented and incomplete. The researchers recommend consolidation and publication of information on the various learning methods used in the community colleges.

Finally, this study will culminate with the publication of a manual on independent learning in Canadian community colleges. The criteria by which the preparation of the manual is to be advanced are noted.

CHAPTER III

THE METHODOLOGY OF THE STUDY

The purpose of this chapter is to describe the procedures which were used in the collection and treatment of the data. The development of the study design, the format of the compiled output, the description of the instrument which were used, the sources of the data, the steps which were used in the collection of the data and the treatment of the data are presented in sequence.

DEVELOPMENT OF THE STUDY DESIGN

The initial planning of this study consisted of facing two fundamental questions, namely:

1. was there a need for consolidation of Canadian community colleges' independent learning information? and, assuming a positive response to this question;
2. how should data useful to curriculum developers be functionally compiled?

The justification for a functional compilation of community college independent learning activities in Canada was made in Chapter II under Independent Learning in Canada. Curriculum and program developers clearly recommend that improved communications among community colleges which practise independent learning is desirable.

The usefulness of the compiled data depends on how readily the

desired information can be retrieved. Therefore, the approach chosen in preparing the manual centered around commonly understood terms such as subjects, courses, and institutions. To receive consistent responses subjects and courses were defined for this study in the questionnaire. These headings were chosen as entry points to the manual. When the desired independent learning subjects or courses have been identified the next task is to relate this activity to a community college. Therefore, a cross-referenced system between subjects and institutions and courses and institutions was established.

FORMAT OF THE COMPILED OUTPUT

The formats chosen for the compiled output are detailed in Tables I, II and III in Appendix C. Tables I and II identify functioning and planned subjects and courses in Canadian community colleges which employ independent learning. Table III identifies present and planned independent learning at each participating institution.

Table I alphabetically lists all reported independent learning subjects and identifies some key characteristics of each approach. These characteristics were identified from various readings; however, Svava's¹ study was used as a base source of information. Adequate information was recorded in this table for a reader to understand the approach used and to judge if direct contact or other forms of follow-up are desirable. By examining Table I researchers can quickly determine how and where independent learning is presently practised or being developed in the subject area of their interest. Also, the anticipated start and completion times of

¹Ronald Svava, Elements of Individualized Instruction. (Chicago, Illinois, Loyola University, 1972.) (ERIC document ED062817.)

activities which are being planned are indicated.

Table II is similar to Table I. The only difference is that Table II provides data on courses rather than subjects.

Tables I and II note subjects and courses and relate this information to Canadian community colleges which are practising or plan to practise the independent learning in these areas. The institutions identified by these means are listed alphabetically in Table III. In addition to noting the independent learning features, Table III notes some key institutional features such as the mailing address, contact person, telephone number, maximum daily enrollment, and the organizational divisions. Table III lists all of the independent learning at one particular community college and indicates whether or not the innovation is in operation and if the developed materials are available for purchase.

Tables I, II and III were assembled into a manual and distributed to each community college which responded to the survey questionnaire.

DESCRIPTION OF THE INSTRUMENT USED

The data for this study was collected on a national basis. Therefore, a survey questionnaire constructed for predominantly objective-type responses was considered to be the only feasible data-collecting approach from an economic point of view.* In considering the questionnaire technique Barr states that:

The questionnaire technique is similar to that of the controlled interview. It is considered desirable when controlled interviews would be difficult to arrange. The format makes immediate feedback impossible but for the exact opposite reasons noted regarding

*The survey questionnaire is presented in Appendix B.

the interview the questionnaire can be relatively free of subjectivity on the part of the person responsible for administration.¹

The survey questionnaire used to collect the data was developed over a period of approximately two years. The design was based primarily on the "what" and "how" questions which were intended to encourage the institutions to tell about their independent learning rather than to have them explain why their particular design had been undertaken.

The third draft of the survey instrument was reviewed by thesis committee members. As well, a copy of the document was mailed to four selected community colleges to be critiqued. Using the feedback as guidance the survey instrument was finally revised and prepared for distribution.

The survey questionnaire was divided into the following three parts.

1. Part A identified some basic information about the participating institutions such as the mailing address, contact person, telephone number, size of the student body, and the organizational divisions. A working definition of independent learning was provided to guide the respondents.
2. Part B was designed to:
 - a) provide the participating institutions with an opportunity to identify all of their independent learning subjects and courses;
 - b) have selected independent learning features identified within the given subjects and courses;

¹Arvil S. Barr, et al, Educational Research and Appraisal. (Chicago, J.B. Lippincott Company, 1953), p. 65.

- c) provide information on the accessibility by other institutions to the independent learning materials developed or purchased; and,
 - d) provide information from which empirical definitions of independent learning, as it is used in Canadian community colleges, could be extracted.
3. Part C was designed to have the respondents indicate the subjects and courses which they planned to develop into the independent learning format over the next four years. The responses to this part were made by the respondents who listed the planned subjects and courses and then selected the appropriate characteristics from the independent learning features provided. Provision was also made for the design and implementation time frames to be indicated. All this information along with the data from Part B of the questionnaire were recorded in Appendix C.

THE SOURCES OF THE DATA

All known community colleges in Canada were invited to respond to the questionnaire and ultimately have their independent learning activities recorded in the manual. The list of institutions contacted included colleges, institutes of technology, technical institutes, community colleges, agricultural colleges, colleges of applied arts and technology, Collèges d'enseignement général et professionnel (CEGEP), horticultural colleges, a marine college, and a land survey institute.

The various non-university post-secondary institutions in Canada

are similar in some ways but have unique roles to play in each province. As well, the number of institutions vary significantly from province to province. In total there were 165 Canadian community colleges contacted. The number of institutions from each province that were invited to participate in the study are noted in Table A.

COLLECTION OF THE DATA

The initial mailing was sent to all the institutions on August 12, 1977 and included the structured questionnaire survey, a letter explaining the objective of the survey and inviting each institution to participate, and a simple response sheet.* The response sheet asked the most senior institutional administrator to indicate, by return mail, whether they would participate. Those institutions that elected to participate but failed to respond promptly were sent follow-up correspondence. Those who did not wish to respond were simply not included in subsequent communication.

The responding institutions were requested to submit their data by September 16, 1977. The initial response time proved to be inadequate and the deadline for submissions was extended to October 28, 1977. By November 7, 1977 responses had not been received from seventeen institutions which had formerly indicated that they would participate. Each of these institutions were telephoned and reminded of the project and given until December 1, 1977 to complete their submission. All of the institutions contacted agreed to submit their independent learning activities by this final date.

*Copies of the correspondence are included in Appendix A. A copy of the questionnaire is included in Appendix B.

TREATMENT OF THE DATA

The incoming data were sorted and manually transferred to the tables in Appendix C. Since the institutions were given the freedom of using their own titles for subjects and courses some arbitrary grouping of the provided information was considered to be desirable. For example, basic mathematics and introductory mathematics were grouped and called mathematics (basic).

The only treatment provided the data was the sorting and compiling of the information into functional formats.

The data obtained from Part B of the survey instrument were grouped as noted above and arranged alphabetically. The information was then transferred directly to Table III. A pre-determined response code indicated which cells in the grid would be marked for the numerical scores noted in Part B.

Subject and course indices were established under which all the institutions that practiced independent learning in a particular subject were listed. When all the replies were available the information was transferred from the indices to Tables I and II.

The data provided in Part C of the questionnaire were transferred to each of the tables in Appendix C of this thesis. The key information from this data was the time frame of the planned developmental activity. With this information inter-institutional contacts can be made by interested readers.

SUMMARY

This chapter described the procedures used in this study for the collection and compilation of the data.

The survey instrument used to collect the information was designed to determine what and how independent learning was being practised and planned in non-university post-secondary institutions in Canada.

The questionnaire was mailed to 165 institutions. Each institution was promised a manual of the compiled data if they responded to the survey.

The collected data were sorted and compiled into Tables I, II, and III in Appendix C.

CHAPTER 1V

THE STUDY: RESULTS, FINDINGS AND IMPLICATIONS

The purpose of this chapter is to analyze the data that were submitted by the responding institutions and used to prepare the tables in Appendix C. As well, some of the more prominent features of independent learning have been gleaned from the data and identified as being characteristics of independent learning in non-university post-secondary institutions in Canada.

More specifically this chapter will:

1. Determine and note the national and provincial response rates to the survey questionnaire.
2. Analyze the response rates on a provincial basis and offer perceptions as to why some low rates occurred.
3. Determine the extent of subjects and courses designed for independent learning and identify the more prominent subject and course areas which have been organized to provide this type of learning.
4. Consider some of the unique applications of independent learning that were identified by the respondents.
5. Extract empirical definitions of independent learning from the submitted data.

PARTICIPATION BY CANADIAN COMMUNITY COLLEGES

All known non-university post-secondary institutions in Canada

were identified and surveyed for this study. The survey questionnaire, which is included in Appendix B, was mailed to 165 institutions on August 12, 1977. The questionnaire was accompanied with two letters. The first letter was an invitation for participation in the study. The second letter was addressed to the most senior executive of the institution and requested the readers to indicate their institutional participation or non-participation intention.*

The participation invitation letter requested a response by September 16. The initial period allowed for replies was not adequate for many of the respondents so the completion date was extended to October 28. This revised date was extended to all institutions that indicated they would respond and those that had not indicated their intention to participate or not participate.

By November 7 no replies had been received from 17 institutions, that had indicated they would respond. The designated respondent for each institution was telephoned and given an additional extension until December 1, for submission. Ultimately, 9 of these institutions responded while the remainder failed to submit their completed questionnaires by December 15.

The responses and non-responses data related to the survey questionnaire are compiled in Table A. The national response rate was 39.4%. Table A indicates the number that responded, the number that indicated they would not respond, the number that indicated they would respond and did not follow through and the number that apparently did not receive the questionnaire even after the follow-up mailing.

*These letters along with other correspondence are included in this study as part of Appendix A.

TABLE A
RESPONSES TO INDEPENDENT LEARNING SURVEY QUESTIONNAIRE

Province	Number of Institutions Surveyed	Responded		Chose To Not Participate		Agreed To Participate But Did Not		Did Not Acknowledge Questionnaire	
		No.	%	No.	%	No.	%	No.	%
Alberta	16	10	62.5	4	25.0	1	6.3	1	6.3
British Columbia	17	10	58.5	5	29.4	1	5.9	1	5.9
Manitoba	3	3	100.0	0	0	0	0	0	0
New Brunswick	10	9	90.0	1	10.0	0	0	0	0
Newfoundland	3	2	66.7	0	0	0	0	1	33.3
Nova Scotia	4	4	100.0	0	0	0	0	0	0
Ontario	29	16	55.2	9	31.0	2	6.9	2	6.9
Quebec	66	5	7.6	37	56.1	3	4.5	21	31.8
Prince Edward Island	1	1	100.0	0	0	0	0	0	0
Saskatchewan	16	5	31.2	5	31.2	1	6.3	5	31.2
Total	165	65	39.4	61	37.0	8	4.8	31	18.8

PROVINCIAL RESPONSE RATES

The survey questionnaire and supporting correspondence did not ask why the institutions would or would not respond but simply asked what independent learning were being practised or planned and how they were being done. Therefore, the following reasons given for the different levels of participation illustrated in Table A are largely perceptions by the researcher rather than reported reasons. A few of the institutions volunteered reasons as to why they would not be able to participate.

The provincial response rates varied from a low of 7.6% to a high of 100%. The higher response rates occurred from provinces where there were few institutions while the relatively lower response rates came from provinces with a greater number of non-university post-secondary institutions.

There appeared to be a general lack of interest in this independent learning study from the institutions in Quebec. Some of the Quebec institutions simply stated that they were not using independent learning and therefore, had nothing to report. In most instances the Quebec respondents either chose not to participate (56.1%) or were not interested enough to indicate a desire to participate or not participate (31.8%). This lack of interest was prevalent in both the public and private sectors of the non-university post-secondary institutions - of 41 public institutions only 3 responded, and of 25 private institutions only 2 responded.

Saskatchewan also had a poor response rate. Two of the three long-established institutions in Saskatchewan responded while only 3 of the 12 newer regional community colleges chose to respond. The 5 institutions that chose not to participate were all recently-established community colleges.

Two of these institutions expressed a keen interest in the study, but indicated their community college model and mandate did not provide for the facilities nor the permanent faculty and support staff resources to design and develop their delivery by independent learning. The reasons given by these two institutions could reasonably reflect the causes for lack of responses from the ten other Saskatchewan community colleges.

The other eight provinces all had response rates which exceeded 55%. The average response rate for these 8 provinces was an encouraging 66%.

SUBJECTS AND COURSES DELIVERED BY INDEPENDENT LEARNING

One hundred eighty-four different subjects and one hundred eighty-five different courses were identified by the responding non-university post-secondary institutions as being designed or planned to provide learning opportunities by independent learning. Most of these subjects and courses were unique to single institutions. However, in some cases, several institutions were using or planned to use independent learning approaches for common subjects and courses. To identify the prominent common areas the subjects and courses with responses from at least six (approximately 9% of the total responses) institutions are noted below.

A review of the data listed in Table I (Appendix C) readily identifies the subject areas which have been organized into some form of independent learning. The subjects which are operating as or planned for independent learning in at least six institutions are:

Accounting	Mathematics (3 different areas)
Biology	Physics
Bookkeeping	Psychology
Chemistry	Science
Communications (4 different areas)	Shorthand
Management	Typing

The subjects which are most frequently offered by independent learning are the more common related and support subjects such as communications, mathematics and science (including biology, chemistry and physics). Independent learning designed for these subjects appears to be used extensively for upgrading and remedial purposes.

The next most popular area which used independent learning is in the business education subjects. The accounting, bookkeeping, shorthand, and typing subjects or complete business education courses are offered by at least 58% of the responding institutions.

Table II (Appendix C) lists the courses which have been designed for or are planned to provide independent learning opportunities for non-university post-secondary institution students. The courses which provide or plan to provide independent learning in at least six institutions are:

Academic Upgrading	Clerk-Typist
Bricklaying	Nursing (R.N.)
Business Education	Welding
Carpentry	

The course which is the most frequently offered through independent learning is academic upgrading. The content of this course parallels similar undertakings in the individual subject areas of academic and remedial upgrading noted above.

The course in business education is the next most popular offering for independent learning. The subjects which collectively make up business education were also identified above as being popular for learning by this method.

It is noteworthy that three trade skill courses, namely bricklaying, carpentry, and welding are using or plan to use independent learning in at least six institutions. Since independent learning is being used or

planned as a learning method for these three trades it might hold potential for expansion into many other skill training courses.

Diploma nursing is a course which has been offered in most community colleges for only the last ten years. However, the respondents to this study indicated that learning for this course is now taking place or will take place by independent learning in at least six institutions.

The information in Tables I and II delineates that different versions of independent learning can be used to provide learning opportunities to almost any field of education and training. Subjects offered by this method vary from child development to ecology while course offerings vary from puppetry to solar energy technology.

UNIQUE APPLICATIONS OF INDEPENDENT LEARNING

The information in Table III identifies three unique applications of independent learning to the learning process. These applications are uncommon because they make or plan to make provision for independent learning away from an institutional setting.

The British Columbia Institute of Technology provided independent learning information on 65 subjects and courses. The design and planned design of their packages is such that learning is intended to occur by correspondence. Several business administration and technology-based subjects are included in their offerings.

Cariboo College indicated that they are using or plan to use the independent learning method to provide learning opportunities in anthropology, psychology, and sociology. These subject areas have often been considered inappropriate for independent learning delivery. However, Cariboo is

offering and plans to offer these courses by independent learning in remote parts of their college region.

Grande Prairie Regional College uses independent learning in what they call a "self-study" program. This program has provided contractual assistance to learners throughout the Peace River region in some subject areas often considered to be too subjective for independent learning (philosophy, political science, and sociology). The respondent for Grande Prairie Regional College stressed that self-study at their institution was not a correspondence course.

EXTRACTED DEFINITIONS OF INDEPENDENT LEARNING

This section will analyze the frequency of use of the given components which indicate how the responding institutions have designed their independent learning. Therefore, the definitions which are extracted will be empirical because they will reflect practise and experience and will not have a scientific or theoretical base.

The indicated features which point out how independent learning has been designed or is planned to be designed at the reporting institutions are itemized in Table C. An examination of the degree to which the features represent the various designs reveals that the organizing of independent learning for subjects and courses is similar.

A clearer description of what the various features noted in Table C mean can be gained by examining the survey questionnaire in Appendix B. Responses in the survey questionnaire were tabulated to reflect what institutions were doing or planned to do. The features of independent learning noted in Table C are identical to the features noted in Tables I and II in Appendix C. To be recorded as an agreement response the elements in the grid of the questionnaire had to be marked as noted in Table B.

TABLE B
 SCORING OF THE ELEMENTS OF THE SURVEY
 QUESTIONNAIRE FOR AGREEMENT RESPONSES

<u>Survey Questionnaire Features</u>	<u>Element Numbers That Had To Be Scored</u>
Use of Performance Objectives	1 or 2
Use of Learning Packages	5
Primarily Print Media	7
Significant Multi-Media	10 to 12
Computer Assistance	13 or 14
Minimum Rate of Student Progress	17 or 18
Readily Available Resources	19 or 20) 2 out of 22 or 23) 3 25 or 26) required
Some Group Presentations	30
Flexible Entrance & Exit of Students	31 or 32
Continuous Measurement	34 or 35
Non-Traditional Grading	37 or 38
Instructor's Role as Learning Manager	41 or 42

PERCENTAGE RESPONSES - HOW INDEPENDENT LEARNING HAS BEEN
DESIGNED AND IS PLANNED TO BE DESIGNED

TABLE C

Features	Subjects %	
Use of Performance Objectives	95.5	90.6
Use of Learning Packages	85.9	80.3
Primarily Print Media	75.8	62.5
Significant Multi-Media	59.1	71.6
Computer Assistance	31.6	17.2
Minimum Rate of Student Progress	57.1	61.3
Readily Available Resources	70.6	71.6
Some Group Instructions	51.0	55.6
Flexible Entrance & Exit of Students	60.3	60.6
Continuous Measurement	78.2	73.8
Non-Traditional Grading	45.2	60.6
Instructor's Role as Learning Manager	73.9	74.7
Independent Learning is Major Portion	61.0	60.0

If one arbitrarily establishes that a 60% or better response rate to a feature is required before it is considered to form part of a functional definition then the following empirical definitions are obtained from the data provided.

Subjects provide learning opportunities by independent learning when they have: (1) performance objectives, (2) learning packages, (3) primarily print media, (4) readily available resources, (5) continuous measurement, (6) flexible entrance and exit of students, and where (7) the instructor's role is one of being a learning manager.

Courses provide learning opportunities by independent learning when they have: (1) performance objectives, (2) learning packages, (3) primarily print media, (4) significant multi-media, (5) a minimum rate of student progress, (6) readily available resources, (7) flexible entrance and exit of students, (8) continuous measurement, (9) non-traditional grading, and where (10) the instructor's role is one of being a learning manager.

These definitions are identical except that courses identify significant multi-media, a minimum rate of student progress, and non-traditional grading in addition to the features noted for subjects. It is interesting to note that for 6 of the features the response percentage for subjects and courses is within 6%.

The popularity of the features can be noted by referring to Table C. The most popular feature of independent learning methods is the use of performance objectives while the least popular feature is the use of computers.

SUMMARY

In Chapter IV the data associated with the study were presented and analyzed. Because the data were not collected with the objective of making comparisons the analysis did not lend itself to a rigorous scientific approach. The analysis was accomplished by: (1) determining the national and provincial response rates to the survey questionnaire, (2) identifying the extent and prominence of subjects and courses, (3) identifying the unique application of independent learning, and (4) arriving at empirical definitions of independent learning as identified by respondents from non-university post-secondary institutions in Canada.

CHAPTER V

DISCUSSION, MODIFICATIONS, CONCLUSIONS AND RECOMMENDATIONS

This chapter will serve as a summary of the thesis. It is composed of a restatement of the problem and the procedure followed, a discussion of the internal validity of the study, an examination of required modifications and modifications suggested for future studies, the conclusions and several recommendations.

THE PROBLEM

The basic objective of this study was to conduct a survey on independent learning in Canadian community colleges and from the collected data prepare a comprehensive manual.

THE PROCEDURE

The data were collected by means of a mailed survey questionnaire. The questionnaire was distributed to 165 non-university post-secondary institutions in Canada. Responses were received from 65 institutions and were tabulated into Tables I, II, and III in Appendix C of this document.

INTERNAL VALIDITY OF THE STUDY

The criteria for the preparation of the manual were listed in Chapter II. The ways in which these criteria have been met will be discussed in this section.

The independent learning in Canadian community colleges was collected from responding institutions by means of a survey questionnaire. The information has been consolidated into a functional manual and it will be distributed to the participating institutions. The complete manual is included in Appendix C of this thesis.

The independent learning manual was prepared to provide a communication link among Canadian community colleges. The completed manual has recorded all reported independent learning information and hence is a source document for the identification of independent learning. If researchers who are interested in developing independent learning refer to the manual it could identify independent learning relevant to their interest and provide an avenue for the sharing of resources among institutions that have the desire to provide similar learning experiences.

Some of the respondents not only completed the questionnaire, but offered support and encouragement for the undertaking. Their positive remarks offered in correspondence and over the telephone indicated to the researcher that the preparation of the manual was considered to be a worthwhile endeavour for the community colleges in Canada. If the readers of the manual have the desire to follow-up on any of the recorded data contact information on the subjects or courses and the institutions is provided in Appendix C.

The number of non-university post-secondary institutions that responded to the survey questionnaire were fewer than anticipated. Independent learning was identified from 65 institutions or 39.4% of the total number of institutions surveyed. The rate of response would

have increased if more institutions with known independent learning had responded. Specifically, institutions such as Mohawk College of Applied Arts and Technology, Algonquin College of Applied Arts and Technology and Vancouver City College have a large amount of independent learning yet chose not to report their work even after extensive follow-up was made.

Manitoba, Nova Scotia, and Prince Edward Island had questionnaire response rates of 100%. Quebec and Saskatchewan responded below the national average of 39.4% while the other eight provinces all had response rates above 55%. The number of institutions from each province that responded to the study are noted in Table A.

The collected data revealed at least three unique applications for independent learning outside of an institutional setting. The British Columbia Institute of Technology provided independent learning information on 65 subjects and courses. The design and planned design of their materials is such that learning occurs by correspondence. Cariboo College has provided for outreach programs in remote regions. The independent learning at Cariboo includes such subjects as anthropology, psychology, and sociology. Some practitioners have indicated that independent learning is not an appropriate method for providing learning for these subjects. However, Cariboo is offering sociology by independent learning and is planning to offer anthropology and psychology in small group seminars in the near future. Grande Prairie Regional College has a structured "self-study" program. This institution offers self-study in subject areas such as philosophy, political science, and sociology. These subjects are considered by some researchers to be too subjective to be learned by independent learning. This program places the responsibility for learning on the student

but by contractual arrangement is tutorially based. The above information indicates that independent learning is practised widely and is used to meet the needs of students in different settings in the non-university post-secondary institutions in Canada.

The data compiled in the manual (Appendix C) identifies an extensive amount of independent learning at the non-university post-secondary institutions in Canada. One hundred eighty-four different subjects and one hundred eighty-five different courses were identified by the responding institutions as using or planning to use independent learning to provide learning opportunities. The subjects and courses identified are from the fields of learning which include academic upgrading, agriculture, applied arts, apprenticeship programs, business administration, health sciences, social sciences, technologies, and trades.

The subjects which are the most frequently offered by independent learning are general education subjects such as communications, mathematics, and science.

The course which is the most frequently offered by independent learning is academic upgrading. Other popular offerings include business education, bricklaying, carpentry, welding, and diploma nursing.

The diversity of the independent learning offerings indicates that this method of learning is being practised or planned in a broad range of academic and vocational disciplines.

The manual identifies how independent learning is designed in Tables I, II, and III in Appendix C. The pre-determined independent learning activity features are noted on the abscissa of each table while the ordinates note subjects or courses or institutions. The independent learning activity

features selected for the manual were consistent with the questions posed in the survey questionnaire. The questionnaire is included for reference in this study as Appendix B. The scoring which resulted in the questionnaire input being recorded in the manual is noted in Table B. When a feature was identified as being practised or planned for a subject or a course or at an institution the grid was scored. A general examination of the details in Tables I, II, or III provides enough information to assist the reader in determining the key ingredients of each design. A study of Table III will provide the reader with follow-up information on independent learning activity features for the subjects and courses unique to each institution. As well, Table III provides key information such as the institutional address, contact person, and telephone number.

The respondents appeared to be able to complete the survey questionnaire with little difficulty. Most respondents completed the questionnaire without making contact with the researcher. The four or five respondents who contacted the researcher did so to request extensions of the deadlines established for completion. The returns were easy to understand and only a minimum of interpretation (eg. consolidating basic mathematics and introductory mathematics under mathematics (basic)) was required.

An analysis of the data in the manual identified the popularity of the independent learning features being commonly practised or planned by the various non-university post-secondary institutions. The percentage response, based on a maximum of a response to every feature for each subject or course is given in summary form in Table C. Empirical definitions of independent learning for subjects and courses, based on a 60% or better response rate, were determined and are presented in Chapter IV.

The 60% response rate level was an arbitrarily chosen figure that was intended to simply represent a majority of the cases being practised.

It is interesting to note that the features used to characterize independent learning in Canadian community colleges are very similar for both subjects and courses.

MODIFICATIONS

INDEPENDENT LEARNING STUDY

The only modification made during the progress of this study was to the length of time permitted for responses to be received. The original plan, which allowed for follow-up, called for a maximum response period of 11 weeks. However, data which were received up to 17 weeks after the questionnaire was mailed were included in the study.

The responses might have been provided more quickly and completely if the information had been requested at a time of the year other than in the fall when the institutions were all busy with the start-up of their operations.

FURTHER STUDY

If a similar study is undertaken in the future the following modifications to the approach should be considered.

1. Tables I and II in Appendix C could be simplified by not including independent learning features. The objective of assembling Tables I and II is to systematically identify subjects and courses. To achieve this objective Tables I and II need only list the subjects and courses and have them

identified with the appropriate institutions. The independent learning features could be included in Table III only.

2. Some motivation or process has to be found to encourage a higher percentage of response from the non-university post-secondary institutions. A study of this type would come closer to meeting its overall objective of improving communications among institutions if more of the institutions reported their independent learning activities and if all those who indicated they would respond were to follow through with their commitment.
3. The time of year at which the information was solicited should be modified. A number of the respondents requested extensions of time to properly complete the survey questionnaire. On each occasion the reason they gave for needing the extension was because of their extremely busy schedules during September and October.

CONCLUSIONS

The manual prepared from this study provides a wealth of information on independent learning in Canada and will establish a communication link among non-university post-secondary institutions. For the first time all reported subjects and courses organized in these institutions by independent learning can be identified in one source.

Community college researchers, faculty and administrators who use the manual prepared during this study can save research time and hours of

searching to determine what independent learning is being practised and planned and how the independent learning is designed or planned.

Research time can be saved by referring to the manual and identifying very quickly the subjects and courses offered or planned by independent learning. Research that has been completed does not have to be undertaken again. Research that is planned can be approached by sharing resources and expertise among interested institutions. Duplication of developmental effort in independent learning in the common areas of interest can be eliminated or at least minimized if unique features need to be introduced at a particular institution.

Efficiency in searching for help can be realized by using the manual because the reader can move from the subject or course identified in Tables I or II to the institutions identified in Table III. In Table III the reader has access to information on independent learning activity features, address of the institution, contact person, and telephone number.

General searching time can also be saved by the researcher, faculty member or administrator who will know that reference to one source document will give them all of the independent learning activities reported from 65 non-university post-secondary institutions in Canada.

The amount of time saved by users of the manual should amount to thousands of hours which translates into tens of thousands of dollars. In addition to the monetary saving the manual opens the communication channels which would probably not be used if a document such as the manual of independent learning activities was not available for reference.

The information contained in the manual opens the door to community college faculty and administrators to methods which can be used to meet the individual needs of their diverse student population.

RECOMMENDATIONS

The outcome of this study indicates that there are certain procedures and practises which, if followed in future projects of this type, could reduce the work required and increase the likelihood of success. With this in mind, the following recommendations are made.

1. Greater effort should be directed toward maintaining contact with the most senior college executive in order to try to increase the response rate. In this study, beyond the initial contact, communication was maintained with the designated respondent.
2. The timing of the data-collecting effort must be carefully considered. Rather than attempting to administer the survey questionnaire in the early fall it might be much better to attempt to collect this type of information during January and February.
3. When the manual format has been established and the required data identified the process of completing the file, sorting the data, and updating the manual could be assigned to a computer program. (The change in format suggested in this chapter under "modifications" should be considered.)

This study identified the "what" and "how" of learning by independent learning. However, there is one other aspect related to this approach which could be studied. Therefore, it is recommended that:

1. A further study be undertaken to show the relationship between available developmental resources support and the amount of independent learning development that actually takes place at an institution.

2. To update the data collected and compiled during this study, a subsequent study of this type be undertaken within the next two years to update the information collected in this study. If the users believe that this information is beneficial to community colleges then the response rate for the next study should increase significantly.

APPENDICES

APPENDIX A
SAMPLES OF CORRESPONDENCE WITH
NON-UNIVERSITY POST-SECONDARY INSTITUTIONS

**RED RIVER COMMUNITY COLLEGE**

2055 Notre Dame Avenue
Winnipeg, Manitoba R3H 0J9
Telephone 204/632-2311

77 01 26.

I am prepared to undertake a survey of non-university post secondary institutes in Canada to determine the extent and type of "individualized instruction" activities which exist and are planned. I would be willing to do the survey and ultimately compile the data if I had reasonable assurances that the need exists for this type of study and that your institute would participate by supplying the data.

Specifically, if I get a positive response to this letter I plan to:-

- (1) Prepare a data collection device for distribution by September, 1977.
- (2) Survey all non-university post secondary institutes in Canada. The objective would be to collect an extensive amount of detail. From a preliminary assessment I would estimate that it may take one hour to complete the questionnaire.
- (3) Analyze the data and prepare an information manual on existing activities and activities planned for the immediate future.
- (4) Provide a copy of the manual to each institute that provided data for the document.

Your response to this enquiry will give me an indication of your feeling regarding the need for such a study. Simply check the appropriate item on the attached sheet and return it to me at your earliest convenience.

Thank you. I hope to hear from you soon.

Yours truly,


C. Howard,
Principal,
Educational Support & Developmental Services.

/ss.

Att.

NEEDS ASSESSMENT FOR "INDIVIDUALIZED INSTRUCTION" STUDY



An "individualized instruction" study is needed and we would be pleased to participate and receive the compiled data.



Such a study is not needed at this time.

COMMENTS:

Completed By: _____

Title: _____

Institute: _____

Please Return To:

Mr. Cy Howard,
Principal,
Educational Support & Developmental Services,
Red River Community College,
Room C-719, 2055 Notre Dame Avenue,
Winnipeg, Manitoba,
R3H 0J9.



RED RIVER COMMUNITY COLLEGE
2055 Notre Dame Avenue
Winnipeg, Manitoba R3H 0J9
Telephone 204/632-2311

77 02 21.

On 77 01 26 I forwarded an individualized instruction "needs assessment" form to your office. As of this date a response has not been received from your institution.

If, for some reason, you did not receive the former mailing, I have enclosed a copy of the previous correspondence and would encourage you to respond at your earliest convenience. If you do not care to respond, I respect your action and will not pursue this activity with your institution.

I look forward to receiving your response.

Yours truly,

C.H. Howard,
Principal,
Educational Support &
Developmental Services.

/ss.
Encl.



RED RIVER COMMUNITY COLLEGE
 2055 Notre Dame Avenue
 Winnipeg, Manitoba R3H 0J9
 Telephone 204/632-2311

77 05 03.

Sample letter sent to validate mailed questionnaire survey.

Dear

I plan to collect data on the independent learning activities that exist and are planned for the near future in non-university post-secondary institutions in Canada. The collected information will be compiled into a manual and distributed to all participating institutions.

In this exercise the data collecting device is an important vehicle. Therefore, I solicit your help toward critiquing the draft of my proposed questionnaire. Any time you could spend on this task would be appreciated by me and I am sure ultimately by all those who respond.

I have sent this questionnaire to only four selected institutions in Canada so I am relying on a response from you to direct me in preparing the final draft.

The enthusiasm you expressed in my needs assessment survey caused me to select you to participate in this questionnaire review. Eighty-two percent of the needs assessment respondents supported the study so I am proceeding and will try to have the final questionnaire in your hands by late August. I really appreciate your encouraging remarks.

Specifically I would ask that you:

- (1) Review the questionnaire, but do not take the time to complete it. Feel free to make comments or raise questions by writing on the document.
- (2) Indicate your feelings and suggestions toward the questionnaire in a very critical manner. You will not offend me since I am seriously considering, along with other refinements, the deletion of Part C and the simplification of Part E.
- (3) Return your comments to me at your earliest convenience. I hope to complete this review by May 20th.

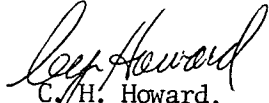
.....2

77 05 03.

The objective of the questionnaire is to answer the "what" and "how" questions related to independent learning. The question of "why" is not intended to be part of this study.

Thank you for your contributions. I hope to hear from you soon.

Yours truly,



C. H. Howard,
Principal,
Educational Support & Developmental Services.

/ss.
Att.

**RED RIVER COMMUNITY COLLEGE**

2055 Notre Dame Avenue
Winnipeg, Manitoba R3H 0J9
Telephone 204/632-2311

77 08 12.

Dear

I invite you or an alternate to complete the enclosed survey questionnaire on independent learning activities at your institution. The data collected from the survey will be compiled into a functional directory. A copy of the directory will be provided to you and every other non-university post-secondary institution that participates in this exercise. Your thoughtful responses will make accurate and useful information about your independent learning activities available to your colleagues across Canada.

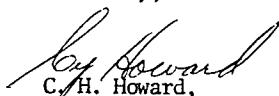
The directory will consist of two cross-referenced sections. The first section will list each institution that has undertaken independent learning, and note the activities in which it has been involved. The second section will list subjects and courses that have been developed using an independent learning format, and show which institutions have been involved in each specific topic area. Both sections will report the independent learning design features provided by the respondents.

I hope you will recognize the value in making the requested data from your institution available to other educational developers across Canada. In a "needs assessment" survey I conducted earlier this year, over 80% of your colleagues supported this undertaking.

I encourage you to complete the questionnaire and return it in the enclosed self-addressed envelope by September 16th. If you have any questions, call me collect at (204) 632-2358.

Many thanks for your anticipated participation.

Sincerely,


C. H. Howard,
Principal,
Educational Support & Developmental Services.

/ss.
Encl.

**RED RIVER COMMUNITY COLLEGE**

2055 Notre Dame Avenue
Winnipeg, Manitoba R3H 0J9
Telephone 204/632-2311

77 08 12.

Dear

In order for me to expedite my activities I need to know whether or not your institution will be responding to the enclosed survey questionnaire on independent learning. This is not an appeal for a hurried response, but a request for you to indicate your intentions.

If you do not desire to have your institution participate, I will not wait for your anticipated response, nor provide further follow-up. If you desire to have your institution participate and I do not receive a response by September 16th, I will provide a follow-up appeal.

Would you please signify your intentions below and return this letter immediately in the attached stamped, self-addressed envelope.

Thank you for your co-operation.

Sincerely,


C. H. Howard,
Principal,
Educational Support & Developmental Services.

/ss.
Att.

Our institution will be participating and we will respond as quickly as possible. Our contact person will be _____.

Our institution will not be participating.

**RED RIVER COMMUNITY COLLEGE**

2055 Notre Dame Avenue
Winnipeg, Manitoba R3H 0J9
Telephone 204/632-2311

77 09 23.

Dear

Thank you for the notification that you will be responding to the independent learning questionnaire which was mailed to your Institution on 77 08 12. I am grateful for your willingness to co-operate in this project.

In order to provide adequate time for quality responses to be prepared, I have extended the "deadline" for receipt of completed questionnaires until 77 10 28. As of that date, I will begin to compile the data and find it very difficult to integrate "late" information into the manual.

I would like to add that the Colleges' responses have been generally very positive and the number of participating institutions is most gratifying. I feel that adequate information will be collected to publish an excellent manual.

I look forward to receiving your completed questionnaire by 77 10 28.

Sincerely,

C. H. Howard,
Principal,
Educational Support & Developmental Services.

/ss.



RED RIVER COMMUNITY COLLEGE
2055 Notre Dame Avenue
Winnipeg, Manitoba R3H 0J9
Telephone 204/632-2311

78.03.28.

Dear

The manual on independent learning in non-university post-secondary institutions in Canada has been assembled and your promised copy is enclosed.

I want to thank all contributors for the time and effort they put forth in providing the data which are enclosed in the manual.

The main reasons for preparing this manual were to:

- (1) Disseminate information on independent learning activities in non-university post-secondary institutions in Canada.
- (2) Provide a communication link among institutions that are using independent learning as one of their methods of delivery.

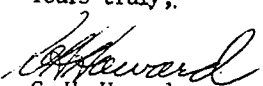
I trust the faculty and researchers who are interested in this mode of learning will find that the manual will meet these objectives.

Copies of the manual can be obtained at a prepaid cost of \$15.00 from;

Book Store,
Red River Community College,
2055 Notre Dame Avenue,
Winnipeg, Manitoba,
R3H 0J9.

Your comments about this publication would be welcomed.

Yours truly,


C. H. Howard,
Principal,
Educational Support & Developmental Services.

/ss.
Encl.

APPENDIX B
THE SURVEY QUESTIONNAIRE.

A SURVEY OF THE

INDEPENDENT LEARNING APPROACHES PRACTICED AND
PLANNED IN NON-UNIVERSITY POST-SECONDARY INSTITUTIONS IN CANADA

88

RED RIVER COMMUNITY COLLEGE

WINNIPEG, MANITOBA

Number _____

Information About The Study

1. What is the purpose of the study? The objective is to compile a directory of activities related to independent learning approaches in Canada. Part A identifies the reporting organization. Part B collects information on past and present activities. Part C collects information on what independent learning activities are planned in the next four years and how they will be designed.
2. Who will benefit? Every post-secondary institution that participates will benefit. A copy of the completed directory will be made available to each institution that responds. The directory will list current activities so that program developers can identify specific developmental activities in other institutions. Plans for future resource allocations should open the door for shared developmental activities.
3. Will the answers be confidential? Usually, replies to survey questionnaires are anonymous. However, as one of the objectives of this survey is to develop

a communication vehicle to help identify institutions that have undertaken or plan to undertake independent learning delivery approaches, the information obtained from your responses will carry your institution's identification.

4. How long will it take? It is anticipated that most respondents will require approximately one hour to answer all of the questions. In some cases, group participation may be desirable.

Remember - Your responses will be identified with your institution, referenced by program developers, and used as an information bank by all who desire to use it.

If your institution does not have any independent learning programs, you need not answer Part B of this survey. However, your responses to Part C will provide data which could be recorded and shared with other institutions.

Part A - Information on Responding Organization

1. Name of Institution _____
Address _____

2. Name and title of person completing this questionnaire.

Phone Number _____

3. What is the maximum number of full time equivalent students enrolled in your institution during the day? (This figure should include students taking extension courses in "off-campus" locations.) _____

4. Which of the following organizational divisions are part of your institution? Check all that are appropriate.

- _____ Academic Upgrading
- _____ Agriculture
- _____ Applied Arts
- _____ Apprenticeship Programs
- _____ Business Administration
- _____ Community Services
- _____ General Education
- _____ Health Science
- _____ Technology

_____ Trades
_____ Other (identify) _____

5. Please identify (using student count) the percentage breakdown of your total offering.

_____ % Academic Upgrading
_____ % Vocational Upgrading
_____ % Terminal Courses
_____ % Transfer Courses
_____ % Other

(Total 100%)

Definition

Independent Learning - This term is used to define any instructional delivery approach which provides for the student to enter a learning situation at his/her developmental level and progress until a pre-set learning criterion has been reached. In this setting the student relies mainly on the teacher as a resource person.

The term "independent learning", as used here, could be replaced with other commonly used terms such as individualized instruction, individualized program, audio-tutorial, self-paced instruction, or continuous progress.

Part B - Past and Present Activities

The following matrix has been assembled to determine, on a consistent format, the type of independent learning in which your institution is presently involved. Your selection of appropriately descriptive elements will permit more than one type of innovative learning strategy to be defined. Please identify each course or subject area where an independent learning strategy has been undertaken and then note the element grid numbers which best describe the approach used. If more space is required, attach extra sheets (supplied).

Part B relates to the past and present. Part C attempts to project the future.

Definitions

Subject - That part of the learning experience which represents one of the components of a student's total undertaking (eg. Business Education English).

Course - The total learning experience which a student would normally complete in order to receive a certificate or diploma (eg. Electrical Technology).

Please do not report at the Subject level if you can report at the Course level.

Independent Learning Course or Subject Areas	eg) Business Education English																			
Characteristics	Elements			A	B	C	D	E	F	G	H	I	J	K	L					
Performance Objectives	1 Prescribed	2 Partially prescribed.	3 Not prescribed.	1																
Mode of Learning	4 Open. Left for students to select.	5 Controlled. Prescribed in learning packages.	6 Set. One type only eg. audio tapes.	4																
Primary Type of Instructional Media	7 Printed material. (Programmed instruction type.)	8 Audio (Audio with students taking own notes).	9 Motion Pictures (Viewing of Video or 16 mm. film).	8																
Combined Type of Instructional Media (if applicable)	10 Video and printed material.	11 Audio, still pictures (slides, film strips) and printed material.	12 Audio, motion pictures and printed material.	12																
Use made of the Computer (Computer Assisted Instruction, CAI)	13 Full CAI is provided. This includes instruction, with feedback communication, test-scoring and record-keeping.	14 The computer is used as a test-scoring and record-keeping device only.	15 The computer is not used in our approach to independent study.	14																
Rate of Student Progress	16 Open. Completely at their own rate.	17 Controlled. Minimum rate established.	18 Set. Week by week goals to be met.	16																
Availability of Instructional Resources	19 Open. Resource centre open at least 80 hours per week.	20 Controlled. Resource centre open between 30-79 hours per week.	21 Set. Resource centre open less than 30 hours per week.	21																

Part B - Continued

Characteristics	Elements		Independent Learning Course or Subject Areas	A	B	C	D	E	F	G	H	I	J	K	L
	22	23													
Location Where Instructional Resources Can Be Used by Students Attending Main Campus	22 Open. All forms of media including video can be checked out for home use.	23 Controlled. Only audio tapes and printed material can be checked out for home use.	24 Set. All media must be used in resource centre.	22											
Outreach Use Made of Instructional Learning Resources	25 Materials are used as a community resource. Public can use as they do library facilities.	26 Materials are available to all registered students regardless of the students' physical location.	27 Materials are available only to students who attend main campus.	27											
Group Presentations	28 Students meet individually with instructors. Group sessions not scheduled.	29 Students may attend scheduled group sessions if they wish.	30 Set. Students are expected to attend group sessions.	28											
Response to Multiple Entry Intake. (Implies frequent student admission to the learning opportunity.)	31 Open. Students can enter on a daily basis and graduate whenever they successfully complete.	32 Controlled. Students can enter periodically (i.e. every second week), but graduate whenever they successfully complete.	33 Set. Students can enter only at the beginning of a semester (i.e. three or four times each year), but graduate whenever they successfully complete.	32											
Formative Evaluation. When Do Students Take Their Tests?	34 Open. Whenever they are ready.	35 Controlled. When they are ready within the prescribed minimum rate.	36 Set. Testing only at prescheduled times.	35											

Part B - Continued

Characteristics	Elements			Independent Learning Course or Subject Areas											
	37	38	39	A	B	C	D	E	F	G	H	I	J	K	L
Level of Accomplishment	Contracted. Performance is set by agreement between student and instructor.	Mastery level required of all students (i.e. 90% or better). (Student must "pass" or else repeat to achieve mastery.)	Graded results, "A, B, C".												
The Subject Instructor's Role in the Learning Center	The instructor is not regularly scheduled into learning center.	The instructional resources are managed by a para-professional. The instructor tutors students who need help.	The instructor fully "manages" and provides tutorial services in the resource center when his/her students are assigned to the center.	38											
How Much Traditional Class Time is Replaced by the Independent Learning Method?	Independent learning replaces at least 67% of classroom time.	Independent learning replaces from 33% to 67% of classroom time.	Independent learning replaces less than 33% of classroom time.	40											
If instructional materials have been developed within your institution, are they available for sale? Yes (Y), No (N). Materials were purchased (X).				43	Y										

Comments
Please offer comments that you feel would clarify any of your above responses. Also, please add commentary that describes your unique approach to independent learning.

Part C - Proposed Activities

Definition

This section of the survey identifies projects that your institution anticipates will be undertaken within the next four years. If planned projects are identified, individuals from separate parts of the country with common interests could communicate and minimize duplication of effort and costs.

Please indicate when you plan to start development (S) and when you hope to begin implementation (I).

Subject and course definitions are given in Part B.

Features Subjects or Courses	Subject (Sb) or Course (Co)	PLANNED INDEPENDENT LEARNING ACTIVITY											START/IMPLEMENT						
		APPROACH WILL REFLECT (PLEASE CHECK)											ADD YOUR OWN UNIQUE FEATURES		Approach Will Be Started/ Implemented In 1 Year	Approach Will Be Started/ Implemented In 2 Years	Approach Will Be Started/ Implemented In 3 Years	Approach Will Be Started/ Implemented In 4 Years	
eg. English (TRADE)	Sb	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							S		I	

Thank you for your participation. Please return survey without delay.

APPENDIX C
THE INDEPENDENT LEARNING
ACTIVITIES MANUAL

A Manual of
Independent Learning Activities
Practised and Planned
in Non-University Post-Secondary
Institutions in Canada

Prepared by:

C. H. Howard
Red River Community College
Winnipeg, Manitoba

March, 1978

INTRODUCTION

This manual was prepared from survey questionnaire responses received in the fall of 1977 from 65 non-university post-secondary institutions in Canada. One hundred sixty-five institutions were invited to participate in a nationwide survey.

The objective of this study was to catalogue information on what independent learning activities were being practised and planned and how they were designed or planned to be designed. The information is intended to provide a communication link among the non-university post-secondary institutions in Canada so that sharing of developmental resources and personal contacts among researchers and instructors could be made easier.

The editor wishes to sincerely thank the personnel from the institutions that contributed. Their careful input made this manual possible.

It is the sincere hope of the editor that readers will find the information useful.

DEFINITIONS

Independent Learning: This term is used to define any instructional delivery system which provides for the students to regularly enter a learning situation at his/her developmental level and progress until a pre-set learning criterion has been reached. In this setting the student relies on the teacher mainly as a resource person.

The term independent learning as used in this document could be replaced with other commonly used terms such as individualized instruction, audio-tutorial, self-paced instruction or continuous progress.

Subject: That part of the learning experience which represents one of the components of a student's total undertaking (eg. Business Education English). Success in an approved collection of subjects would be required in order for a student to complete a course.

Course: The total learning experience which a student would normally complete in order to receive a certificate or diploma (eg. Electrical Technology). A course would subsume several subjects.

HOW TO USE THE MANUAL

The manual is organized into three distinct yet related tables. Table I identifies the subjects that have been structured on an independent learning format. Except for minor alterations by the editor the subject titles are those submitted by the responding institutions. The subjects are arranged alphabetically and in most cases more than one subject appears on a page.

To determine what independent learning was reported in a subject area the reader should examine Table I. In this table the institutions with independent learning activity in the identified subject areas are listed on the rows and the independent learning activity features are listed in the columns. If the activity of a specific institution is of interest to the reader reference can be made to Table III for more details and contact information.

Table II is identical to Table I except that it identifies courses rather than subjects.

When institutional information on a specific subject or course is desired the reader should refer to Table III. Table III lists the participating institutions in alphabetical order and separately details all reported practised and planned independent learning activities. In addition to providing the independent learning activity features for each subject or course Table III notes the mailing address, contact person, telephone number, enrollment, and organizational divisions for each institution.