ACCEPTED

AN EVALUATION FRAMEWORK FOR DISTANCE EDUCATION

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by

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We accept this thesis as conforming
to the required standard

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ABSTRACT

The evaluation of adult and distance education is a growing area of concern. A review of the literature reveals an abundance of material on evaluation; however, few models assist the distance educator seeking to devise an instrument to evaluate a specific program. The study proposed here will attempt to answer the question "How should distance education programs be evaluated?"

This major research question and its subsidiary questions have not been addressed in any comprehensive way in the literature. This thesis synthesizes research on evaluation, distance education, and andragogy, and suggests and empirically tests a rigorous multiperspective evaluation framework that derives its criteria and procedural features from the nature of the adult learning processes. It takes into account the distance factor, and does not adhere to the traditional scientific paradigm of inquiry. The evaluation framework is tested on a professional undergraduate university course.

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Chapter I

THE RESEARCH PROBLEM

Introduction

Distance education is a recent endeavour and every area of the field requires study. Much of the educational developments in the field have been grafted on to existing systems which do not address the specific needs of the adult distance learner. Brookfield identified part of the problem when he said that "evaluation models applied to adult learning tend to draw from secondary school or higher education settings and then adapt to the circumstances of adult learners. Rarely are they grounded in, or reflective of the concepts of philosophies, and processes of adult learning" (Brookfield, 1986, p. 262). Furthermore, as Ljoså and Willen (1984, p. 114) observed in their study on evaluation of distance education at Swedish universities, "the evaluation was based on deliberations rooted in general views on higher education and adult education, and not in experience or research in distance education as a separate field of study". The characteristics and criteria under which distance education programs function differ from those of traditional face-to-face tuition (Cropley and Kahl, 1984). Little has been done to develop evaluation criteria or models for distance education since D. Gooler's (1979) publication. More work is necessary so that evaluation can be based on deliberations rooted in experience and research in distance education as a separate field of study.

Much of the current literature reveals a certain uneasiness with the traditional methods of educational evaluation. Program evaluation done with unquestioning faith in scientific methodology seeks to isolate, analyze and reduce complex systems to individual elements. This methodology seeks out facts about a program. Knowledge of facts, however, is not the same as understanding the program (Sparks,1983). Eisner (1979) believes that the scientific approach, while it has certain merits, does not present enough of a picture of the program being evaluated;

it provides only a partial or distorted view of the reality that the evaluation is attempting to understand and improve (Eisner, 1979). Distance education is a complex system but the scientific paradigm obscures its natural complexity.

Distance education is often seen as a separate field of study (Sparks, 1983). The technologies, methodologies, target clientele, and intentions differ from the traditional face-to-face tuition. We must be mindful of these differences when seeking an evaluation framework.

The purpose of this study will be to explore how the criteria and characteristics of distance education programs impact on the evaluation design. The author will examine some of the research on evaluation, distance education, and andragogy, and suggest and test a framework for evaluating distance education programs. The framework takes into account the distance factor, derives its criteria and procedural features from the nature of the adult learning processes, and acknowledges the difficulty of evaluating a complex system in the conventional scientific paradigm by combining both hard and soft data methodologies. Specifically, the study will investigate learning situations and materials for the purpose of providing useful information about the course that has been implemented and gaining new insights that may have implications for future course planning, development and implementation.

The research will explore the attitudes and feelings of those people involved in a course, regarding the process, their progress, the nature of the learning experience, access, relevancy to needs and expectations, and learner outcomes. The inquiry methodology is intended to address the question: "How is the program perceived from the client's point of view - and what are the salient and critical features which will ensure its success or failure?", rather than asking "How effective is the program?", a query which is grounded in instrumentalism. This methodology is based on the assumption that there may be features salient to the success or

acceptability of a program which are never discovered, because the questions posed at the beginning of the project were put in such a way that other unsought information was excluded.

Implicit in this study is the belief in the need to formulate grounded theory for evaluation in distance education. Kemmis (1986, p. 124) states that:

> "If educational research is wholly committed to the investigation of educational problems, then it will be based on the realization that the only genuine source of educational theories and knowledge is the practical experiences out of which these problems are generated, and the proper concern of educational research is with formulating theories that are grounded in the realities of educational practice."

The theory will come from data systematically obtained from research. Distance education is a new endeavour and thus it is especially important at this point in time to adopt research strategies and methods that are appropriate to the development of 'grounded' substantive theories.

In summary, there is a need for further research to formulate grounded theory on the evaluation of distance education programs for the adult learner. This study will explore how the characteristics and criteria of distance education programs impact on the evaluation design, and suggest and test a framework for evaluating distance education programs.

The Research Question

This study is an explication of the question: How should distance education programs be evaluated? A number of subsidiary questions will be investigated to provide insight into the major research question and support for the major thesis.

Subsidiary Questions

These questions are not addressed iteratively or in a linear fashion however, they provide a point of focus while reviewing the related literature and considering evaluation issues and concerns.

1. What are the issues involved in evaluating distance education programs? (i.e., How is distance learning different from traditional face to face instruction?)
2. What are the characteristics which influence the design of distance program evaluations?
3. What are the criteria on which to base an evaluation of a distance program?
4. What are the most effective methodologies for gaining new insights and seeking as comprehensive a picture as possible of the program being evaluated?
5. Are there unique problems in evaluating distance education not found in attempts to evaluate other education or social programs?
6. Are the purposes for doing an evaluation of distance education programs unique?
7. Do evaluations of distance education programs require unique designs, methods, or procedures?
8. Do the conventional methods of evaluation meet the needs of evaluating distance education programs?
9. What are the specific needs of the adult learner that must be acknowledged in

planning, implementing and evaluating distance education programs?

10. Are the needs of the distance student different from the needs of the traditional face-to-face student studying at a conventional university?

Terms

For the purpose of this thesis the following operational definitions will be adopted:

Evaluation: The principal objective of evaluation is to investigate learning situations and materials for the purpose of providing useful information to decision makers (Stufflebeam, 1971), ultimately attempting to determining worth or value (Scriven, 1967).

Distance Education: Distance education is a form of education characterised by:

1. the quasi-permanent separation of teacher and learner throughout the length of the learning process; this distinguishes it from conventional face-to-face education.
2. the influence of an educational organization both in the planning and preparation of learning materials and in the provision of student support services; this distinguishes it from private study and teach-yourself programs.
3. the use of technical media; print, audio, video or computer, to unite teacher and learner and carry the content of the course.
4. the provision of two-way communication so that the student may benefit from or even initiate dialogue; this distinguishes it from other uses of technology in education.
5. the quasi-permanent absence of the learning group throughout the length of the learning process so that people are usually taught as individuals and not in groups, with the possibility of occasional meetings for both didactic and socialization purposes.

(D. Keegan, 1986, p.49)

Andragogy: Andragogy has been defined as "... the art and science of helping adults to learn and the study of adult education theory, processes and technology to that end" (Titmus et al. 1979). The term refers to the principles of how adults learn. An andragogical approach is one in which adults are encouraged to think critically rather than to accept others' views. According to the research findings of Brookfield, twelve features important to andragogic process are: "nonprescriptive attitude, issue-centered curricula, problem posing, praxis, continuous negotiation, shared responsibility for learning, valuing process, dialogue, equality, openness, mutual respect, and integrated thinking and learning" (Brookfield, 1986, p. 100). These features impact on the evaluation design.

Substantive grounded theory: Substantive grounded theory is theory that is systematically obtained from research data and is developed for a substantive, or empirical area of enquiry, such as professional education. Relevant concepts, hypotheses, and problems must be inductively developed from the 'raw data' provided by a study of the substantive area (Kemmis, 1986, p. 125).

Distance-learning system: Distance learning system is used here to characterise processes that attempt to develop the full potential of distance learning models within a given context, and without relying overmuch on traditional educational patterns and structures. Such systems are qualitatively different from many traditional correspondence teaching systems. They serve relatively dispersed student populations and involve a minimal reliance on, or a significant change in the role of face-to-face teaching (Rumble and Kaye, 1981, p. 230).

Organization

Chapter I provides the introduction to the study and states the research questions to be addressed. Chapter II is a review of the current literature on evaluation, andragogy and distance education. Chapter III contains the theoretical foundations for the study, a description of the research design, analytic technique and the evaluation framework. Chapter IV describes and discusses characteristics, procedural features and criteria that impact on the design of an evaluation plan for distance education. A guide for action is presented in Chapter V. In Chapter VI the program is evaluated using a selection of appropriate criteria discussed in Chapter IV and the evaluation model is tested. In Chapter VII the effectiveness of the model is discussed and suggestions for further research are made.

Chapter II

REVIEW OF THE LITERATURE

Introduction

A review of the pertinent literature is presented in three sections. The first section focuses on the issues and concerns in evaluation that are pertinent to this. The next section discusses the literature on the principles of andragogy and the nature of the adult learning processes. The third and final section discusses the relevant literature on distance education as a field of study and characteristics of the distance education student.

Review of the Literature on Evaluation

A review of the literature on evaluation suggests that there is a wide range of evaluative situations. However, evaluation is essentially undertaken for three reasons: 1) to respond to a mandate for evaluation; 2) to provide data for program justification; and 3) to provide information useful for program improvement. Evaluation is a dynamic process. It serves many different audiences, can take place at different stages of the program's planning and delivery, and is based on many different criteria. In any evaluation the evaluators need to define and clarify the following: the audience and information required, the particular object to be evaluated, the purpose of the study, the inquiry approach to be employed, the concerns and issues to be examined, the variables to be assessed, the basis for interpreting the findings, the communication mode to be used, the anticipated findings, and the standards to be evoked in assessing the quality of the work (Madaus et al., 1985).

Historically the focus in evaluation has tended to be a quest for efficiency,

stability, human predictability, and social control. The academic father of evaluation, Ralph Tyler, introduced the objective-based approach in the 1930s and 1940s. He insisted that curriculum be organized around certain objectives that were crucial to providing explicit guides for teachers in selecting materials, outlining content, developing instructional procedures and preparing examinations. He believed that objectives served as a basis for systematic and intelligent study of educational programs. In his monograph, *Basic Principles of Curriculum Instruction* (1950), he asserts: "The process of evaluation is essentially the process of determining to what extent the educational objectives are actually realized . . . However, since educational objectives are essentially changes in human beings, that is, the objectives aimed at are to produce certain desirable changes in the behavior patterns of students, then evaluation is the process for determining the degree to which these changes in behavior are actually taking place" (Tyler, 1950, p. 69). This model is typically understood to be evaluation. The rationale, built upon the prevailing scientific tradition, was "systematic in nature, elegant, precise, and internally logical" (Lincoln & Guba, 1981, p. 4).

The Tylerian rationale forged a new dynamic thrust for evaluation but it was not long before this model was seriously challenged by the appearance of new models. Cronbach (1963) called for a shift from objectives to decisions as the organizers. Scriven (1967) said that attention should be paid not only to whether the goals were achieved, but whether or not the goals were worth achieving. Despite the many criticisms, however, evaluators persisted in using objectives as organizers. Examples include the Hammond cube (1973), the Provus discrepancy model (1971), Popham's instructional objectives approach (1975), and Stake's (1967) countenance model. While each model addressed the issues and concerns of educational evaluation in a different way, all employed the same basic inquiry mode. They were all grounded in the scientific paradigm.

Working within conventional methods, evaluators proceeded with the premise

that "when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind" (Kaplan, 1964, p. 172). Such conventional evaluators commit themselves to an exaggerated regard for the significance of quantitative data, using statistical correlations for purposes of generalization, judgement, and control. In this paradigm, educational evaluation seeks quantitative data from standardized achievement tests, whether norm or criterion referenced, to assess how well a student or a group of students performs (Eisner, 1979). The achievement tests are successful in telling what "specific" knowledge a student has learned, but they do not reveal anything about the contextual situation. They indicate little about whether a student "can do" or "does" anything with the formal knowledge in his "real life world" (Rothe, 1978). Sparks (1983) points out that program evaluations undertaken with an unquestioning faith in scientific methodology seek to isolate, analyze and reduce complex systems to individual elements. This methodology seeks out facts about a program. Clearly, however, knowing the facts about a program is not the same as understanding it.

Recognizing the inadequacies of existing curriculum inquiry modes, researchers sought alternate evaluation paradigms. Evaluators looked for other ways to gather information which produced descriptive data about human qualities and school contexts (Rothe, 1978). Alternate evaluative frameworks emerged. Eisner (1976) advocated the critical judging of a program from an expert point of view. Others, such as Knox (1979), and Parlett and Hamilton (1976), sought to understand programs in the wider educational context in which they operated. Lincoln and Guba (1985) suggest that the quantitative methodology of the scientific paradigm is too limiting; they propose the use of qualitative data and the adoption of naturalistic evaluation. Aoki (1978), Werner (1978), Rothe (1978), and Wilson (1978) took their cue for evaluation from what Beittel (1973) called the "Rashomon effect",

a notion borrowed from Kurosawa's film in which the same event is disclosed interpretatively from different perspectives (Aoki, 1985). They saw an investigation based on multiperspectives as providing a useful and meaningful framework for conducting an evaluation. Werner (1978) says that "evaluation is a 'making-sense' or interpretative activity. It is the task in which the evaluator interprets educational situations and programs from some perspective" (p. 20).

There are many approaches to evaluation. Some programs have a methodology which allows them to measure whether the program goals have been met. These programs have an abiding faith in "objective measurement"; they are based on the assumption that all human behavior must be quantified if efficiency is to be advanced. Central to this paradigm is a view of the learner as a mechanistic student for whom an appropriate package of programmed course materials can be designed and evaluation is best achieved by a scientific or rational methodology emphasizing careful collection of data. However, not all courses are, or should be, so prosaic. Sparks (1983) believes that for the social sciences, management, and human relations as well as education, the methodology of scientific research has its drawbacks. One of the main techniques of scientific research is analysis and isolation, leading to reductionism and studies of isolated elements of an overall system. The natural complexity of the system is lost as each component is considered independently. Unlike the results of normal scientific research, the knowledge of experience cannot always be tested in controlled experiments (Sparks, 1983).

As Gooler states, multiple criteria acknowledge the pluralistic nature of distance education. "Evaluation is more an art than a science. It requires the ability to respond to a real state of affairs with an appropriate design, to create a plan out of the complexity of an education program and to respond to its many constituents" (Gooler, 1979, p. 50). Needs and interests change over time and thus the substance of the criteria will change. A good evaluator will be sensitive to the shifts in priorities

and expectations of developers, managers and consumers of distance education services. Gooler's (1979) article suggests criteria according to which distance education programs might be evaluated. Some of these criteria are access, relevancy to needs and expectation, quality of program offering, learner outcomes, cost-effectiveness and impact. While some criteria are common to both face-to-face and distance education, others are uniquely relevant to distance education programs. In general terms, evaluations of such programs are aimed at determining who is involved, what they are learning and at what costs, and with what benefits (Gooler, 1979). Programs should not be judged according to a single criterion.

Any model of evaluation represents explicitly or implicitly a view of the nature of learning, what influences it, and how it can be investigated. The "test measurement" or "positivist" evaluation model has close links with the stimulus response approach of behaviourist psychology. At the other end of the scale, the "illuminative" (Parlett and Hamilton, 1973) or "naturalistic" (Lincoln & Guba, 1981) evaluation model represents the broader approach of the social sciences. By its very nature, the basic information processing model of learning provided by cognitive psychology focuses attention on the actual process of learning. The "objective orientated" or "test measurement" model approach assumes a direct link between teaching and learning and thus looks towards changing teaching. In complete contrast, the "illuminative" approach is largely unconcerned with either improving the learner's skills or revising instructional materials.

> "There seems to be at least two different schools of thought on distance education, one stressing individual study and individual, non-contiguous tutoring on the basis of course materials produced for large groups of students, the other aiming at parallelism with residential study and usually including class or group teaching face-to-face as a regular element. Whereas the former represents the type of industrialization leading to rationalisation and economy of quality discussed by Peters and considers distance education to be basically different from face-to-face education, distance education is to the latter merely a form of distribution for which even the same tutor-student ration for distance study and on-campus study is considered acceptable and even advantageous" (Holmberg, 1983, p. 4).

The organizational model adopted by the institution will inevitably impact on the evaluation design.

Review of the Literature on Andragogy

Adults are one of the primary target clientele for distance programs. Much of the literature recognizes the variables and the psychological considerations that make the adult learning experience different from that of the adolescent. Emerging theories of how best to facilitate learning for adults are subsumed in the term andragogy. The term refers to principles of adult learning. Many adults bring to the learning experience a rich body of experience, different motives and learning needs in a time scale different from that of childhood. The adult learner has passed through childhood development and needs learning experiences that are adapted to adult life. Hough's (1984) viewpoint is that effective adult learning should be based on the needs and interests of the adult learner. He summarizes the key feature of the adult learning approach as: "it allows the learner to select the content and processes of learning; content and processes are based on individual needs and interest." (Hough, p. 7) Petersen believes that there are three major demographic variables that are highly relevant to educational planning for adults: 1) age; 2) level of educational attainment; and 3) place of residence. These factors support the argument that the needs and experience-based concepts of andragogy offer useful insights into the learning patterns of adults: "The implications of andragogy for education are obvious. We might best summarize them by advising adult educators to spend as much time studying the rhythm of mental, physical and emotional development of their students as do child psychologists and pedagogues in the primary school" (Petersen, 1981). McClusky (1983) suggests that maximizing adult learning requires a judicious selection of techniques which optimize characteristics of adult learning and ensure maximum motivation. Brookfield

(1986) identifies six central elements effective in facilitating adult learning: voluntary participation, mutual respect, collaborative spirit, praxis, critical reflection, and self-direction. According to Simpson (1980), the two distinguishing characteristics of adult learning most frequently advanced by theorists are the adult's autonomy of direction in the act of learning and the use of personal experience as a learning resource. Brookfield points out that:

> "self-direction in learning is not an empirically verifiable concomitant of adulthood. There are many individuals who are chronologically adult but who show a marked disinclination to behave in anything approaching a self-directed manner in many areas of their lives. Self-directedness is rather being advanced as a prescriptively defining characteristic of adulthood. Hence, for an act of learning to be characteristically adult, it will have to exhibit some aspect of self-directedness." (Brookfield, 1986, pp. 25-26).

James (1983) devised the following set of basic principles of adult learning after a team of researchers undertook a search of articles, research reports, dissertations, and textbooks on adult learning (p.132):

1. Adults maintain the ability to learn.
2. Adults are a highly diversified group of individuals with widely differing preferences, needs, backgrounds, and skills.
3. Adults experience a gradual decline in physical/sensory capabilities.
4. The experience of the learner is a major resource in learning situations.
5. Self concept moves from dependency to independency as individuals grow in responsibilities, experience and confidence.
6. Adults tend to be life-centred in their orientation to learning.
7. Adults are motivated to learn by a variety of factors.
8. Active learning process contributes to learning.
9. A comfortable supportive environment is the key to successful learning.

Individual learning behaviors are idiosyncratic. It must be recognized, however,

that the characteristics and the nature of the adult learning processes differ from those of the younger learners for whom the paradigm for tertiary education was designed. Learning activities and the evaluation of those activities should reflect an understanding of their uniqueness. The evaluation framework should be grounded in, and derived from, central features of adult learning. Brookfield (1986) suggests that the three models that appear most likely to qualify as candidates for a uniquely adult evaluation framework are: 1) participatory evaluation (Lincoln, 1955), allowing adults to assume control for the evaluation of their learning; 2) perspective discrepancy assessment (developed by a team of researchers at Columbia University's Teachers College), based on the assumption that "the educational process can best be understood by examining how those involved perceive and understand the process and themselves in relation to it" (Mezirow, 1978, p. 52); and 3) andragogy and collaborative modes of evaluation (adumbrated by the Nottingham Andragogy Group, 1983), suggesting that the educator hand over the power and responsibility for the group to the participants, who frequently "reflect on the value of the activities of the group" (Brookfield, 1986, p. 27).

Review of the Literature on Distance Education

Much of the literature on distance education emphasizes how different the educational experience is for the distance learner than for the student in a face-to-face learning experience. Kahl and Cropley (1986) summarize these differences as follows:

DIFFERENCES BETWEEN DISTANCE AND FACE-TO-FACE STUDY

Face-to-face education	Distance education
Immediate, personal contact between learner and teacher	Contact through communications media
Teacher can readily adapt to learner's immediate behavior	Adaptation delayed
Learner's environment is primarily designed to support learning activities	Learner's environment is designed to serve other purposes (distractors)
Metacommunication between teacher and learner is possible	Metacommunication is difficult
Personal relationships can moderate learning	Personal relationship is of little importance
Direct control of learner by teacher is possible	Teacher's influence is indirect
Learning materials can be of low didactic standard	Learning materials must be of high didactic standard (well organized, clear, etc.)
Learners experience a limited of freedom	Learners experience a high degree degree of freedom
Wide opportunities exist for imitation/identification learning	Few opportunities exist for imitation/identification learning
Communication need not be planned to last detail	Communication is usually highly planned

Information is provided by a mixture of cues (personal, content - related, organization-related)	Information is mainly provided by content organization
A high degree of evaluation and feedback from the teacher is possible	A comparatively low degree of feed-back evaluation and feed-back from the teacher is possible
Internal motivation, self-direction, self-evaluation, planning, etc. can be low	Internal motivation, self-direction, self-evaluation, planning ability, etc. must be high
Willingness and ability of learner to work without direct supervision may be low	Willingness and ability of learner to work without direct supervision must be high

(Cropley and Kahl, 1986, p. 37)

The many differences between distance and face-to-face study indicate how important it is to consider the unique characteristics of the distance education experience and avoid grafting on to the existing educational systems.

There is evidence to suggest that distance education courses serve a unique clientele. Coldeway (1986) suggests that students who enroll in distance education programs differ in several ways from on-campus students. The students are older, with a wide range of educational backgrounds, a wider range of prior educational experiences, a wider range of academic ability, and a wider range of demographic and personal characteristics (e.g. age range, sex ratio, family situations, and work experience). In summary, the student population and the educational experience differs from the traditional face-to-face tuition.

Educating adults outside the traditional face-to-face on-campus model is an evolutionary process dating back 200 years. However, it is only in the twentieth century, and perhaps particularly in the last decade, that teaching at a distance has achieved international recognition and even acclaim (Sewart, 1983). It holds a

great attraction to a certain clientele because it liberates the student/teacher interface from the traditional setting. It removes as many of the barriers of conventional education as possible. The rationale for distance education has been generated from two different sets of needs: (1) in the western world, the need to provide an education for adults denied access to higher education because of distance; (2) in developing countries, although distance is a factor, the primary need is for economic development (Perraton, 1982).

According to the Report of the Distance Education Planning Group on a Delivery System For Distance Education in British Columbia, prepared in 1977, the target clientele for distance education is isolated from traditional learning institutions by the following constraints:

1. Time: shift workers, employees who travel, fishermen whose activities are seasonal, etc.
2. Social Space: the under-educated adult, the high school drop-out, the isolated housewife, the immigrant who does not identify with traditional learning institutions, etc.
3. Geographic Space: the person who is beyond commuting range of a college campus, etc.
4. Physical Space: the handicapped or the elderly who cannot move easily to educational institutions, the hospitalized, the institutionalized, etc.
5. Learning Style: The learner who wishes to proceed at his own pace for a variety of reasons, etc.

(Report of the Distance Education Planning Group on a Delivery System for Distance Education in British Columbia, 1977)

Thus, new programs and priorities are emerging because the learners' needs are not met through traditional institutions and delivery systems. Hough (1984) believes that a greater incorporation of adult needs and characteristics into both

course and subject designs and into the delivery systems of distance education would lead to more effective distance learning by adults.

Diverse new technologies and educational instruction systems have created a complex field of educational activity (Sewart, 1983). More recent technological developments include two-way interactive radio and television, satellite links between learning centers, computer terminal/learner/instructor interaction, micro-computer programs, video tapes, and video discs (Ruggles et al, 1982). It is this complexity that both demands and challenges evaluation.

Distance education is often seen as a separate field of study because the technologies, methodologies, target clientele, and intentions often differ. We must be mindful of these differences when seeking an evaluation framework.

In summary, there is a very limited body of literature specifically addressing evaluation of programs offered to the adult distance learner. More research is necessary to guide the development of distance education program evaluation. The purpose of this study is to consider the literature on evaluation, andragogy and distance education and explore how the criteria and characteristics of distance education programs impact on the evaluation design. Specifically, in an attempt to formulate grounded theory for evaluation of distance education programs, the study will consider the issues and the concerns of evaluating distance education programs, and develop and test an evaluation framework specific to the needs of adult distance learning.

Chapter III

PROCEDURE

Conceptual Framework

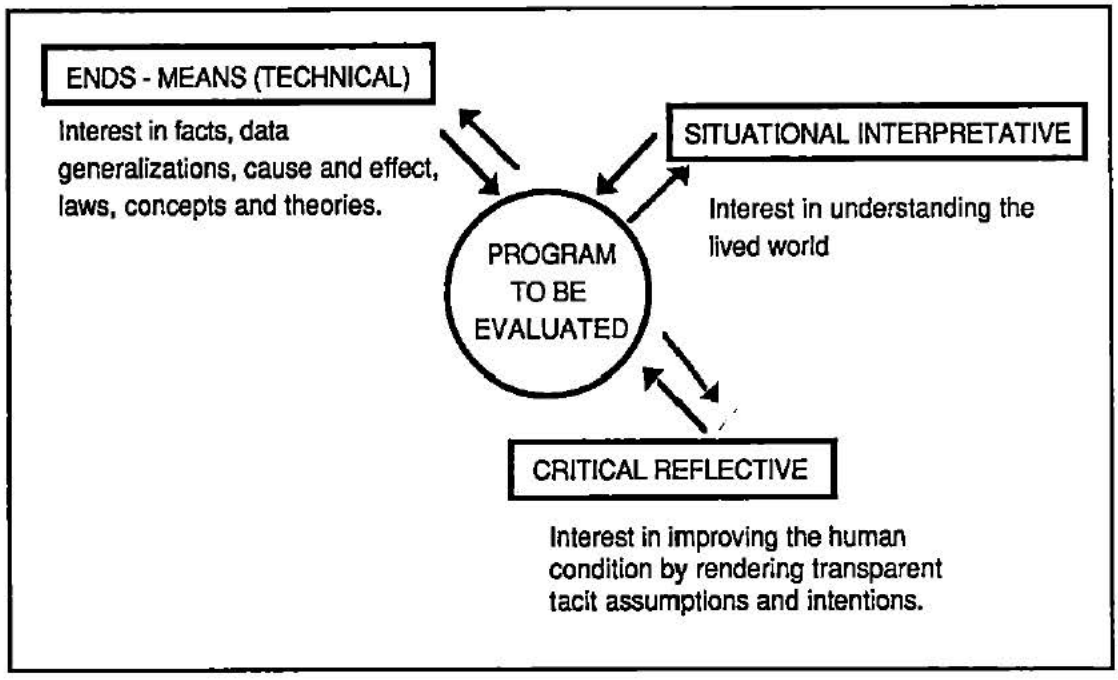
The work proposed in these pages is based on modification of two alternative evaluation paradigms: 1) an evaluation study of an introductory sociology course offered by distance education between 1983 and 1986 at the Gippsland Institute of Advanced Education; and 2) an evaluation of the British Columbia Social Studies curriculum in 1979.

The British Columbia Social Studies evaluation, in an "endeavour to transcend the dominant tradition of curriculum evaluation" (Aoki, 1984. p.4), appropriated Jurgen Habermas' paradigms. In the western intellectual world, Habermas saw a serious crisis dominated by instrumental reason based on scientism and technology. He appealed to philosophical anthropology to reveal knowledge constitutive human interests embedded in basically different paradigms. The British Columbia Social Studies curriculum committee relabelled the paradigms: (1) Ends-Means (Technical) Evaluation Orientation; (2) Situational Interpretive Evaluation Orientation; and (3) Critical Evaluation Orientation; and used these multiple perspectives to guide the curriculum evaluation.

The evaluation of the introductory sociology course, at the Gippsland Institute of Advanced Education, drew strength from critical theory, especially Habermas. Central to this approach is the view that evaluation is best achieved by those actively involved in the programs under review. This approach emphasizes the unity of theory and practice and sees useful reform as proceeding from critical reflection upon practice. The evaluation was based on action-research and critical reflection, exemplified by the work of Kemmis and Carr (1983) and Smyth (1984a, 1984b).

Figure 1.

Diagram of Conceptual Framework



Sources of Evidence

There are several major sources for this study. The first, that of secondary materials, has already been discussed under the "Literature Review" section of this thesis. The other major source is an article by D. Gooler (1979), entitled "Evaluating Distance Education Programs". The major research question is put forth along with twelve questions, the answers to which should provide insight into the major research question and support for the major thesis.

Questionnaires and interviews grounded in Habermas' different paradigms will assist in seeking the answer to the major question. The intent of the questionnaires and interviews is to gain a situational or a contextual understanding of the program

as well as some factual information.

All participants in the program, the students, the teacher, the course designers and the tutors are involved in the evaluation as all of these people have important stories to tell; each can make a major contribution to the process. Sample questionnaires and sample interview guides are in the Methods/Instruments section of the research design. These qualitative evaluation methods are based mainly on the observations and recommendations of Patton (1980).

Analytical Technique and Research Design

Introduction

This section describes a model for action designed by the author. It is an evaluation framework that derives its criteria and procedural features from the nature of adult learning processes, takes into account the distance factor and goes beyond the mono-dimensional effect of the conventional scientific methodology. Testing this model will result in the formulation of substantive grounded theory on evaluation of distance education programs for the adult learner.

The Evaluation Design

Objectives and Rationale

The principle objective of evaluation is to investigate learning situations and materials for the purpose of providing useful information for decision makers (Stufflebeam, 1971), and ultimately determine worth or value (Scriven, 1967). Evaluation of distance education not only provides useful information about the value or worth of a course that has been implemented but also has significant

implications for future course planning, developments and implementation (Gooler, 1981). A course or a program cannot be considered successful in terms of a single criterion or from a single point of view. To obtain the most meaningful information about a program the perspectives of all the participants must be incorporated into the evaluation.

Secondary and/or enabling objectives are as follows:

- to develop criteria on which to base an evaluation of a distance program;
- to identify characteristics which influence the design of distance learning evaluations;
- to diagnose particular areas of weakness in design or delivery requiring remedy;
- to get the broadest picture possible of the program ; and
- to identify particular areas of strength on which further courses might be modelled.

The evaluation is intended to focus on professional programs, thus eliminating a number of issues that present potential problems in evaluating other distance learning situations. The goal of the student, i.e., successful completion, is consistent with that of the institution. Motivation is high for successfully completing the course because it is part of a program that leads to betterment in the workplace. Professional programs assume certain levels of literacy and competency in terms of study and organizational skills.

The design of the model is eclectic in that it is based on several different models. It combines hard data methodology with case study methodology so as to acknowledge different ways of knowing and understanding in order to get a holistic view of the program. Such an approach seems appropriate for it increases the relevance of the findings and offers an opportunity to break out of traditional paradigms. Case study methodology presents a better opportunity to get the type of

information that is more likely to provide new and unexpected insights. If a framework only allows response to specific questions, the investigator will only get answers to those questions. The field is new, and if only a hard data inquiry methodology is used, the scope and the nature of the findings will be limited. This is not to deny the importance of such techniques or the value of quantitative data; on the contrary, in this evaluation some forms of hard data are sought.

In an on-campus evaluation the instructor gets immediate feedback on the effectiveness of the course. Body language, eye contact, and certain types of questions lead to insights into strengths or weaknesses in the course and the quality of the learning experience. Personal interview data gives the distance student an opportunity to discuss his or her opinion.

There are specific factors not commonly found in other educational contexts which must be considered when designing an evaluation of distance learning programs. Briefly, they are as follows:

- Criteria for ascertaining success are more difficult to define.
- Student performance is not necessarily directly related to the quality of the course, the materials, or the instruction. Distance students, unlike most on-campus, do not give studying top priority. They are likely to be older, married with families, and working. Successful completion does not necessarily reflect the quality of the course or how much learning occurred.
- In general it is not possible to observe students while doing the course.

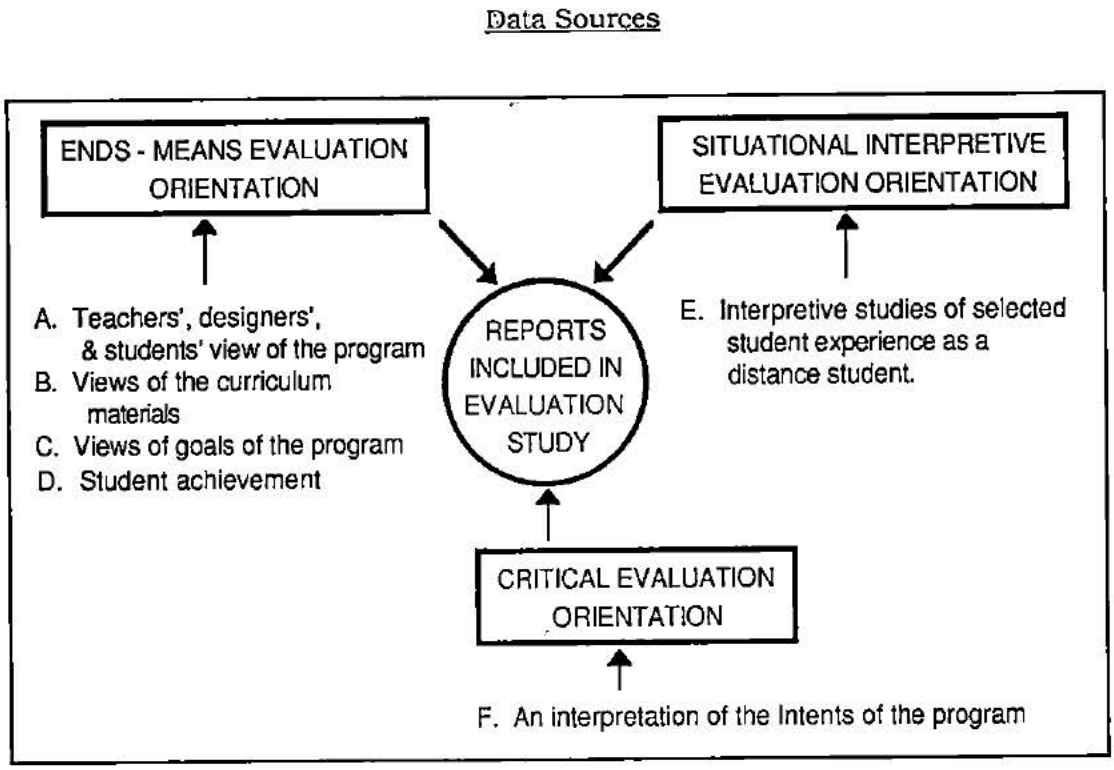
Student performance does not necessarily reflect the success or failure of the organization of the course, the instructor in the course, or the quality of the materials. The types of evaluation models and approaches which are commonly used in an on-campus situation may not be directly applicable or suitable for an off-campus evaluation.

Data Sources

Information about the course must be obtained from its authors, designers and/or project managers, the students, the teacher, and the tutor where applicable. Multiple lenses add texture and fullness. The designers' perceptions as to what they expect to be the effectiveness of the course are sought. The students' views must be compared with those of the developers. Managers and tutors represent somewhat different perspectives. Tutors can observe how the students are progressing and can identify problems encountered with course materials and assignments, and point out issues related to accommodating different learning styles and difficulties arising from integrating the course into lifestyles. Project managers should assess the course and how the students coped.

Data collected through personal interviews clarify and identify the goals, intentions, and assumptions on which the course is grounded. This helps to identify possible discrepancies between what an instructor considers to be his message and the apparent meaning derived from it by some of his students. See Figure 2 for data sources.

Figure 2.



Student performance must be incorporated into the study in a systematic way. It is here that hard data collection is required. In a professional course a specified level of competency is required; thus achievement is of direct significance to the success of the course.

Evaluation of student performance must consider the issue of attrition which has been studied by Spady (1970, 1971), Tinto (1975), and Terenzini and Pascarella (1979, 1980). Despite the lack of a common definition for the population of drop-outs, failure to complete is a concern for distance educators.

Timing of Information Collection

An interview was conducted with the course designer and the teacher/tutor during the course to determine orientation, expectations, and goals. A questionnaire was mailed out at the beginning of the course to gather personal information including constraints and motivation (i.e., is the student working while taking the course, could he/she have taken the course on campus, etc.?).

Midway through the course students' attitudes towards the distance study process, problems being encountered, comments on construction and design of the course, effects of the different media employed, etc., were gathered by randomly selecting a group of students to interview by telephone. When students completed the course and their performance was assessed, reflective information from the students, teacher/tutor and managers was obtained.

For an evaluation plan to be successful and sustained, it must be adaptable. The design must be flexible so that informants can provide information in ways and at times that are convenient for them and evaluators can adjust their methods and timing as appropriate. This flexibility allows for changes in the format, scope, and timing of evaluation strategies as the need arises. See Appendix E.

Methods/Instruments

Patton suggests that the type of instrument used can greatly influence the type of information gathered. A closed interview forces program participants to fit their knowledge, experience and feelings into the evaluator's categories. I chose to use an open-ended or qualitative interview, because as Patton (1983) claims, open-ended interviews seek new information by providing a framework within which respondents can express their own understandings in their own terms. Qualitative interviews never supply or predetermine the phrases or categories that must be used

by the respondents to express themselves. The purpose of the qualitative interview, as suggested by Patton, is to "understand how program staff and participants view the program, to learn their individual perceptions and experiences" (Patton, 1980, p. 203).

Patton describes three types of open-ended interview strategies:

(1) The informal conversational interview. The questions and topic are not predetermined but emerge from the immediate context and are asked in the natural course of things.

(2) The interview guide approach. The topics and issues are outlined in advance; the interviewer determines the sequence and working of questions in the course of the interview.

(3) Standardized open-ended interview. The wording and the sequence of questions are determined in advance and all interviewees are asked the same basic questions in the same order.

I believe that the interview guide approach is the most suitable choice. It allows enough structure for comprehensive and systematic data collection, flexibility for relating to particular individuals and circumstances, and freedom to remain fairly conversational and situational.

While the specific questions should be determined in response to the specific program being evaluated, they fall into six basic categories. On any given topic it is possible to ask any of the following:

1. Experience/Behaviour questions. These elicit descriptions of experiences, behaviours, actions, and activities that would have been observable had the observer been present (e.g., "If I had been in the program what would I have seen you doing?").

2. Opinion/Value questions. These questions are aimed at understanding the cognitive and interpretative processes of people. The answers tell us what people think about the world or a specific program. They tell us the person's goals,

intentions, desires, and values (e.g., "What do you think about?" or "What is your opinion of ...?").

3. Feeling questions. These deal with the emotional responses of people to their experiences and thoughts. There is an implicit assumption of spontaneity about the origin of emotional responses. In asking feeling questions, the interviewer is looking for adjective responses, for example, "Do you feel anxious, happy, afraid, intimidated, confident, . . . ?". It is important to note a distinction between opinions and feelings. When one wants to understand the respondents' emotional reactions it is appropriate to ask about feelings. When one wants to understand what they think about something, the question should explicitly ask about opinions, beliefs and considered judgments - not about feelings.

4. Knowledge questions. These are asked to find out what factual information the respondent has. Knowledge of a program may consist of reporting on what services are available, who is eligible, the characteristics of the clients, who the program serves, how long people spend in the program, what the rules and regulations of the program are, and so on.

5. Sensory questions. These are about what is seen, heard, touched, tasted, and smelled (e.g., "When you are walking through the doors of the program, what did do you see?" or "What does the counsellor ask you when you met him? What does he actually say?") Sensory questions attempt to have interviewees describe the stimuli to which they are subject.

6. Background/Demographic questions. These are concerned with identifying the characteristics of the person being interviewed. Age, education, occupation, and residence/mobility are standard background questions.

In qualitative interviewing the interviewee needs to become actively involved in providing descriptive information as soon as possible instead of becoming conditioned to providing short answers or routine responses to uninteresting categorical questions. Although there are no rules for sequencing questions Patton

makes several suggestions:

1. Begin with non-controversial questions on present behaviours, activities, and experiences that involve straightforward description, and minimal recall and interpretation.
2. Knowledge and skill questions typically need a context. These questions can be threatening so they work best after rapport and trust have been established in the interview.
3. Questions about the present are easier to answer than those about the past. Use the present as the baseline to ask questions about the past and only broach questions about the future.
4. Background and demographic questions are basically boring and epitomize what people don't like about interviews. Patton recommends that they should be kept to a minimum and placed strategically and unobtrusively throughout the interview. Socioeconomic status, birth order and the like should be saved for the end of the interview.

Asking questions is an art (Payne, 1951). Wording is an important element in determining the response. Patton makes several suggestions which should be kept in mind when determining how questions will be asked. He says that good questions should be held to a minimum and be open-ended, neutral, singular, and clear. The questions should be posed in such a way as to get an in-depth interview and to get people to talk about experiences, feelings, opinions, and knowledge. For this reason Patton suggests the following:

1. The questions should not be dichotomous response questions (Patton, 1983, p. 213).
2. Presupposition questions are useful to the skillful interviewer to increase the richness and the depth of responses and data obtained (Patton, 1983, p.

219). The presupposition format has a naturalness (Patton, 1983, p. 221). The purpose of in-depth interviews is to find out what someone has to say and by presupposing that the person being interviewed does, indeed have something to say, the quality of the descriptions received is likely to be enhanced.

3. One of the basic rules of questionnaire writing is that each item must be singular, i.e., no more than one idea should be contained in any given question. Patton says that in his experience multiple questions create tension and confusion because the person being interviewed does not really know what is being asked (Patton, 1983, p. 222).
4. Patton suggests that one should avoid "why" questions. "Why?" questions presume cause-effect relationships, an ordered world, perfect knowledge, and rationality. The why questions move beyond what has happened, what one has experienced, how one feels, what one opines, and what one knows to making analytical and deductive inferences.
5. Neutral questions establish a rapport with the person being questioned. Neutrality means that the person being interviewed can tell the interviewer anything without engendering either favor or disfavor.

Regardless of the interview strategy used, the wording of questions will affect the nature and quality of responses received. Constant attention to the purpose for specific interviews and the ways in which questions can be worded achieve the evaluation purpose. The instrument designed with Patton's suggestions in mind is found in Appendices F, G, H, and I.

During the implementation phase a sample of students provided highly specific feedback on how they were progressing through the course. These students were randomly selected and asked to make specific comments on any difficulties they may have been experiencing and any strengths of the course delivery as they saw

them at that point. They also were asked for any other comments they wished to make. They were reminded that the evaluation would not influence their grades as the instructor would not see the comments until the end of the course when the comments would be compiled anonymously onto a sheet.

At the final or outcome stage, several information collection strategies were applied. A general survey questionnaire was administered to all students who responded to the first questionnaire. Students who did not complete the course were sent a questionnaire by the University.

The teacher/tutor report discussed perceptions of how well the course went. The report was semi-structured and outwardly informal, and the results were recorded and subsequently summarized.

The variety and timing of evaluation strategies deployed contribute to the reliability and validity of the evaluation. This is especially important in a qualitative study, for such studies are often accused of being too subjective. Each instrument contributes to the overall completeness of the results. For example, the general survey of students in each course conducted at the end of the term is obviously limited in the depth of understanding it can provide. This limitation, however, is offset by the highly specific data collected from the sample of students who reported problems and progress throughout the duration of the course.

When students have completed a course, the things which annoyed them previously are often no longer important and they tend to respond mildly on retrospective surveys (Thompson, 1987). This design is meant to capture spontaneous judgments as they are made. For this reason the midcourse student evaluation is probably the most valuable data collected in the evaluation.

Recording Information

Summaries were made of all descriptive reports and student responses. Extensive notes were made on all interviews.

Information Processing and Interpreting

The essential task of the evaluator is to collect, process and interpret the results. Points of congruence or discrepancy become apparent and insights and understanding result.

Reporting Findings

The evaluator must report the findings to the selected audience in a meaningful descriptive form. The principal audience for this evaluation is the course developer or the project managers. The results have implications for future development and construction of courses.

The systematic processing of the qualitative data is a strength of the design. The mass of subjective information must be systematically organized to convey insightful meaning. The information must be organized and presented in a way so as to give structure to the qualitative data and make meaningful interpretations of the complexity of opinions. The information must be organized and presented in a way that cannot easily be dismissed by the appropriate audience.

Chapter IV

CRITICAL ISSUES THAT IMPACT ON THE DESIGN OF AN EVALUATION PLAN FOR DISTANCE EDUCATION

Characteristics of students

The characteristics of the target clientele clearly impact on the evaluation design. It is necessary to describe distance learners and understand their needs and expectations in order that effective models of course delivery be developed and existing models modified. Much has been done to describe the learner in terms of personal characteristics such as age, education, and occupation (Shipp and McKenzie, 1981). Field's (1982) comprehensive analysis of a major group of students who have chosen to study at a distance signals four characteristics which differentiate these students from the traditional university undergraduate student. They differ in: experience, aspirations, study milieu, and investment. The major components of Field's analysis of Open University students and students generally is presented in Figure 3 (Field, 1982).

Figure 3.

Comparison between Open University students and traditional university undergraduates.

Characteristics of Students

Students generally	Open University students
1. Experience	
People under 25, with little direct experience of employment; of the application of knowledge or tech- in service or industrial settings; of human relations or of social changes.	75% aged 30-55 with a diverse accumulation of experience; with ideas on evidence, accuracy and analysis not gained from schooling. For many learning starts with un-learning.
2. Aspirations	
People locked into education because of selection and training; because of family expectations; because of tied income and for whom in the current economic climate there is no attract-ive alternative.	For some, university studies are central as there is no other way to fulfil aspirations; or study to gives a new dimension to existing work; or study is marginal with family and job responsibilities dominating it.
3. Study Milieu	
Easy access to learning media; to fellow students; to advisers and tutors; leisure facilities are complementary to study; all within a convenient distance.	The study milieu is generally characterised by its distance from the source of instruction; the distance in time caused by the mis-match between the student-system time and institutional time.
4. Investment	
Traditionally a paid-for place in an institution of higher education has been the surest route to a clean, pleasant and interesting job. More recently it is a postponing of unemployment or work experience. Graduates emerge not very useful immediately to employers but they can be developed and exploited by employers.	The student takes on and finds money for an extra workload, a departure from most of his peers. To the family of the student the return may be less tangible than from other activities. The graduates are older, expensive and less mobile but with extensive experience of life.

Keegan says that:

> "... in general distance students tend to be gainfully employed, have less prior education, are older and live comparatively far away from the nearest place offering the same course in a different form." (Keegan, 1986, p. 171)

Understanding Principles of Effective Practice

The literature on andragogy recognizes that there are variables and psychological considerations that make adult learning experiences different from those of the adolescent. Brookfield (1986) suggests that when facilitating adult learning we should recognize the central principles of effective practice. These principles apply to activities that support teaching and learning encounters, and not marketing, budgetary or administrative tasks. These six principles are:

1. Voluntary participation in learning
2. Mutual respect
3. Collaborative spirit
4. Action and reflection
5. Critical reflection
6. Self direction

The following is a brief description and discussion of the implications of these six principles of effective practice in facilitating adult learning as laid out by Brookfield (1986). These six principles impact significantly on the evaluation criteria.

Participation in Learning

Participation in learning is voluntary. Adults engage in learning on their own volition in order to develop new skills, improve already existing competencies, or sharpen powers of self insight. Albeit the circumstances prompting the learner may be external (loss of job, divorce), the decision is the learner's. Since the learner is not

coerced or intimidated into learning, she/he is less likely to resist participatory learning activities such as discussion and collaborative analysis of personal experience. It also means that such participation can be easily withdrawn if the adult learner feels that the activity does not meet his/her needs, does not make particular sense, or is conducted at a level that is incomprehensible to them. Facilitators must pay close attention to curriculum development and educational processes. Brookfield (1986) believes that participatory learning methods can be used to present new knowledge concepts, skills or frameworks of interpretation to adult learners in a way that is comprehensible in terms of their own experiences. Bligh (1972) claims that mass instructional techniques can be employed for presenting information but are little use if the educator or trainer is seeking to promote critical thinking or to encourage adults to be more flexible in their thinking.

Mutual Respect

Brookfield (1986) believes that effective practice is characterized by a respect among participants for each other's self worth, uniqueness and individuality. It is important to set a climate for learning (Knowles, 1980) and to assist in the development of a group culture in which adults feel free to challenge one another and to be challenged. The development of powers of critical reflection, which is central to adult learning, means that the adult will frequently be challenged by educators and fellow students. The honest expression of differences is a valuable part of the educational process if the milieu is supportive and comfortable.

Collaborative Spirit

Collaboration is grounded in the features of voluntary learning and respect for individual participants. Collaboration involves a continual renegotiation of

activities and priorities with different group members assuming leadership and facilitator roles in the setting of objectives in curriculum development, in methodological aspects, and in generating criteria and indexes. Education roles vary so that at different times different members of the adult learning groups will assume responsibility for posing questions, identifying materials, suggesting priorities or organizing aspects of the group process. Brookfield (1986) says that adult learning is facilitated when adults meet as equals in small groups to explore issues and concerns and then take action as a result of these explorations.

Action and Reflection (Praxis)

Learners and facilitators are involved in the continual process of activity, reflection upon activity, collaborative analysis of activity, and further reflection and collaborative analysis. "Activity" can, of course, include cognitive activity, learning does not require participants to "do" something in the sense of performing clearly observable acts. Exploring new ways of interpreting one's work, personal relationships and political allegiances are examples of activity in this sense.

This process centers on the need for educational activity to engage the learner in a continuous and alternating process of investigation and exploration, followed by action grounded in the exploration, followed by reflection on the action, followed by further investigation and exploration, followed by further action and so on. This notion of praxis as alternating and continuous engagement by teachers and learners in exploration, action, and reflection is central to adult learning. It means that exploration of new ideas, skills or bodies of knowledge does not take place in a vacuum but are set within the context of the learners' past, current and future experiences. In settings where skills are being learned praxis is easily observable. Learners become acquainted with skills, apply these to real life settings, reflect with other learners on their experiences in these settings, redefine how these skills

might be altered by context, reapply these in other real settings, and so on.

Activities are concerned with paradigm shifts, changes in consciousness, and explorations of new interpretations. Adults do not acquire and internalize ideas, skills, knowledge, and insights in a context free vacuum. In curriculum design, selection of materials, and use of educational methods therefore, facilitators should build upon this tendency of adult learners to interpret, understand, codify, and assign meanings to new ideas, insights, skills, and knowledge in the context of their own experiences.

Critical Reflection

Critical reflection aims to foster healthy skepticism. Brookfield (1986) suggests that through educational encounters, learners come to appreciate that values, beliefs, behaviours and ideologies are culturally transmitted. He believes that learning is effectively facilitated when the educator is prompting in learners a sense of the culturally constructed nature of knowledge, beliefs, values and behaviours. To develop this awareness the facilitator must present alternative interpretations of the learners' lives, personal relationships and views of social and political work.

There must be an awareness of underlying assumptions, norms, and uncritically accepted practices as well as encouragement to imagine alternate structures and practices. Brookfield (1986) says that education is centrally concerned with the development of a critically aware frame of mind, not with uncritical assimilation of previously defined skills or bodies of knowledge.

Self Direction

Self directed learning in adulthood is not merely learning how to apply techniques of resource location or instructional design, it is a matter of learning

how to change our perspective, shift our paradigms, and replace one way of interpreting the word with another. Brookfield (1986) notes that the task of the facilitator is to present learners with alternatives to their current ways of thinking, living and behaving, and, to nurture self-directed empowered adults. Such adults, he notes, see themselves as proactive, initiating individuals engaged in a continuous re-creation of their personal relationships, work worlds, and social circumstances rather than as reactive individuals, buffeted by uncontrollable forces of circumstances. At the heart of self-directedness is the adult's assumption of control over educational goals.

Comments

These central principles of effective practice should be kept in mind to facilitate adult learning. The distance factor makes learning a more difficult but not impossible endeavour. These principles can become operational for distance education if curriculum planners and facilitators pay close attention to curriculum development and educational processes. With appropriate resource materials, the use of technology and a supportive administration, distance learning systems can be created to facilitate effective practice. To become operational the traditional functional paradigms for distance delivery require some reconsideration and modifications.

Developing Evaluation Criteria

The goal of distance education systems is to offer a unique, widely dispersed student population high quality educational opportunities in a time frame and under conditions that permit adequate flexibility to meet the needs of the individual who wishes to study.

With this goal in mind, a framework for determining how successfully this goal has been or will be met might include the following criteria.

1. Relative cost of the learning achieved/ cost effectiveness
2. Access/ equal opportunity
3. Relevancy to needs and expectations
4. Quality of program offerings
5. Quality of the learning achieved/ education or instruction?
6. Professional socialization
7. Student drop-out
8. Status of the institution
9. Student support services/ institutional infrastructure
10. Historical background and political ethos

These criteria represent a number of dimensions according to which one might evaluate a distance education program. The extent to which each of these criteria becomes operational in an evaluation plan depends on many different factors. An evaluation for the purposes of government processes and policy making is going to be derived from different criteria than an evaluation designed to assist in improving a course.

Each of these criteria is discussed below.

The Relative Cost of the Learning Achieved

Information on distance education, prompted by the drive for accountability, is needed for fiscal planning (Rumble, 1982). Programs are challenged to provide good educational experiences in a cost effective manner. Central to the minds of those judging the success of a program is how much does the program cost and what

effectiveness has it achieved. The unique nature of distance education makes this a difficult endeavour.

There are several reasons why a direct cost comparison of unit cost across programs is difficult. Traditional institutions have a significant physical plant to maintain whereas distance education programs relying heavily on multi-media technology have virtually no facilities' cost but incur significant design and production costs. Inconsistencies in cost accounting schemes make comparisons difficult. Difficulties also arise when attempts are made to compare the effectiveness of one program that has one set of intentions with another program that has a different set of intentions. The Australian Universities Commission 6th Report (1975, p.261) concedes that:

> "relative expenditures incurred in teaching internal and external students is likely to reflect university policy in allocation of resources as much as in real differences in cost."

Finally, inherent in the evaluation of any educational program is the difficulty relating cost to effectiveness. Such a relationship is tenuous. Many studies have shown that the choice of medium is one of the major cost-inducing variables in the distance education system and that the choice of certain media can rapidly and permanently increase the total system costs (Keegan, 1986, p. 184).

Rumble (1982) identifies factors unique to distance education which affect the cost structures of the distance learning system. Costs are critically dependent on the following factors:

1. The choice of the media. Sophisticated media mixes affect costs significantly.
2. The size of the academic program, however it is measured (in courses, credits or hours of student learning materials developed), may affect costs significantly if linked with the heavy use of cost intensive media such as television and tuition.

3. The number of students in the system. The level of initial investment required to establish an institution and to develop and produce course materials is considerable and will only pay off, in cost-efficiency terms, if there are sufficient students in the system to warrant the investment and to reap the economies of scale that are there to be achieved (Rumble, 1982, p.138).

The literature on costing distance education systems is limited. From an analysis of studies done by Wagner (1972) and Laidlaw and Layard (1972) on OUUK; Daniel and Snowden (1980) on Athabasca Open University; and Rumble (1982) on Distance Teaching University, Keegan (1986, p. 233-234) summarizes the economic indicators in the costing of distance systems:

- The economics of conventional education is of little value for the cost analysis of distance systems.
- The equation frequently used in conventional education:

$$\text{Faculty salary expense} = \frac{\text{Weekly student hours X average faculty salary}}{\text{Average class size X average faculty load}}$$

has little relevance in distance education.

- The proportion of fixed costs to total costs in conventional education (schools, colleges and universities) is small; this is not true of distance systems.
- Distance systems, like industries, have high capital investments in the production of courses; conventional education is labour-intensive.
- The number of drop-outs in the system is crucial; once the drop-outs pass 50% and move towards 100%, cost-effectiveness vanishes.
- If student support services are face-to-face and compulsory, cost structures rapidly return toward those of conventional education. Some authors suggest

that academic success or the reduction of drop-outs may be linked to provision of student services.

It is clear from studies on the costs of distance teaching systems that they have the following characteristics: high fixed costs, low variable costs per student, and design and production costs that are dependent on the choice of media. Variable costs per student are dependent on the following variables: number of local centres, number of courses in production and number of students in the system. (Keegan 1986, pp. 234-235)

Keegan has developed a formula for assessing the cost of a distance education system. The author of this thesis has modified the formula to include several other features important to costing a distance system. The modifications encompass several other important variables such as the lifetime or the shelf life of the course, the importance of an action research type model for course improvement (the cost of evaluation and revisions), and availability of prepackaged, readymade courses for purchase.

The formula is as follows:

The cost of a system in any year is:

$$T + Z$$

where T = recurrent costs
and Z = fixed costs (plant, buildings)

because $T = F + L\partial + D\beta/lt + Cy + Sx + P/lt + R/lt + E$

where T = total recurrent costs

F = recurrent fixed costs

L = number of local centres

∂ = average cost of a local centre

D = number of courses in production

β = average cost of design and production of a course

C = number of courses in presentation

y = average cost of presentation of a course

S = number of students

x = average cost per student

lt = lifetime of a course

P = purchase price of a preproduced course

R/lt = cost of revising or updating a course.

E = evaluation of the courses after production/ research

A funding formula such as this one for distance education would be useful in determining the cost per student. From this formula one would be able to compare the cost of a degree or course from a conventional university to the cost of a degree or course from a distance learning system. This formula would provide the data for determining cost-efficiency, cost-effectiveness, cost benefit or opportunity cost of distance education.

In the process of comparison it is essential to bear in mind that different institutions fulfil different functions. While some institutions are degree granting, others give credits for transfer to other institutions. The 1988 report of the visiting Committee of the Association of Universities and Colleges of Canada on the British Columbia Open University says that more than three quarters of their students indicated that they were studying for credit elsewhere, for general interest, or for a one-year certificate.

The economic attractiveness of distance education springs from economies of scale which it makes possible. Distance teaching can be effective and its cost can compare favourably with those of orthodox education (Perraton, 1982, p. 31). There

are circumstances under which distance teaching can be cheaper than orthodox education, whether measured in terms of audience reached or of learning. Jamison and Orivel (1981), for example, considered twelve distance teaching projects and found that most of the projects studied were less expensive than equivalent, traditional methods of education. They found that the economies achievable by distance education are a function of the level of education, size of the audience, choice of media and sophistication of production (Jamison and Orvivel, 1981). In spite of a widespread assumption that distance teaching is an economic way of teaching people effectively, the actual evidence for this is 'scattered and by no means clear cut' (Young et al., 1980, p. 65).

Relative cost of the learning achieved: Evaluation Criteria

From the literature on relative cost of the learning achieved, the costs are concerned with cost-efficiency, cost-effectiveness, cost benefits and the opportunity costs of distance education. In the drive for accountability the following criteria are drawn, to be used later in the assessment of the data.

1. What is the raison d'être of the distance education system? Is it to:
   - relieve the burden of conventional schools and universities?
   - to create cost-effective systems?
   - to create alternative facilities for learning which encourage individualisation and independence?
   - to increase access?
2. What is the cost/student over the lifetime of the course?
3. What constitutes successful performance?
4. How many people passed the final exam compared to the total number of students enrolled in the course?
5. What is the cost per distance education student compared with the

on-campus cost per student?

6. Can the benefits be measured in monetary terms or should the benefits be considered in terms of instructional, cultural, social or political benefits?
7. Is the output the same? Is a distance education degree equal to a degree obtained from a conventional institution?

Access

> "All who have mediated on the art of governing mankind have been convinced that the fate of an empire depends on the education of its people".
>
> (Aristotle)

Access is the raison d' être of many distance education programs; thus, it is an important criteria for evaluating the success of many distance education programs. Holmberg (1981) exemplifies it's importance. He says:

> "Open learning systems around the world are mass education systems reaching tens of thousands, even hundreds of thousands. They increase educational opportunities through liberal admission policies, through more than one mass medium to communicate to learners, and by bringing resources to the learners rather than expecting the learners to come to the resources" (Holmberg, 1981, p. 123).

Rumble has analysed the goals of the Open University of the United Kingdom and found that it tries to serve:

- those previously deprived of higher education through lack of opportunities rather than lack of ability;
- those qualified school leavers who, despite expansion of conventional universities, could not gain a place in such universities;
- those who left school early (without gaining normal academic requirements) but who later realized they wanted or needed higher education;
- the many thousands of certified non-graduate teachers who wish to acquire

graduate status;

- other significant groups of professional students interested in the University's courses;
- to rectify the 'long continuing imbalance ' in the number of women involved in further and higher education.

The state government of North-Rhine-Westphalia gave three reasons for funding the Fernuniversität in the Federal Republic of Germany:

- to increase the number of university places available;
- to provide a university setting for continuing professional education; and
- to introduce new methodologies into university teaching.

The rationale is to widen access or open up education to groups of students who cannot or do not wish to participate in conventional studies.

Success in widening access might be in terms of absolute numbers or in terms of attracting a different target group (Keegan, 1986). Rumble reports that in 1971 many of the students who enrolled at the OUUK would never have enrolled in a conventional university and 40% of all students enrolled did not have the prerequisite courses for entrance into conventional institutions. Kaye summarizes the key features of distance learning systems as:

> ". . . an enlargement or 'opening' of educational opportunity to new target populations, previously deprived through geographical isolation, lack of formal requirements or employment conditions (Kaye, 1981)".

Creating easier access means at least four things. It means that there are no entrance prerequisites; adults are not expected to go back to school to qualify for admission. It means that people can study part-time and will be able to hold their full-time jobs or look after families and homes. It means that people can study at home and not depend on face-to-face tuition, for which they would have to be at a particular place at a particular time. Finally, the structure should not be a barrier

to even the poorest who wish to study. (Perry, 1981).

The importance of widening access is stated by Perraton. He says:

> ". . . Education is to do with power. People without education are at the mercy of those with it, who can use what they know to their advantage and to the disadvantage of the ignorant around them. Education means gaining power, and not simply a right to the better educated minority. On this showing the case for expanding education is a simple egalitarian one" (Perraton, 1981. p. 35).

There is a body of literature that documents social stratification effects on access to higher education. Findings across the studies reveal that lower socioeconomic status has constrained and continues to constrain university level aspirations. Less influential, but still significant are the limits placed on the development of educational aspirations and expectations by one's birthplace. Post secondary expectations of urban youth are wider in scope than those of rural youth. Although women's current post secondary participation is dramatically higher than in the past, a number of factors (including type of institution, program and choice and vocational expectations) still experience inequalities in educational opportunities (Anisef et al, 1985). The 1988 Provincial Access Committee report on access to advanced education and job training in British Columbia cites people in small remote communities, native Indians, the disabled and the prison population as groups currently under-represented.

British Columbians, despite the expansion of post secondary education resulting from the McDonald Report (1962), do not have equal access to post secondary education. Higher education is still more readily available to those living in the south on the coast. The emphasis placed on widening access to higher education is a challenge to distance education. Pagney (1983, p. 157) calls for distance education to "shed its marginal image once and for all, and be accepted as an integral part of the educational system". He sees the rationale for distance education not to as filling a gap in 'normal' provisions, but as enriching the

education process and permitting it to reach its full potential.

Access: Evaluation Criteria

From the review of the literature on access to post secondary education, the following principal criteria are drawn and will be used later in the assessment of the data.

1. Has there been progress over time?
2. Has there been progress at different levels?
3. What progress has occurred relative to other societies or subgroups?
4. Are entry qualifications required?
5. Are previously unrepresented groups involved?
6. How many people are being served?
7. What kinds of people participate?
8. Does the course development reflect the needs of the target population, or is it possible that the population has grown simply as a result of the course being offered?
9. What is the policy of the institution in terms of who they want to target?
10. Is the course repeated? How often?
11. To what extent does the course contribute to the understanding of a broader phenomenon?

Relevancy to Needs and Expectations

Relevancy to needs and expectations is an important criteria against which to evaluate a distance education program. The concept of needs and expectations might be considered in several ways. Cooler (1979) questions to what extent programs provide opportunities and services regarded to be of priority to

communities in general or to specific individuals. Given these criteria, a distance education program could be judged both successful and unsuccessful, depending on who is making the judgment and whose needs are being served. Clearly, some programs are able to meet the needs of a significant number of groups of people, while others satisfy but a few needs profiles (Gooler, 1979). The success of some distance learning systems is that they are able to satisfy national, local and individual needs (Keegan and Rumble, 1982).

The literature on adult learning theory unquestionably supports the importance of the criteria of relevancy to the needs and the expectations of the adult learner. In terms of whether or not the program is meeting the needs of the individuals involved Mager and Beach (1967) recognize how crucial it is to know something about the students, their goals, social and educational background, incentives and motivation, why they study at a distance and what they expect. They say:

> "the course must be designed for the target population that actually exists. The major characteristics of the target population constitute the starting point of the course, the performance called for in the course objectives constitutes the finishing point, and the process of turning the incoming student into the skilled graduate constitutes the course itself. In other words, the substance of the course is derived from what the student already is able to do and what you want him to be able to do."

Ausubel, a salient educational psychologist on learning theory, claims that:

> "If I had to reduce all educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly" (Ausubel, 1963)

Bates (1981) further supports the importance of relevancy to needs and expectations with evidence from distance education. He says that one of the most common reasons given for adults failing to complete distance education television courses is their perceived lack of relevance.

One of the greatest difficulties in distance education is forging the link between

what the student knows, wants and expects and what the distance education course is able to provide. The target groups for distance education courses are those who are involved in recurring education. Holmberg (1983) says that:

> "distance students are normally adults with a job and social responsibilities to which they must give priority. Furthermore, adult learners may enter the instructional program with a poor sense of their self worth as a learner having had past experiences in the classroom which have left them with a sense of failure. Study skills are likely to be unpracticed, and adults have outside responsibilities and commitments that limit their time for study. These special characteristics of the adult learner need to be kept in mind by planners and instructors of distance education courses, and their support staff."

The ways in which distance teaching is used are of course politically and culturally determined (Perraton,1981, p. 36). It is also important to understand that the failure of distance education depends as much on the political context as on its methods (Perraton, 1981, p. 36). Distance teaching institutions inevitably reflect the values of the society.

Relevancy to needs and expectations: Evaluation criteria

1. Does the courseware fit the learning needs of the intended learners?
2. Are learners required to draw from their own experiences when working with the courseware?
3. Do learners interact with the courseware?
4. Are practical opportunities congruent with the learning objectives?
5. Are there adequate opportunities for learners to get feedback on their progress?
6. Is the 'follow-thru" (remediation, enrichment) based on the feedback?
7. Does the course address the specific interests and needs of the group?
8. Does the course permit any learner control?
9. Are the instructional techniques appropriate for the learner?
10. Is personal experience used as a learner resource?

11. Does the course take into consideration the distinguishing characteristics of adult learning?
12. Is the course offered in a comfortable supportive environment?

Quality of Program Offering

Quality of the program offerings is a criterion to be considered in all types of courses, whether they are presented at a distance or in the conventional tuition. Quality materials are more important for the distance student who might not have the opportunity to discuss problems in understanding them with the teacher or other students. Often immediate judgments are made about the institution on the basis of the materials used. The success of the course depends on many structural considerations: the choice of the medium or media, how the media is integrated across sections and components, and the coherence of the didactic structure. Holmberg (1981, p. 79) supports this view:

> "Whatever the success and shortcomings,... it is evident that the basic requirements for the creation of good distance education are not only the analyses and practical measures, but also full integration of the various components of the development work."

The question of delivery is an important problem in most distance education programs. Because these programs are directed at an unconventional population, unique delivery problems may occur. Delivery mode is an integral element in the content analysis. For the purpose of describing and articulating criteria for evaluation, delivery mode will be dealt with as a subsection of content analysis.

Inspired by Gagné, distance educators believe it is essential for course developers to:

- arouse attention and motivation, presentating objectives that are within reach;

- make students aware of the expected outcomes of the study;
- link up with previous knowledge and interests;
- present the material to be learnt;
- guide and structure, offering guidance for learning;
- activate;
- provide feedback;
- promote transfer; and
- facilitate retention.

Although, by definition, a distance study course can use a number of media, the structure of printed course material is of particular importance. Today, even with the increasing availability of various other communication technologies, the printed word is still the most commonly used medium in learning at a distance (Kaye and Rumble, 1981; Keegan, 1981; Schramm, 1977). It must be recognized that a printed distance study course is basically different from a textbook with questions. While a textbook gives all the relevant facts in a clear and logical way, it does not teach. A distance study course guides and teaches by giving complete explanations with elucidating examples, by providing exercises of various kinds, and by constantly referring to what the student has already learned. The print package is a substitute for both a textbook and the exposition of a teacher. The course materials must compensate for good teaching activity that motivates and activates students, presents the subject and provides exercises and tests. Content is generally taught in study units that represent a suitable quantity of material to be learned. Criteria for determining the size most likely to facilitate learning, and circumstances under which various sizes provide optimal learning conditions, are dependent on the nature and type of course.

Other structural considerations include providing suitable introductions and advance organizers. In Rothkoph's terminology, advance organizers promote

'mathemagenic positive' behaviour, that is, behaviour that is conducive to individual learning.

Attempts to summarize individual features of the four basic categories of media used in distance education are found in Appendices J and K. Further research is necessary to identify the unique qualities of various media and to determine how to exploit them to improve instruction. (American Journal of Distance Education, 1988 p. 54)

Choice of Media

Media choice is an important criterion in evaluating distance education programmes. Many attempts have been made to answer the question "which medium is best for teaching (this) course or subject?". Schramm (1972) found that:

> "... given a reasonably favourable situation, a pupil will learn from any medium - television, radio, programmed instruction, films, film strips or other. This has been demonstrated by hundreds of experiments. In general, the same things that control the amount of learning from educational media; among others, the relevance and clarity of content, individual abilities, motivation to learn, attention, interest in the subject, respect and affection for the teacher, emphasis and replication of the central points to be learnt, and rehearsal by the learner."

Similarly, Trenaman found in comparing radio, print, and television that "the three media communicate a wide variety of material with roughly equivalent efficiency". While differences between students or audiences, and differences between subjects, have major effects on how easily something is learned, differences between media seem far less important.

Other more recent studies have drawn similar conclusions. Bergin (1986) says, "televised instruction is neither superior nor inferior to traditional classroom presentation. The question is not which medium works best but, what is effective instruction? Kaye (1981) points out that:

> a brilliant inspiring lecture, with imaginative use of visual aids, will help people to learn more effectively than a badly written, inaccurate correspondence lesson. Conversely, a well structured, stimulating student-active correspondence lesson will undoubtedly be more effective than the performance of a mumbling lecturer, reading out of his notes to an amphitheatre full of bored students."

Critical variables for effective learning depend more on the pedagogical quality of the actual learning materials, than on the medium.

When choosing the technology to be used to present a particular course one must consider the following criteria.

1. It is necessary to identify the media to which the students will have access.
2. It is necessary to determine the resources the project will have available, in the widest sense of the term.
3. The question of media choice is only relevant when a project has the good fortune to be able to use several media, each accessible to the student and within the project's budget. The question then arises as to which learning objectives to associate with which medium, since each has particular pedagogical and motivational characteristics which can be optimally exploited.

Bates (1982) gives a five-point guideline for choice of media for a distance system:

1. Accessibility: available to most students at home?
2. Convenience: can the student use the medium?
3. Academic control: can the teacher design the material himself?
4. 'Human touch': can the learner relate to the teacher via the medium?
5. Availability: what is available now?

Bates (1982) says that further indicators that influence the choice of medium are

pedagogic effectiveness, cost, political influences, research pressures, student access and privatization of living.

Perraton (1982) says that:

> ". . . there is evidence to believe that several media are better than one. This may simply mean that to use more than one medium makes learning more fun, and therefore, perhaps, more effective, or that it enables information presented in one medium to reinforce that in another, or that individuals learn more easily from one than another. Evidence in the United Kingdom suggests that if we measure the proportion of people following a course, a multimedia approach is superior to one that relies on a single medium" (Perraton, 1982, p. 41).

Kaye (1981) suggests that where facilities exist, the use of various media in various mixes is desirable as it allows some degree of redundancy in treatment of some learning objectives.

Briggs (1967) has suggested that :

> "...a valuable function of the different media in a multi-media system is to provide precisely the degree of redundancy by presenting the same material in different media on the assumption that some students learn most effectively from television or film, and others from print. Variety in media use can certainly allow for this, as well making a course more interesting; providing an alternative mode and 'style' for learners, and encourage people to 'think' about the material rather than memorize it."

A content analysis should consider the politics of knowledge. The current educational status quo is dominated by patriarchal constructs of knowledge. Both the overt and hidden curriculum reflect patriarchal authority and tradition.

Faith (1988, p. 12) states that:

> The uses of language, definitions of meaning, construction and deconstruction paradigms, underlying epistemological assumptions, interpretations of history, theory-making and practical methodologies have been transmitted, within the diverse range of cultural contexts, through male dominated conduits of judgement.

The feminist epistemology does not need to dominate but alternatives must be sought to the current educational status quo. When it is possible and appropriate the curriculum should be "gender-sensitive"; integrating both masculine and feminine perspectives into the curricula.

Content Analysis: Evaluation Criteria

The following questions about content and presentation of the course serve to establish criteria for an evaluation.

1. Does the study guide give complete explanations with elucidating examples?
2. Does the study guide provide exercises and refer to what students have already learned and mastered?
3. Are the units a suitable size for the subject matter presented?
4. What is the criteria for size: What size is most likely to facilitate learning and under what circumstances can the various sizes provide optimal learning conditions?
5. Is the information presented clearly and logically?
6. Does the introduction elucidate the study objectives and function as an advance organizer?
7. Are the advance organizers part of the cognitive structure?
8. Is the material designed to activate the student?
9. Are the students required to consider special points, take notes, review, make tables and summaries, and answer questions and solve problems?
10. Are there self checking exercises and submission tasks?
11. Are there strategies to bring about student autonomy?
12. Does the approach stress learning rather than teaching?
13. Is the textbook designed specifically for the course? If not, is there adequate direction on how to use the text?
14. Are study techniques built into the course based on one medium or various media?
15. Is there a systematic survey of the main points?
16. Is there an adequate opportunity for students to draw conclusions that are correct and fruitful?

17. Are study guides built into the course?
18. Is there reinforcement feedback built into the study unit?
19. Is the vocabulary and the sentence structure suitable for the intended student?
20. Does the course have a conversational character? Is the format designed to encourage stimulating reconsideration, a search for more information, a practical application and exercises and verbal articulation?
21. Is there real two-way communication? Do the course developers address the student as 'you' ?
22. Does the course stimulate mathemagenic positive behaviour leading to independent learning?
23. Are texts and pictures integrated into one lexi-visual presentation? Are there explanatory drawings and text units, panoramic pictures and photos of details, documentary illustrations?
24. Is the typography of the print component laid out for learning effectiveness? Are the divisions logical? Is there considerable spacing of chapters, sections, and paragraphs? Do headings and subheadings help to structure content? Are italics or bold type used to single out key concepts or key words?
25. Is the medium chosen for its own sake or is it valuable as a means to the study objectives?
26. Is the material designed to reflect how much learning has taken place? (For the student and the institution.)
27. Is the material designed to encourage interaction with the tutor, teacher, other students or the institution?
28. Does the study material encourage long-term deep level learning or short-term, superficial, recall type learning?
29. Is there a range of tasks and, course materials presented by means of different media so as to allow for flexibility and to accommodate different

needs and learning styles?

30. What kinds of strategies are employed to bring about student autonomy?
31. Is the quality and presentation academically acceptable? Is the material clear, unbiased, factually accurate and representative of differing points of view and interpretations?
32. Does the material take into account prior knowledge, skills and attitudes that the student possesses?
33. Is there minimal use of forward and backward referencing, or of references to other materials?
34. Is there careful integration of text and audio-visual materials and, where relevant, practical activities?
35. Can the information be updated easily?
36. What kinds of technologies are used to form a link or bridge the gap between the students and instructors, other students and the institution?
37. Are the different teaching methods and techniques suitable to the different kinds of educational aims, subject matter, and different kinds of students?
38. Does the material look appealing?
39. Is the curriculum inappropriately dominated by patriarchal constructs of knowledge?
40. Is the language non-sexist or gender neutral?
41. Does the reference material include works of both women and men?
42. Is adequate attention paid to marketing and packaging?

The following checklist is to be used later in the assessment of the data.

QUALITY OF THE PRESENTATION

1 = Excellent
2 = Very Good
3 = Satisfactory
4 = Satisfactory with modifications
5 = Unsatisfactory

	1 2 3 4 5	Comments
• Are the texts and pictures integrated into one coherent presentation?	☐☐☐☐☐	_____
• Are there explanatory drawings and text units?	☐☐☐☐☐	_____
• Is the typography of the print component laid out for learning effectiveness?	☐☐☐☐☐	_____
• Are the divisions in the text logical?	☐☐☐☐☐	_____
• Is there considerable spacing of chapters, sections, and paragraphs?	☐☐☐☐☐	_____
• Do headings and subheadings help to structure the content?	☐☐☐☐☐	_____
• Are italics and bold type used to single out key words or key concepts?	☐☐☐☐☐	_____
• Is there careful integration of text and audio-visual materials and, where relevant, practice activities?	☐☐☐☐☐	_____
• Do the materials look appealing? Is there adequate attention paid to marketing and packaging?	☐☐☐☐☐	_____
• Is the material self-explanatory?	☐☐☐☐☐	_____
• Are there adequate support materials for the audio-visual presentations?	☐☐☐☐☐	_____
• Is the material clear, unbiased, and factually accurate?	☐☐☐☐☐	_____
• Does the material represent differing points of view and interpretations?	☐☐☐☐☐	_____
• Is the technical information accurate and up-to-date?	☐☐☐☐☐	_____
• Are (learner/ tutors) those using the materials satisfied with them?	☐☐☐☐☐	_____

APPROPRIATENESS OF MEDIA

	1 2 3 4 5	Comments
• Is there enough flexibility in media choices to accommodate different learning styles?	☐☐☐☐☐	_____
• Is the media chosen for its own sake or is it valuable as a means to the study objectives?	☐☐☐☐☐	_____
• Is the media choice accessible to all learners?	☐☐☐☐☐	_____
• Can the information be updated easily?	☐☐☐☐☐	_____
• Is the media choice suitable to the educational aim?	☐☐☐☐☐	_____
• Is the media choice suitable for the subject matter?	☐☐☐☐☐	_____
• Do the media permit learner control?	☐☐☐☐☐	_____
• Is the media choice cost effective?	☐☐☐☐☐	_____
• Are there mechanisms in the course to collect feedback?	☐☐☐☐☐	_____

FIT WITH INTENDED LEARNER

	1 2 3 4 5	Comments
• Are there strategies to bring about learner autonomy?	☐☐☐☐☐	_____
• Does the approach stress learning rather than teaching?	☐☐☐☐☐	_____
• Is there authentic dialogue?	☐☐☐☐☐	_____
• Is the format of the course designed to encourage stimulating reconsideration, a search for more information, a practical application and verbal articulation?	☐☐☐☐☐	_____
• Is the vocabulary and sentence structures suitable for the intended learner?	☐☐☐☐☐	_____
• Is the material designed to encourage interaction with the tutor, the teacher, other students or the institution?	☐☐☐☐☐	_____
• Is there flexibility in choosing activities and resources?	☐☐☐☐☐	_____
• Does the study material take into account prior knowledge, skills, and attitudes that the learner possesses?	☐☐☐☐☐	_____
• Does the approach stress facilitation of learning rather than teaching?	☐☐☐☐☐	_____
• Is the quality and presentation academically acceptable?	☐☐☐☐☐	_____

APPROPRIATENESS OF PRESENTATION

	1 2 3 4 5	Comments
• Does the study guide give complete explanations with elucidating examples?	☐☐☐☐☐	_____
• Is there a systematic survey of the main points?	☐☐☐☐☐	_____
• Are the learning units a suitable size for the subject matter presented?	☐☐☐☐☐	_____
• Is the information presented clearly and logically?	☐☐☐☐☐	_____
• Does the introduction elucidate the study objectives and function as an advance organizer?	☐☐☐☐☐	_____
• Are advance organisers part of the cognitive structure?	☐☐☐☐☐	_____
• Is the textbook or printed material designed specifically for the course?	☐☐☐☐☐	_____
• Are study guides built into the course?	☐☐☐☐☐	_____
• Is adequate attention paid to orientating the learner?	☐☐☐☐☐	_____
• Are the instructional techniques appropriate for the learner?	☐☐☐☐☐	_____
• Is there a minimum of backwards and forwards referencing or referencing to other materials?	☐☐☐☐☐	_____
• Is the evaluation process clearly stated?	☐☐☐☐☐	_____
• Is there a discrepancy between the stated objectives and the evaluation methodology?	☐☐☐☐☐	_____

ADEQUACY OF PRACTICE OPPORTUNITY

	1 2 3 4 5	Comments
• Does the study guide provide exercises and refer to what students have already learned?	☐☐☐☐☐	_____
• Are there self checking exercises and submission tasks?	☐☐☐☐☐	_____
• Does the course have a conversational manner?	☐☐☐☐☐	_____
• Is there a range of tasks?	☐☐☐☐☐	_____
• Are the different teaching methods and techniques suitable to the different kinds of educational aims?	☐☐☐☐☐	_____
• Is there an opportunity for students to draw from their own situations and draw conclusions that are correct and fruitful?	☐☐☐☐☐	_____
• Are students required to consider special points, to take notes, review, to make tables and summaries, and to answer questions and solve problems?	☐☐☐☐☐	_____
• Is there reinforcement feedback built into the study unit?	☐☐☐☐☐	_____
• Are the assignments formative? Are standards communicated through formative assignment?	☐☐☐☐☐	_____

Quality of the learning - Education or Instruction?

The possibility of a distance education system providing education, as opposed to instruction, especially at the university level, is central to the imagination of all those concerned with the effectiveness of distance education. Brookfield (1986) makes a distinction between education and training or instruction. Training or instruction involves transmitting a set of clearly identified skills and students are required to assimilate these in a manner prescribed by the trainer, employing agency or certification body. In education, by contrast, learners are encouraged to examine the assumptions underlying the acquisition of skills, consider alternative purposes and place skill acquisition in a broader context. The quality of the learning is a necessary criterion in an evaluation plan, and is significantly influenced by the curriculum orientation and the media mix.

The media mix is essential to the kind of learning that takes place. Perraton (1982, p. 35) believes that "... unless there is dialogue, education changes to indoctrination". He states that dialogue is a necessary condition of education. If the purpose of the course is to provide instruction and factual knowledge, one questions how necessary the face-to-face component is. Curriculum must be designed to encourage authentic as well as simulated dialogue. Conferencing modes, interactive video, and teleconferencing can provide opportunities for students to interact.

New possibilities and new patterns of communication have significantly addressed difficulties that distance once presented. Computers, the telephone system, direct broadcast satellites, fibre optics, cyclops, and electronic mail will make postal transmission to distance learners obsolete (Winders, 1988). New technologies present unique opportunities for distance learners to become actively involved in new learning opportunities. It is becoming possible to have stimulating global classrooms in the global village.

Facilities for two way communication between student and tutor or the

instructor make teaching models traditionally associated with distance teaching obsolete as well. Innovative teaching technologies tremendously increase the range of possible teaching models. In the past distance students were denied dialogue with the teacher, tutor, or peer group, thus missing both the moral support and enhanced learning opportunities which it gives.

An understanding of the curriculum orientations of course designers, content specialists, instructors and tutors is essential to an evaluation plan. In order to determine the goals of a program and to establish criteria for evaluating those goals, one must be clear as to what the intentions of the curriculum are. These intentions must be consistent with the orientation of the course designers, content specialists and instructors, the form of knowledge sought and the teaching model used.

These orientations are discussed briefly in the following section. A chart summarizing these discussions is included in Appendix M. Jurgen Habermas designed a tri-paradigmatic framework which is most useful for understanding the multiple perspectives from which to approach curriculum inquiry. The orientational framework provides three root orientations: technical, practical, and emancipatory. Aoki (1984) renamed these orientations: empirical analytic, situational interpretative and critical reflective.

The dominant paradigm is the scientific inquiry or the empirical analytic orientation. Assessment of learner outcomes has historically been the focus of evaluation efforts. Attention to acquisition of prespecified goals or objectives has also been an important concern in evaluating distance education. The outcome from this type of learning is nomological: i.e., one in which the student knows facts, data, concepts and theories in terms of "how to" and relationships in terms of cause and effect.

The second paradigm is the situational interpretive. It seeks knowledge in terms of authentic dialogue with the students. This paradigm attempts to seek an

understanding in terms of situationally lived meaning. A phenomenological interpretive understanding of the lived world is encouraged.

The critical reflective paradigm is the third paradigm that Habermas describes. In this paradigm the educator seeks to elicit a different type of understanding from the student. This paradigm seeks to lead the student to probe an understanding of underlying bases in order to reveal tacitly held intentions and assumptions. In this paradigm it is the goal of the educator to reveal underlying ideologies.

Understanding different perspectives that undergird curriculum thought is necessary when attempting to evaluate and determine if there is a discrepancy between what is intended and what has occurred. These multiple perspectives should drive curriculum thought and decisions. Curriculum literature is largely devoted to an elaboration of Tyler's language of ends-means relationships and, while it has become more sophisticated with concepts of systems theory, games theory and decision theory, the underlying intentions remain the same (Aoki, 1984).

Education or instruction : Evaluation Criteria

The following questions are intended to guide an evaluation of this criteria.

1. Is the system designed to provide education at a distance or just to pass on information?
2. What is the level of personal interaction? What kinds of things have been done to encourage this interaction?
3. What didactic strategies were developed to provide a framework for true dialogue?
4. Is there a dynamic relationship between tasks with changing difficulty levels and learning as opposed to students achieving mastery over static tasks?

5. Does the curriculum teach people what to think rather than how to think?
6. Is there bias, distortion or inaccuracy in the materials which might be seen as 'curriculum control' (Freire, 1972)?
7. What teaching model is used? Does the teaching model match the intentions of the course?
8. Does the curriculum encourage reflectiveness?
9. Does the curriculum take a positivistic stance?
10. Does the curriculum seek out new orientations or it is mono-dimensional?
11. Does the curriculum encourage a probing of the deeper meaning of what is?
12. What are the perspectives that undergird curriculum thought?
13. Does the curriculum seek technical, empirical analytical knowledge?
14. Is scholastic excellence possible to achieve at a distance?
15. Is there adequate opportunity for feedback to learners on their progress?
16. Is the curriculum concerned with critical understanding of fundamental interests, values, assumptions and implications for human and social action?
17. Does the curriculum seek a nomological and law-like knowledge that gives people explanatory power, e.g. cause and effect, functional or hypothetico-deductive statements?
18. Does the curriculum orientation view human and social life as something that can be explained away with degrees of certainty, probability, and predictability?
19. Does the curriculum allow for people to give personal meaning to each situation experienced?
20. Is there inter-subjective dialogue?
21. Does the curriculum centre on meaning giving activities?
22. Does the curriculum encourage the student to question him/herself?
23. Is there adequate opportunity for authentic dialogue? dialogue with oneself?

dialogue with other students? dialogue with the tutor or instructor?

24. Is there adequate opportunity for two-way communication?
25. Are the activities and assignments consistent with the goals of the curriculum?
26. How flexible and adaptable are distance learning courses/ programs to individual needs and learning?
27. Is the purpose of the course to provide instruction and transmit factual knowledge or is it to provide education, for development of the individual?
28. Does the student have control over the learning?
29. If the purpose of the course is to provide instruction and transmit factual knowledge, how important is it to maintain a face-to-face component?
30. Is there an attempt to involve the students emotionally so that they take a personal interest in the subject and its problems?
31. Is there a personal style? Are personal and possessive pronouns used?

Professional Socialization

Professional socialization is an important criterion which must be considered in an evaluation framework for professional programs. The extent to which a distance education program offers adequate opportunity for the student to learn behaviours appropriate to and typical of the profession is an important didactic issue and an indicator of the program's success. Each profession has a set of learned behaviours that are indicative of that profession. There must be sufficient opportunity for students to engage in activities to acquire the characteristic cognitive and affective learning.

Attridge (1987) synthesizes the following definition from the literature:

> "Professional socialization is the complex process by which a person acquires the knowledge, skills, and sense of occupational identity that are characteristic of a member of that profession. It involves the internalization of the values and norms of the group into the person's

> own behaviour and conception (Jacox, 1973). The end product of professional socialization must be a person who has both the technical competencies and the internalised values and attitudes demanded by the profession, and expected by the public at large. Professional socialization is a part of, and a responsibility of, the formal education process (Watson, 1986; Cohen, 1981; Jacox, 1973; Rosow, 1965).

This definition articulates the importance of cognitive and affective learning and professional identity. The sense of professional identity, the internalization of norms, values, beliefs, and attitudes typical of a fully qualified professional, is more difficult to apprehend and internalize through distance education. Distance educators are becoming competent at producing effective and efficient learning materials for students to acquire the requisite knowledge and skills of the professionals; however, the affective domain presents a more difficult challenge. The learner must be provided with the opportunity to learn the behaviours typical of and appropriate to his/her profession. As distance education gains status and momentum more programs and degrees are being offered entirely through distance learning systems. These programs must acknowledge the importance of professional socialization and provide an educational process that involves cognitive content, the development of performance behaviours and affective learning.

A number of factors influence the process of professional socialization. The literature suggests that greater length and depth of exposure to what is to be learned has a significant effect. Greater depth of exposure has been seen to be particularly influential in affective change. An important issue confronting those developing distance learning systems for professional programs should be how to provide sufficient immersion in a learning environment, or how to provide the kinds of experiences and activities influential in the development and internalization of certain attitudes and values. Distance students taking one or two courses at a time, entrenched in the workplace social system, must get enough exposure to communicate and reinforce the desired behaviour change.

Teaching and learning of professional skills and conveying formal requirements and formal rules of conduct appropriate to particular occupations might best occur when nominal peers are influenced by 'significant others' who are more advanced, know and exemplify the norms. These role models provide an opportunity for students to think, talk and practice appropriate professional behaviour. An occupational identity becomes apparent as expectations of 'significant others' induce normative compliance and actually share attitudes and beliefs.

Endeavour to change behaviour is difficult to articulate, manage and evaluate in traditional face-to-face tuition. Even the most competent and intuitive educators find it difficult to ensure that the student makes a perspective shift and internalizes the new set of values, beliefs and behaviours. The task becomes increasingly difficult and complex in distance education.

Media and learning activities must be carefully selected. The intended body of theory must clearly explicate and support the values, beliefs and norms that the program intends to communicate. The media must be chosen to ensure that role models are apparent. Tacit assumptions and implicit messages reveal themselves through style and presentation of materials.

Professional socialization is of concern to a greater or lesser degree in all disciplines in the professional category of occupational classification. Albeit the process is difficult to define, manage and evaluate, it must be integrated into the evaluation criteria. Students must be presented with opportunities to acquire both the cognitive and affective learning typical of the profession being studied if distance education is to be considered a valid educational option.

Professional Socialization: Evaluation Criteria

The following criteria are indicators of the successfulness of the program in

addressing the issues relating to professional socialization.

1. Is there adequate interaction with peers, teachers, role models, mentors, or 'significant others' for the student to see, understand, apprehend and internalize behaviours appropriate to his/her profession?
2. Are the intended behaviours, norms and beliefs visible through role models, content, style, format, and media?
3. Is the curriculum designed so students can see practising professionals thinking about, talking about and practising in ways that are congruent with the roles aspired towards?
4. Is there a length and depth of exposure that will influence affective change?
5. Is there an opportunity to see and hear varying viewpoints and develop a sense of the ontology of a particular profession?
6. What are the characteristics of the tacit, implicit messages?

Drop-outs

A cursory glance at distance education literature reveals a preoccupation with the drop-out phenomenon, variously described as drop-out, withdrawal or attrition. Albeit this phenomenon exists in all forms of teaching, in distance education it is a major characteristic. Its incidence is often many times greater than in any form of conventional education. Its very existence threatens the 'cost-effectiveness' of distance learning systems.

Tinto developed a theoretical model, based ultimately on Durkheim, in which it was hypothesized that weakness of integration of the student into the social fabric of the institution was an indicator of possible dropout. His model of Institutional Attrition conceptualizes institutional attrition as a product of student characteristics, abilities, goals and commitments interacting with the institutional

environment (Tinto, 1975).

Pascarella and Terenzini (1983) used and expanded Tinto's model. They found that the effect on persistence of background characteristics with which students arrived at university, and their initial commitments to the institution had an indirect effect on persistence. At the end of the freshman year factors such as social and academic integration and institutional and goal commitment had the strongest direct influence on attrition (Pascarella, Duby, and Iverson, 1983). Understanding why students drop-out from traditional institutions is somewhat different but some similarities exist.

Rekkedal (1971, p. 25) summarizes the situation of drop-outs in distance education:

> Comparing drop-out rates within different correspondence courses in different institutes is very difficult. The courses vary in content, level, quality of work, degree of difficulty and organisation. Also the educational methods and media involved differ form course to course. Further, there are also large differences between criteria used in connection with course drop-out and cancellations and how drop-out and success are defined. In some surveys all students enrolled are taken into consideration. In other studies only individuals who really have started submitting assignments are defined as students. Nevertheless, the quantitative data published seems to indicate that the rate of drop-out in correspondence education normally is considerably higher than in full-time face-to-face education, and that the number of students dropping-out is especially high in the beginning of the studies, but generally higher than other forms of part-time studies.

Woodley and Partlett (1983, pp. 20-21) describe a complex interplay of 'push' and 'pull' factors. They believe 'push' factors encourage the student to continue while 'pull' factors lead to withdrawal. Each 'push' or 'pull' factor has a different strength. When 'pull' factors outweigh 'push' factor drop-out occurs.

The propensity of enrollees to drop-out can be attenuated by the provision of quality learning materials, but above all, by support services for the avoidance of drop-out. Where adequate student support is not provided, distance study may be constantly fraught with the risk of discontinuation (Keegan, 1986).

Holmberg believes the definition of drop-out rate causes difficulty. When the

course under examination is to lead to objectives within a specified time period the drop-out rate is easily determined. Since distance education programs are often used by individual students who do not declare their ultimate goals (self-actualization rather than the acquisition of competence may be their aim) or the period over which they intend to spread their study, it is difficult to determine the definition of student drop-out. Non-completion may mean interruption or drop-out but it does not necessarily mean failure in terms of the individual's intentions or plans (Holmberg, 1977 p. 29). An adult student may not have goals consistent with the institutions goals - that of completion. Self-actualizing adults may feel that they have been successful when they have learned what they needed and wanted to learn.

Enoch (1988, p. 77) says:

> "... By it's very nature this type of educational framework is bound to have a high dropout rate. People with a lot of other responsibilities find to difficult to spend 10 to 12 hours every week studying, and some register without a realistic understanding of the time required. Taking all these factors into consideration, the issue of success/failure rate is rather more complex than just considering the number of students who receive their final degree."

Drop-out: Evaluation criteria

From the review of the literature on drop-out in distance education, the following principal criteria were drawn, and used later in the assessment of the data.

1. What percentage of the students who start the program, complete to graduation or certification?
2. What percentage of the drop outs were unavoidable?
3. What has the institution done to address the phenomenon of drop-out?
4. Does drop-out mean failure? Is it possible that the adult student did not have goals that were consistent with the institution? Perhaps the student did not care to complete the course but did get the kind of information wanted and then used

the text books for reference.

Status

One of the problems which may face a distance teaching department operating within a conventional university is that of inferior status, which is reflected in a relatively diminished political and academic status vis `a vis conventional departments (Rumble and Kaye, 1982, p. 279). The degree, certification or credits earned must be held in high enough esteem to enable the student to go on to higher levels of study, transfer to other institutions or get different or better jobs.

In Canada, membership in the Association of Universities and Colleges of Canada, is an indication of the status of the institution. It is not an accrediting body however, membership is granted as a result of the recommendations of a visiting panel of three university presidents who vet the applicant institution and its activities very carefully. They make comments on the academic quality of the programs.

Gooler (1979) suggests that successful distance education programs can have a significant impact on the status of the institution. If the program achieves a degree of success and acceptance or notice from other institutions in the region, those institutions may regard the distance programs as providing a model for their own activity. This has a significant influence on the status of the university.

Status: Evaluation Criteria

The following criteria are essential to a consideration of the value of the program and will be used later in the assessment of the data. They are considerations that must be given to all distance education programs at this point in time.

1. Do other institutions accept the studies for transfer credits to other educational institutions?
2. Do employers have the same esteem for the degrees awarded by distance learning systems as for those of conventional university graduates?
3. Does the academic community accept the degrees and diplomas as qualifying students to go on to higher levels of study?
4. Is the distance teaching institution held in esteem by the academic community and the community at large?
5. Are there highly qualified academics on full-time staff?
6. Is the institution a member of a recognized degree granting organisation such as the A.U.C.C. (Association of Universities and Colleges of Canada)?
7. Does offering a particular course impact on other programs or institutions?
8. Are content specialists or authors who contract to write units highly qualified academically?
9. Are the tutors academically qualified?
10. Is there a cohesive system of student evaluation?
11. Is there a competitive examination system? If so, is there parity of results?
12. What is the structure of the academic governance?
13. Is the system politically or academically driven?
14. How is the institution funded?
15. Is there an advisory committee to ensure excellence?
16. Does the institution or program have international prestige?

Student Support Services and Infrastructure

A substantial body of literature supports the view that the amount and type of student support affects the success of the distance education experience. Robinson (1981) says "... students in distance learning systems face not only the problems of

conventional students, but also those generated by the system itself" (1981, p.141). Keegan says that "... it is believed that where student support of an adequate nature is not provided, students should understand that distance study may be constantly fraught with risk of discontinuation" (1986, p. 175). At the University of New England in Australia, peer support, compulsory residential schools and local support help is utilized to encourage students towards course completion (Smith and Small, 1982). The critical importance of the development of a feeling of warmth and friendliness between students and institution is emphasized by several authors (Lewis, 1982; Singer, 1982; Tinto, 1975).

Willén (1984) expresses the importance of interrelationships between administrative and pedagogical functions in distance education institutions. He feels that this interrelationship, whether it be at a large-scale or a small-scale institution, is very important. It is the key issue in Peter's industrialization theory. Willén questions whether it is affected by the scale of the institution or different methods of financing activities. She questions whether computerization of administrative systems causes more alienation, or enhances opportunities for personal dialogue and interaction.

Student Support Services and Infrastructure: Evaluation Criteria

The following questions about the quality and type of support services serve to establish criteria for guiding the evaluation process.

1. What is the mean student load of the tutors?
2. What kinds of facilities are available (e.g., computer facilities, student advising services, library services, registration and counselling services, etc.)?
3. What kinds of two-way communications are part of the technology used in the course?

4. What is the nature of the interaction between the institution and the student?
5. What efforts have been made to reduce the rates of avoidable drop-outs?
6. Is there any way of identifying students who might be at risk?
7. Is interaction or the contact activity with the tutor or the teacher compulsory or optional?
8. Is there any effort made for students to interact with one another?
9. What kinds of feedback mechanisms are designed into the course?
10. Is there continuous assessment of the student's work?
11. Are there local study centres?
12. Does the tutor have only a correspondence function?
13. Does the tutor help to:
    - advise applicants on course choices?
    - develop good organisational and study skills?
    - maintain motivation?
    - encourage the student to take more responsibility for negotiating their own learning?

Historical Background and Political Ethos

Contextual variables such as the institutional climate, historical background and the political ethos of the time impact on the evaluation design. Eisner (1979, p. 8) claims, "without an appreciation of context conditions the possibility of misinterpreting what one sees is high". Friere (1985) believes that it is difficult not to consider the political dimension of education because everything about education is political. This is perhaps more evident in distance education than in other educational provision.

Since evaluations are frequently undertaken to decide whether or not a program's funding should continue, it is important to understand who the

individuals or groups are that have an investment in securing a favourable evaluation for a certain program (Lincoln and Guba, 1981). Stakeholders likely will provide the evaluator with information that shows that the program is successful and accomplishing the goals for which it was established.

The role the institution assumes is often the result of a political decision. How distance education impacts on institutions, programs and individuals might be a result of government priorities and government funding. One might examine the extent and the ways in which distance education programs influence the goals, policies and directions of other institutions, programs, agencies or individuals.

Evaluation Criteria: Political Ethos

1. What is the raison d'être of the distance education system or the program? Is it to:
   - relieve the burden of conventional schools and universities?
   - create cost-effective systems?
   - create alternative facilities for learning which encourage individualization?
   - to increase access?
2. Who are the stakeholders?
3. Are the employer's expectations concerning the "proper" focus for evaluation efforts made explicit?
4. Are the institutional goals explicit?
5. What are the interpersonal conflicts?
6. What is the hidden institutional agenda?
7. What are the covert purposes that surround the decision to call for an evaluation?
8. Is distance education intended to be an integral part of the national provision or a fringe form of educational provision?

9. Is it a planned component of socio-cultural development?
10. Is distance education an attempt to help the individual?
11. Is distance education a means of maintaining a dominant ideology?
12. Is distance education being used for "improper" purposes? (e.g. propaganda, biased teaching?)
13. How is government responding to the societal need of access to higher education? What is the decision grounded in? What are the underlying assumptions about the system chosen?
14. What are the political and social motivations underlying the establishment of the institution?

Chapter V

A GUIDE FOR ACTION

> "Evaluation is more an art than a science. It requires an ability to respond to a real state of affairs with an appropriate design, to create a plan out of the complexity of an educational program, and to respond to it's many constituents" (Gooler, 1979, p. 3-4).

The process of evaluation requires a guiding plan or conceptual framework based on the variables in the situation. The plan should be rigorous, responsive and viable. It must provide credible information on time, using techniques that supply data in a usable form. The form and content should be agreed to by program personnel and the results should conform to that format. A plan for action must be sensitive to many issues. It is important to work with those who may be affected by the evaluation, to understand and be sensitive to their needs, be willing to sacrifice some measure of precision to gain insightful results, and to recognize the existence of different value perspectives.

An evaluation plan will evolve in response to the following questions. These questions do not need to be addressed iteratively or in a linear fashion but must be considered when constructing the evaluation framework and implementing the evaluation plan.

Evaluation Questions

1. Are the goals of the program clear and explicitly stated?
2. Who is the evaluation's audience?
3. What is the level of questions you are asking in the evaluation?
4. What kind of information is sought about the program? Are they large amorphous questions, small detailed precise questions, or some of each?
5. Is the type of information sought about the program factual knowledge, or an

understanding of the situationally lived experience? Is interest in revealing tacitly held assumptions about the program?

6. Who has requested the evaluation? What is their interest in the results of the evaluation?
7. Why is the evaluation being undertaken? What does the evaluation's audience want to know?
8. How critical is the evaluation?
9. What is the required depth of understanding?
10. What are the constraints in terms of time, confidentiality, money, resources and personnel, etc. ?
11. Given the circumstances, audience, and resources what will be the data collection devices?
12. What are the available techniques for analysis given the types of information collected?
13. In view of the audience and the intentions of the evaluation, how will the final report look? Will it be a formal report or an informal discussion?
14. Are people likely to interfere if you ask certain types of questions?
15. What are the key features of the evaluation?
16. What are the standards to be invoked in assessing quality?

This evaluation project was undertaken to consider what constitutes strengths and weaknesses in distance education programs and to understand how programs might best be designed to facilitate the needs and interests of the adult student learning at a distance. Questions are posed to develop 1) an understanding of factors that contribute to success or failure of a course to meet the needs of those involved; 2) an understanding of the unique problems or concerns of the distance student; and 3) a sense of the ontology of distance education. This evaluation seeks different ways of knowing and understanding about the program. With this being the goal,

the evaluation plan is structured on Habermas' concept of three generic areas in which human interest generates knowledge. The questions, issues and concerns identified as criteria at the end of each section in Chapter 4 incorporate these ways of knowing. Habermas' triparadigmatic framework is described more fully in Chapter 3.

The following is a succinct description of the perspectives that undergird the evaluation orientations and a list of issues and concerns the evaluator considers in each orientation. These perspectives and evaluation questions were the basis of the 1978 British Columbia Social Studies Assessment.

Evaluation Orientations

An evaluation that is structured on Habermas' three paradigms seeks to understand a program from several perspectives. These perspectives have been appropriated by Aoki (1984) as follows:

1. Ends - Means (Technical) Evaluation Orientation
2. Situational Interpretive Evaluation Orientation
3. Critical Evaluation Orientation

Each of these perspectives seeks a different way of knowing and understanding. Each perspective is characterized by different evaluation concerns. Below are reviews of each perspective and respective lists of issues the evaluator must consider.

Ends-Means Evaluation Orientation

This dominant paradigm assumes quantitative measurement to be objective, reliable and valid. The methodology is scientific. The experience of people in programs is described in terms of standardized categories. A numerical value is

attached to each category. "Hard data is sought - the harder the better" (Aoki, 1984). The complexity of the situation is reduced, and understanding of the program is in terms of degrees of certainty, probability and predictability. This type of information can be acquired through achievement orientated, goal based, criterion referenced, cost benefit evaluation.

Ends-Means evaluation concerns are:

1. How effective are the means in achieving the end?
2. How much consistency or discrepancy is there between and among the objectives, content, resources, and strategies?
3. Have the stated objectives been achieved?
4. How much does the program cost and what effectiveness has it achieved?
5. What constitutes successful performance?
6. How effective and efficient is the program in achieving the objectives?
7. What theories or generalizations can be derived from this evaluation?

Situational Interpretive Evaluation Orientation

The situational interpretive approach involves an interest in authentic communication. The evaluator tries to gain insights into what it is like to be in a particular situation and acquires information through interviews, open ended questionnaires and on- site visits. Since on-site visits may not be an option for the evaluator of distance education programs, distance educators must be particularly astute when conducting interviews and designing questionnaires.

Situational Interpretive evaluation concerns are as follows:

1. How is the situation perceived from the viewpoint of all of participants?
2. Was the program relevant to the individuals involved?
3. How is the program understood in the larger school or community context?
4. What frame of reference do participating groups bring to the program? (IE.

cultural experiences, personal history, values and belief systems, etc.)

Critical Reflective Evaluation Orientation

The evaluator takes a very active role in the critical reflective approach. They bring into fuller view the taken for granted assumptions and intentions and ask questions which probe, uncover and make explicit the foundations of the program. The focus is on "the dynamic between the knowledge structure of life experiences and the normative structure as well" (Aoki, 1984).

Evaluators seek critical knowledge by addressing the following issues.

1. What level and whose interest does the curriculum serve?
2. What are the perspectives underlying the curriculum?
3. What are the root interests, root assumptions, and root approaches? (root metaphors)
4. What is the basic bias of publishers/authors/developers of prescribed or recommended resource material?
5. How does the curriculum planner view the student or teacher?

In summary, ends-means, situational interpretive and critical reflective perspectives are three ways to understanding program. Each perspective is different in intention and methodology. An evaluator who focuses attention on the means to achieve an end wants to know if specified goals have been achieved. The situational interpretive evaluator studies the perceptions of the people in the program. The evaluator seeking a critical understanding is concerned with the tacit goals, assumptions and values, and the worth of the goals. The perspectives are not in competition with one another, each perspective seeks different data and different ways of knowing and understanding. Combining the three perspectives discloses different aspects of the program or course.

How to use the framework

This evaluation framework is intended to transcend the dominant tradition of evaluation. It is my intention to push beyond the normal limits of the ends-means paradigm and integrate situational and critical perspectives into the evaluation plan. A more comprehensive, wider and deeper dimension of what is happening in a program results. When explanation is sought, ends-means knowledge is satisfactory. When understanding is sought, other orientations are necessary.

Different styles of evaluation serve different purposes. The evaluation framework must match the goals and intentions of the program, needs of the audience, goals of the stakeholders, and time and resources available for the evaluation. An evaluation plan should be able to be changed, modified, and adapted to respond to the needs of those involved. The criteria are intended to frame the issues in distance education and guide thinking about distance education and evaluation. It is not my intention to use the criteria as the basis for designing a criterion referenced evaluation.

Many evaluation questions relevant to important issues and concerns have been identified. The questions at the end of the section on relevant criteria are not only nomological questions; they are clarifying questions that address situational and critical issues and concerns. If the range of questions is incorporated into the plan the evaluator will gain a fuller understanding of the program.

Ends-means evaluations are central to the domain of evaluation. If evaluation needs require the evaluator to use logical positivism the essential questions and criteria for this type of credibility are comprehensive. Qualitative and quantitative data sources and triangulation of observations contribute to methodological rigour. A rigorous methodological framework incorporating ends-means knowledge as well as situational and critical perspectives will result in the development of grounded theory, a richer contextual understanding of the program, and more

valuable and useful findings for decision makers.

In summary, an evaluation is a way of knowing. Evaluators should endeavour to know and understand by integrating in any evaluation plan as many viewpoints as possible, and as may different ways of knowing as possible. Evaluators should use all data sources available to develop a more comprehensive understanding of the program - to tell the whole story. Conventional approaches to evaluation "focus almost exclusively on the products of the enterprise -- a narrow slice at that -- while they neglect the conditions, context and interactions that led to these consequences" (Eisner, 1979, p. 2). Multiple lenses add texture and fullness to an understanding.

CHAPTER VI

THE EVALUATION REPORT:

Evaluation of Nursing 310

The evaluation report consists of four sections: an introduction, the findings, a summary, and recommendations and discussion. The introduction includes the purpose of the evaluation, a brief description of the course, the historical context of the course and the methodology. The findings describe the results of the questionnaires and interviews. Results from each question are placed in a table to enable the reader to quickly see patterns and relationships. The summary discusses the findings in light of questions selected from the previously established criteria and the data collected. A brief discussion of the course from a critical orientation is also included in the summary. The recommendations and discussion section reflects on the strengths and weaknesses of the course. Provisos are suggested.

Part 1

Introduction

Purpose of the Evaluation

This evaluation was undertaken for the purpose of course improvement--to find out the strengths and weaknesses in the teaching-learning design and solicit suggestions from all those participating in the course about how the course could be enhanced for the learner. Questions are posed so as to facilitate understanding of the unique problems of the distance student and the ontology of distance education. The evaluation will identify particular areas of strength on which other distance education courses might be modelled. For the purpose of this evaluation, all categories of criteria will be considered. A selection of questions which seem appropriate to the needs of this evaluation will be discussed. Cost effectiveness will be only briefly discussed but, the formula described in the previous chapter will not be used.

Description of the Course

Nursing 310 is a 1.5 unit undergraduate course offered at a distance through the Extension Division of the University of Victoria. It is designed to enable health care professionals in various health care settings to recognize and take advantage of teaching-learning opportunities. The course emphasizes selecting and implementing a variety of approaches to learning and evaluating the effectiveness of the teaching and learning. See Appendices A, B, C, and D for a complete description of the nursing program, the distance education program, Nursing 310, and course objectives.

The course was offered September through December. It consists of a print

package, a TV component, and teleconference sessions. The TV component consists of five one-hour programs. The teleconference took place one evening a week, for 1 1/2 hours. The instructor was available for teletutorials from 6:30 to 8:00 a.m. one morning during the week. The teleconference and the television program were not on the same night.

The print package is very comprehensive. It contains all the readings for the course. The students do not have a separate text or reference book. Each unit is well organized. Advance organizers are located at the beginning of each unit, clearly indicating to students the scope and sequence of the lesson. Practice exercises are located throughout each module. The print package also contains all the necessary administrative information such as: contact people and numbers, course outline, timetable and assignments.

Historical Context

Nursing 310 is the second nursing course to be offered at a distance through the Extension Division of the University of Victoria. It was designed in 1981. The on-campus instructor, in collaboration with several other people, prepared the course for distance delivery. The instructor had some background in curriculum development and instructional design. As a group, they had little experience with distance education (Attridge, 1988).

The course underwent a major revision in 1985 and a small revision in 1988. Originally the course adopted network television as the core format and medium of delivery. Attridge (1988) describes the first version as follows:

> "We followed a somewhat traditional behaviorally oriented and linear curriculum design and implementation model (objectives -- learning experiences --evaluation) utilising to a great extent the usual classroom approach, lecture predominantly. Print materials were minimal (some session objectives, preparatory assignments readings, etc.), telephone tutorial support was limited and no other technological media were used. The TV segments were long (2 1/2

> hours), predominately live and interactive in type, and students came together in regional centres to receive the signal. Built into each segment were occasional short pretaped portions in addition to opportunities for students to engage in group work with each other around teacher questions or short assignments"

The course has undergone some changes as described above in the course description.

An unsuccessful attempt was made to collaborate with the Nursing faculty at the University of British Columbia to develop a baccalaureate nursing degree at a distance. Different philosophical and political underpinnings resulted in the University of Victoria offering all of the courses required for the baccalaureate nursing program.

To further contextualize the course's historical background, in 1982 the Registered Nurses of British Columbia prepared a position paper which states that by the year 2000 all nurses will be required to have a baccalaureate nursing degree. (see Appendix T). This statement created a need and a clientele for the program.

Methodology

The evaluation process used was much like the naturalistic responsive plan of Lincoln and Guba (1981). The evaluation was initiated and organized, the key issues and concerns identified, and useful data gathered. These were followed by a report on the results and the formulation of recommendations.

The key concerns were partially identified in the literature. Two sets of questionnaires were used to gather data about Nursing 310. Questionnaire #1 was sent out to a random sample of 100 of the 213 students originally enrolled in the course. Eleven students enrolled late; these students were not included in the sample. Telephone interviews were conducted with a random sample of 14 of the students who responded to the first questionnaire. Post-course questionnaires were sent out to 63 of the 73 students who responded to the first questionnaire. The other

10 respondents who were not sent post-course questionnaires were randomly selected to be interviewed by telephone. Thirty three students responded to the Post-course questionnaire.

Questionnaire #1 was designed to collect demographic data on the students, gain an understanding of their attitudes and interests and become aware of their perceptions of themselves as distance students.

The Post-course questionnaire was sent out several weeks after completion of the course. This questionnaire sought information on how students perceived the course in terms of presentation, personal satisfaction and the experience of being a distance student.

A semantic differential was included in both questionnaires. This was designed to see if opinions on distance education had changed during the course.

Information was also obtained from interviews with the content specialist/course designer, teacher, and course manager. Useful background information was obtained from the content specialist/course designer in an interview (see Appendix F) and, in a paper she wrote. The teacher was interviewed in person and informally by telephone (see Appendix G). She provided details on student performance, teleconferences, teletutorials, and student drop-outs. The course manager provided administrative information.

Part 2 - Findings

Success Indicators: A summary of key evaluation issues and concerns

Nursing 310 was evaluated in light of some of the questions and criteria described in Chapter 4. For the purpose of this evaluation the cost of learning will not be used as a success indicator. The following success indicators synthesized from the relevant literature, identify the key concerns of the evaluation.

Summary of success indicators:

1. Judgment of principles expressed through interviews.
2. Completion rate/degrees granted.
3. The extent to which those associated with the project are satisfied with what it does.
    - The extent to which distance is a desirable, satisfactory, or preferred delivery system.
    - The extent to which students are able to realize personal goals.
    - The extent to which students feel supported and integrated into the organisation.
    - The extent to which students are able to access post-secondary education.
    - The extent to which program aims are realized
4. Quality of the education available. Education or instruction?
5. The extent to which the costs are relative to the learning achieved.
6. The extent to which other institutions or employers recognize the qualifications acquired.
7. The extent to which the program utilises the central principles of effective practice in facilitating adult learning.
8. The extent to which the courseware fits the learning needs of the intended learners and is congruent with the learning objectives.
9. The extent to which didactic strategies match the intentions of the course.
10. The extent to which the course is an integral part of the national educational provision or a fringe form of educational provision.
11. The extent to which the objectives of the course are worth achieving.
12. The extent to which the teacher's goals are consistent with the curriculum as designed.
13. The amount of learning that took place.

Demographic Data

Biographical data on age and marital status was collected. Results indicated that 68% of the students were married. 34% of the students had one or more children (see Table 1). Most students (73%) were between the ages of 29 and 45 years of age (see Table 2).

Other demographic information indicated that 52% of the students had been out of college or school for more than 6 years. Most students worked (93%); the 7% who were not employed cited maternity leave and being at home with small children as their reasons for not working outside the home (see Table 4). All students were studying part time, 88% were taking fewer than 6 units (see Table 8). Furthermore, only 30% of the students said that they lived within driving distance of a university offering courses in Nursing (see Table 5).

Student Attitudes and Interests

Several questions were used to collect data on student attitudes towards being a distance student. Only 23% of the students preferred taking courses on campus; 59% liked the flexibility offered by distance courses (see Table 6).

Many students responded to several choices when asked to classify their learning interests. Students could respond to as many choices as they wished. The top three choices were: desire for more information and intellectual development (68%), better employment opportunities (77%); and credit towards a degree (78%).

When asked if they would enroll in the course if they did not have to, 48 percent responded "yes" (see Table 11); 10% did not respond to this question.

Several questions were designed to determine how the students perceived their abilities as students and how they perceived their relationship to distance study. Students seemed confident in their ability to successfully complete the course, 60%

expected a letter grade of B+ or better and all students who responded to the question expected a C+ or better (see Table 10). When asked how they perceived their reading ability in comparison to other students 91% thought they were average or above (see Table 13).

Student Performance

The marks for the course were very good. The teacher reported a range from 62 per cent to 98 per cent. Sixty-two per cent represents a C+. The mean and the median was 84 per cent. Eighty-four represents an A-. The mode was 82 per cent.

The instructor for Nursing 310 on-campus reported, in a similar size sample, a mean in the mid-eighties. Collins says "Academically, the students distant to the university do as well as the on-campus students" (Collins 1987, p. 25).

" A study by Athabasca University and the University of Alberta found RN students to be one sector of the population that does extremely well learning by distance education. Nurses are motivated, goal directed and capable of imposing the self-discipline necessary for distance learners." (Collins, 1987, p. 25) This helps explain the high achievement. Furthermore, adult students are more likely to discontinue than fail. Eight students dropped the course in the first few weeks. Several students choose not to continue after the midterm exam. Those students who did not continue after midterm had done poorly on the exam.

Six students did not complete the course within the designated time. Extensions were granted due to illness and family difficulties. The nature of distance education makes this flexibility possible.

TABLE 1

Marital Status

Status	Percent
Single/widowed/divorced	21
Divorced with children	1
Married	45
Married with children	33

TABLE 2

Age When Commencing the Course

Age	Percent
22-28	19
29-35	39
36-45	34
46-55	5
over 55	3

TABLE 3

Years Since Last Attending College or School

Years	Percent
less than 1	17
1-5	19
6-10	18
11-20	34
more than 20	12

TABLE 4

Hours of Employment per Week

Hours	Percent
not employed	7
20 or fewer	19
20-39	61
more than 40	13

TABLE 5

Proximity to an Institution Offering the Course

Distance	Percent
Reside within driving distance of campus	30
Do not reside within driving distance	70

TABLE 6

Study Style Preference

(students responded to several choices)

Preference	Percent
Would prefer to take courses on campus	23
Would prefer to devote full-time to classroom work	21
Prefer the flexibility offered by distance courses	59
Have previously enrolled in other distance courses	46
Successfully completed other distance courses	56

TABLE 7

Responses to: "Do you know other students enrolled in the course?"

Response	Percent
Yes	80
No	20

TABLE 8

Course Load

Units currently enrolled in	Percent
3 or fewer	55
4-6	33
7-9	12
10-12	0
more than 12	0

TABLE 9

Credits Previously Earned at a Distance

Credits	Percent
0	7
1-6	22
7-12	28
13-18	31
19-24	9
25 or more	3

TABLE 10

Expected Letter Grade

Letter Grade	Percent
A+	15
A	11
A-	34
B+	34
B	1
B-	1
C+	3
no response	13

TABLE 11

Response to: "Would you enrol in this course if you did not have to?"

Response	Percent
Yes	48
No	42
no response	10

TABLE 12

Reading Ability Compared to Other Students

Reading Ability	Percent
very fast reader	3
fast reader	36
average reader	52
slow reader	9
very slow reader	0

TABLE 13

Classification of Learning Interests

Classification	Percent
Desire for information and intellectual development	68
Desire for better employment opportunities	77
The job requires updating	15
Credits towards a degree	78
Desire to be a better parent, husband or wife	7
To help with present job or job change	34
To improve self image	26
Taken as part of a professional program	26
Other	3

Students' Perceptions of the Course

Tables 14 - 30 are the results of the thirty-three responses to the post-course questionnaire. All student who responded to the first questionnarie were either contacted by telephone or sent a post-course questionnaire. Seventy three post-course questionnaires were sent out. This questionnaire was designed to collect data on the students' perceptions of the course, the experience of being a distance education student, and any specific strengths or weaknesses of the course.

As Table 14 indicates, most students (91%) expected to receive a B standing or better in the course. No student anticipated anything less than a C+ letter grade.

Eighty-four percent of the students indicated that they made an average or slightly above average effort in this course in comparison with other distance courses they had taken. The hours of study per week ranged from 3 to 20. The average number of hours per week spent on Nursing 310 was 9.42 hours (See Table 16).

Students seemed satisfied with the course. Ninety seven percent of the students said they would recommend the course to others while only one of the 33 respondents would not (See Table 18). Forty-seven percent of the students agreed strongly that the course was very interesting; 97% ranged between neutral and strong agreement.

Support from the institution was available when needed. Forty-eight percent of the students responded that help was "always" available when needed. Only 6% responded between "sometimes" and "never" (See Table 20). Only 18% of the respondents reported contacting the Extension Division at the university while they were taking the course.

Few people worked in isolation. Eighty-two percent of the students contacted other students during the duration of the course; 67% contacted the instructor and 30% contacted other professionals in the area (see Table 17).

Several questions posed about the general level and quality of the communication met with favorable responses (see Tables 19, 21, 22, 25, and 26). Students reported that 47% of the communication consisted of asking for additional explanation (see Table 25).

Students were asked to classify learning interests on both Questionnaire #1 and on the post-course questionnaire. Although responses were very similar, at the end of the course more students said they had taken the course for information and intellectual development and as credit towards a degree (see Table 28).

As Table 30 illustrates, 88% of the students felt that the course objectives were very clearly stated. Responses to format and organization will be describe further in the section on open-ended questions.

TABLE 14

Letter Grade Expected

Letter grade	Percent
A+	3
A	31
A-	12
B+	24
B	21
B-	6
C+	3
C	0

TABLE 15

Effort Compared to Other Distance Courses

Amount of effort	Percent
1 (least amount of effort)	0
2	3
3 (average effort)	52
4	42
5 (most effort)	3

TABLE 16

Average Hours per Week Spent on Course

Hours per week	Percent
1-3	0
3-6	19
6-9	28
9-12	25
more than 12	31

The average number of hours per week spent on the course was 9.42 hours per week.

The time ranged from 3 hours per week to 20 hours per week.

TABLE 17

Support Sought During the Course

Contact	Percent
Other students in the course	82
Instructor or tutor	58
Other professionals in the area	30
Administration (at the University)	18

TABLE 18

Responses to: "Would you recommend this course to others?"

Response	Percent
Yes	97
No	3

TABLE 19

Response to: "Which situation most resembles your impression of the course?"

Response	Percent
Watching a TV/video tape	42
Attending a lecture	18
Taking part in a seminar	21
Watching an 'open-line' TV show	9
A live TV broadcast	0
Having a conversation with a friend	9
Listening to a cassette	3

Eighteen percent of the respondents indicted that the categories were not applicable.

TABLE 20

Response to: "Do you feel personal help was available from the institution when needed?

Response	Percent
1 (always)	48
2	32
3 (sometimes)	13
4	3
5 (never)	3

TABLE 21

Opinion of the General Level and Quality of Communication in the Course

Level and Quality of Communcations		Percent
1	(highly unacceptable)	3
2		3
3		0
4	(neutral)	18
5		24
6		30
7	(highly acceptable)	21

TABLE 22

Response to: "It is more difficult to understand the material presented in the distance mode than if it had been presented face-to-face."

Response		Percent
1	(strongly disagree)	6
2		6
3		3
4	(neutral)	18
5		24
6		18
7	(strongly agree)	21

TABLE 23

Response to: "Participation by all students was encouraged."

Response	Percent
1 (strongly disagree)	6
2	6
3	3
4 (neutral)	18
5	24
6	18
7 (strongly agree)	21

TABLE 24

Response to: "It is helpful to talk to people in one's own discipline when enrolled in the course."

Response	Percent
1 (strongly agree)	0
2	0
3	6
4 (neutral)	3
5	9
6	25
7 (strongly agree)	56

TABLE 25

Response to: "Two way communication consisted of:"

Response	Percent
1. Asking for information	44
2. Student providing information	31
3. Asking for additional explanation	47
4. Institution providing additional information	22
5. Providing information about administrative matters	25

TABLE 26

Response to: "Two way communication was carefully planned."

Resonse	Percent
1 (strongly disagree)	6
2	3
3	6
4 (neutral)	25
5	25
6	25
7 (strongly agree)	9

TABLE 27

Response to: "The content was interesting."

Response	Percent
1 (strongly disagree)	3
2	0
3	0
4 (neutral)	9
5	19
6	22
7 (strongly agree)	47

TABLE 28

Post-course Learning Interests

Learning Interests	Percent
Desire for more information and intellectual development	78
Desire for better employment opportunities	66
Job requires updating	19
Credits towards a degree	97
Desire to be a better parent, husband or wife	6
To help with present job change	53
To improve self image	34
Taken as part of a professional program	38
Other	0

*Students responded to more than one category.

TABLE 29

Extent to Which the Course Has Met Personal Goals

Response	Percent
1 (not at all)	3
2	0
3	3
4 (neutral)	9
5	33
6	27
7 (completely)	24

*The student who responded "not at all" stated that she had to withdraw due to "unforeseen circumstances".

TABLE 30

Response to: "Were the objectives clearly stated?"

Response	Percent
1 (not at all)	3
2	0
3	3
4 (neutral)	0
5	6
6	38
7 (completely)	52

Open Ended Questions

Several open ended questions were included in both Questionnaire #1 and the post-course questionnaire (see Appendix Q and R). Responses were classified into the following categories of concern:

1. Format
2. Organization
3. Helpfulness of instructor
4. Workload
5. TV broadcasts
6. Interest level
7. Comments on assignments
8. Final exam
9. Collect telephone calls to the tutor; and
10. Duration of the course

The following concerns arose frequently.

1. Some students found it difficult to coordinate the TV component with the course outline.
2. Many students found the TV component unnecessary.
3. The final exam schedule was a source of contention for some students.
4. Some students found the teleconference schedule inconvenient.
5. Students wanted to be able to call the instructor collect.

Most students made favourable evaluative comments concerning:

1. the course content
2. interest level in the course
3. quality of the instruction
4. helpfulness of the instructor
5. presentation of the material; and
6. the course being manageable in terms of time commitment and difficulty level.

Teleconferences

The teleconferences took place for one evening a week, for 1-1/2 hours. The teleconference bridge accommodates 19 students and the instructor. The average number of students participating was six. The instructor categorized the calls into two types: 1) questions exploring content, and 2) curiosity about what might be going on. The students who joined in out of curiosity were generally from communities where they were the only class member or students who learn best in a social setting.

On several occasions the teleconference bridge was full - at the beginning of the course and just before the final exam. Calls at the beginning of the course were generally to find out about the instructor and to case-out the course. Just before the final exam students hoped to get hints about the final exam. The instructor felt that she got to know some of the students who participated regularly in the teleconference quite well.

Teletutorials

Teletutorials were held from 6:30 to 8:00 one morning per week. The instructor said that these calls almost always had an agenda. Students called were made to ask for direction on the assignment or to ask permission to hand an assignment in late. Calls frequently were to discuss comments on the assignment. Complaints were seldom registered during these calls; however, several students did not get the course material on time and they called the instructor, rather than the university administration with this concern.

Semantic Differential

A semantic differential was used at the end of each questionnaire. It proved to be a useful methodology for collecting information about student opinions on distance education. Students were asked to respond to concepts relating to distance education on a scale of one to six. The same semantic differential was used on Questionnaire #1 and the post-course questionnaire. It was the intention to find out the student's connotative meanings of concepts related to distance education. By comparison, the second questionnaire indicates the extent to which student perceptions changed in a desirable or undesirable manner during the course.

Figure 4 represents the profiles for students at the beginning and at the end of the course. Questionnaire #1 was based on the responses of 73 students. The post-course responses are based on a population of 33.

The neutral point on the scale has a value of 4.0 and is indicated by a horizontal line representing the mean for each concept. Figure 4 shows the mean from Questionnaire #1 , the mean from the post-course questionnaire and the change in attitude that occurred for the 33 respondents .

Figure 4.

DISTANCE LEARNING - Results from Semantic Differential

Concept	Mean #1	Mean #2	Change
theoretical - practical	3.23	3.91	.68
sophisticated - unsophisticated	5.26	4.87	.39
concrete - abstract	3.70	4.29	.59
difficult to learn - easy to learn	4.19	4.26	.07
relaxed - tense	3.50	3.81	.31
academically isolated - academically integrated	3.20	3.03	.17
comprehensive - narrow	5.16	5.14	.02
dragging - lively	3.90	4.39	.49
satisfying - dissatisfying	5.06	5.32	.26
precise - vague	4.40	4.71	.31
vocationally worthless - vocationally valuable	5.47	6.03	.56
technically innovative - technically conventional	4.04	5.26	1.22
deep - superficial	4.84	4.42	.42
inferior - superior	4.70	5.03	.33
theoretical - applied	4.48	4.65	.17
boring - interesting	5.46	5.53	.07
important - unimportant	5.63	5.75	.12
static - lively	4.49	5.09	.60

Part 3 - Summary

Each data source provided a different kind of information. The literature provided a discussion from which the key evaluation issues and concerns were synthesized. The courseware provided an indication of the scope and sequence of the course. The instructor and the content expert provided information on how the content is presented and how the students performed, along with judgments about how effective the organization and presentation were. The student questionnaires and interviews provided another perspective on the successfulness and effectiveness of the course. These various data sources resulted in the following summary of the strengths and weaknesses of the course, according to the categories previously identified.

Access

Distance education is a global and rapidly growing phenomenon which offers formal learning opportunities to people who would not otherwise have access to schooling; women are especially likely to need the flexibility and ease of access that distance education provides. Educational institutions have a special responsibility to offer the courses women need for their professional lives. Traditional female professions such as nursing, teaching, child care and social work are reasonably well served in British Columbia (Sturrock, 1988, p. 27). The Extension Division at the University of Victoria is increasing access to its nursing program. Distance learners can now complete a Bachelor of Science in Nursing without any residency requirement.

In 1987 there were 28,000 registered nurses in British Columbia. Nearly 50 per cent of the nurses reside outside of the urban centers. These nurses have great difficulty gaining access to university schools of nursing (Collins, 1987, p. 25).

Access to these courses is very important. A position paper put out by the Registered Nurses Association of British Columbia states that by the year 2000 all new nursing graduates must have a baccalaureate degree. According to Attridge (1987), the proportion of baccalaureate graduates in nursing is still small, and there is a long way to go to meet the provincial mandate. Collins (1987) reported that 7.9 per cent of registered nurses in British Columbia had a baccaluareate degree in 1979, by 1987 about 15 per cent of nurses had a baccalaureate or higher degree.

Access to the nursing courses required for a baccalaureate has improved greatly. The majority of the nursing courses will be offered yearly as opposed to the previous practice of once every two years.

Distance education is one means of enabling women to reconcile personal and domestic needs with educational advancement. This program offers a realistic opportunity for women who want to pursue academic study alongside other responsibilities. Results of the study show that 70.5% of the students are between the ages of 29 and 45 years of age. Sixty-eight percent are married and 32.9 % are married with dependents. Seventy percent of the students did not live within driving distance of a tertiary institution offering the B.S.N. course; 10.9% were from Victoria. Of the two hundred and eleven students enrolled 17% were from out of the province. They lived as far east as Nova Scotia, as far north as the Yukon and the Northwest Territories, and as far south as Washington. It is unrealistic and impractical to expect these women to return to campus either on a full-time or part-time basis. If this course was not available through distance education, many of these women would likely not complete their degrees.

Women are targeted as an under represented group. Access to an under represented group is one of the mandates of most distance education programs. Distance education is intended to provide an opportunity for those students who missed other chances to further their education. 46.5 % of the students in the sample had been out of school or college for more than eleven years.

Statistical evidence indicates that enrolment in the program has doubled in the past two years. Sixteen students graduated in the fall of 1987 without having attended any on-campus classes. There were approximately 1,000 registrations for courses by distance education for the fiscal year running from April 1, 1987 to March 31, 1988 (University of Victoria Annual Report, 1987 - 1988).

Drop-outs

"By its very nature this type of educational framework is bound to have a high dropout rate. People with other responsibilities find it difficult to spend 10 to 12 hours every week studying, and some students register without a realistic understanding of the time required" (Enoch, 1988, p. 77). Seventy percent of the women were employed 20 or more hours per week. Many of the students had children, husbands and homes. Studies show that women still assume most, if not all, of the domestic responsibilities (Sturrock, 1988).

It is also important to note that "there is a significant difference between the withdrawal rates of new students and continuing students" (Keegan, 1986, p. 259). These students are part of a larger program; most have taken distance education courses before. "It is evident that once a student has been successful in a course, ability and determination to maintain studies is improved immeasurably" (Keegan, 1986, p.259).

Forty percent of the students indicated that they would not take the course if it was not required for the program. One might speculate that if the Registered Nurses position paper were not in existence some of these students might represent dropouts if the incentive was not very strong to complete. Possibly they may not have registered.

An unavoidable drop-out leaves the program due to circumstances beyond his/her control, i.e., sickness in the family, death, relocation. The institution can

do nothing to avoid this attrition. Avoidable drop-outs are those students who are not motivated, feel isolated, find the material difficult, or for various reasons do not function effectively in a distance learning environment. In this course 20 of the 224 students enrolled were drop-outs. The extension department sent out a questionnaire to these students and of the six who responded none dropped out because they were dissatisfied with the course. They were on the other hand unavoidable drop-outs, citing personal reasons such as family commitments, finances, and employment as reasons for failing to complete the course.

Quality of the Program Offerings

The quality of the learning materials, whether conveyed through electronic media or print, determines the success or failure of distance education. Carefully prepared high quality materials will instil confidence in the student, prevent drop-outs, and establish the status and reputation of the institution. This course has very high calibre courseware. The checklist identifies areas of strengths and weaknesses.

The course designer commented that while the course was well organized and clearly laid out this might be to the disadvantage of the student. She expressed concern that such structure did not involve the student in the "struggle of learning". The course is so conveniently prepared that the student is not required to go beyond the course package and search out other information. Opinions on this issue vary. One might contend, as does the teacher, that distance students do not need a struggle, i.e., they have enough things to concern themselves with.

The courses are developed and instructed by the School of Nursing faculty. This ensures an academic standard consistent with courses taught on campus (Collins, 1987, p. 25). The print package for Nursing 310 is used in the on-campus course.

Costs

A major attraction of distance systems is their reputation for cost-efficiency relative to conventional institutions (Keegan, 1986). According to the literature most institutional models include lower cost as one of the characteristics of distance learning (Keegan, 1986).

The province of British Columbia has a unique educational broadcasting system, the Knowledge Network of the West, which collaborates with the province's post secondary institutions to broadcast their courses. The availability of the Knowledge Network of the West, and the political structure behind it, makes television broadcasts a feasible alternative. Video cassettes are less feasible in terms of large enrolment.

While this study does not attempt to cost the program, the large enrolment creates the necessary economy of scale, and the availability of broadcast time on the Knowledge Network of the West makes presentation of this course an economically viable endeavour.

Status

The distance education nursing programme contributes to university and school prestige. The University of Victoria School of Nursing program is highly visible; it is the only North American post-basic baccalaureate degree in nursing available entirely by distance education. As such, it may provide a model for other programs in the country.

The annual report (1987-1988) from the University Extension Division states that currently the program is so popular that enrolment has doubled in the past two years. Furthermore, because there are insufficient resources to deal with expansion, the university has had to limit enrolment to exclude registered nurses

living in other Canadian provinces.

Relevancy to Needs and Expectations

There is an increasing demand upon nurses in Canada to be educated at the baccalaureate level because of the growing complexity of patient care, and consumer demand for high quality care (Attridge, 1987). Special circumstances such as jobs and family responsibilities prevent nurses from accessing educational opportunities in traditional ways. Fifty nine percent of the students indicated that they preferred the flexibility offered by distance courses (see Table 6).

On the post-course questionnaire 97% of the students classified their learning interest as "credits towards a degree". Sixty-six per cent stated that they wanted better employment opportunities and 53% said that they were taking the course to help with changing their present job (see Table 28). A follow-up study would be necessary to determine the extent to which these goals were met.

When asked if they had met their personal goals 24% stated they had met them completely and 94% responded between neutral and completely. One student had to withdraw due to an "unforeseen circumstance"; she stated that her personal goals were not met at all (see Table 29).

Seventy eight percent of the students indicated on the post-course questionnaire that an important learning interest was the desire for more information and intellectual development. Ninety-seven percent of the students said they would recommend the course to others (see Table 18). When asked if the course was interesting, on an interval scale of 1 to 7, 88% of students rated the course a 5, 6, or 7. Seven indicated that they strongly agreed that the course was interesting.

Quality of the Learning

Two-way communication and dialogue are necessary conditions of education. Although studying is an activity performed independently there is significant opportunity for personal interaction. The following provisions are built into the course to encourage two-way communication and guided didactic conversation.

1. The course has a weekly telecourse session providing the student with the opportunity to talk to the instructor and other students via telephone. It provides an important opportunity to get questions answered, help other students, and most importantly, hear other points of view.

2. A telephone tutorial time is arranged where the student must incur the expense but can call the tutor for a one-to-one conference.

3. Students are encouraged to form study groups. Class lists are sent out to each student so they can get together to discuss the course. Guidelines prepared by Counselling Services at the University of Victoria are provided to assist students in forming a worthwhile, interesting and productive study group.

4. All distance education students at the University of Victoria have access to INFOLINE, which gives explicit instructions on obtaining additional library materials. The Infoline will answer general reference queries, provide an information gathering service and some bibliographic work.

5. The learning situation is very personalized. The assignment is designed so that the instructor interacts with the student part way through the course. The student gets feedback on the first part of the assignment before progressing to

the second. The assignment relates directly to the students' practice.

6. The style encourages interaction. Personal pronouns and possessive nouns involve the student directly.

7. Questions are posed frequently and exercises are carefully dispersed in the print material to encourage the students to interact with the text. Students are involved actively, not only cognitively. In each module students are encouraged to draw from their own experiences and reflect on them.

8. There was a good 'follow-thru' on the assignment. Each student was provided with insightful thought provoking questions to guide her through the second part of the assignment. The feedback was personalised as the teacher chose not to hire a marker so she would have the necessary contact with the learners.

9. There were 224 students enrolled in the course. The teleconference bridge accommodated nineteen students at a time. The instructor reported that there were only several times when there was a "full house". The average teleconference consisted of six participants. The busy times were at the beginning and end of the course. Initial calls were to find out about the instructor and the course. Calls at the end of the course related mainly to the final exam.

10. Students were encouraged to contact the institution with questions. They reported the project manager to be very helpful.

11. Pictures of the tutor and the course designer were included in the first few pages of the course manual. This is a personaltouch that adds to the sense of knowing

with whom you are communicating.

Student Support Services

The university recognizes student support services as being a very important variable in the successful completion of courses. This is evidenced by the provisions that the university extension department implemented to facilitate the distance student. Several of these provisions were outlined in the previous section's discussion of two-way communication and guided didactic conversation (see points 1 - 5, and 8 - 10). Good communication is essential to student support.

The Department of Health Sciences has introduced an emissary program to be implemented in the near future. In the annual report it states:

> "The Health Sciences Program realises that students at a distance are often learning in isolation unlike their on-campus classmates. This program has developed a peer counselling program which will consist of a published manual and training program for selected students in the B.S.N. program who will become student emissaries. These emissaries will assist and support their educational colleagues." (University of Victoria Extension Division Annual Report, 1987-1988)

Results from the questionnaires and interviews indicated a high level of satisfaction with the support services. Students commented that telephone registration was not very convenient as they had to go to a telephone booth to use a "touch telephone" and the lines were frequently busy. Many students felt that registration by mail would suit them better.

The need for student support services appears to be directly related to the organization of the courses and the quality of the print package. Students generally did not feel the need to contact the university or the teacher. Most said they found all relevant information in the print package. The package is up-to-date. It includes objectives, course requirements and deadlines. Questions about assignments and exams were directed to the instructor. Most students did not

contact the institution. Those students who did found the personnel helpful and accommodating.

This group of students is somewhat atypical. Ninety three percent of the students are working in their field of study. Many knew other students in the course or in other distance courses. A B.S.N. by distance education is a widespread occurrence. Unlike many other distance education situations, these people are able to draw support from colleagues. There are many people outside of the university context who can help with course materials and sustain motivation. Difficulties in understanding particular concepts could be discussed with supervisory personnel or become the topic of a lunchtime conversation.

Professional Socialization

For professional socialization to occur, the program must provide ample opportunity for the student to be adequately exposed to the belief and value system of "significant others". They will then internalize the behaviours typical of a successful practising professional. This course provides role models on television and through case studies. Those students who took part in the teleconference had the opportunity for dialectical discussion with significant others.

Professional socialization is a concern that must be addressed by curriculum developers. It is extremely difficult to manage and evaluate the process of professional socialization in a face-to-face learning environment during the short term of a 1.5 unit course. It is almost impossible to assess at a distance, albeit difficult to evaluate, it must be considered and integrated into the curriculum design. The mechanisms are in place to facilitate some professional socialization.

Critical Evaluation

Critical evaluation involves looking at descriptive accounts of the program and then probing to discover underlying assumptions, interests, values, motives, perspectives, root metaphors, and implications for action. The following is a brief discussion of the course from a critical perspective.

This course is well organized. Each of the seven modules is organized so that the objectives are stated at the beginning of the module. They are followed by the definitions, theory, and practice exercises. Each module concludes with a summary. Answers to practice exercise questions are located at the back of the print package. The organization and epistemological framework, considered by students to be one of the strengths of the course, reflects an important perspective on the teaching-learning process. It assumes an interest in predictive knowledge i.e., knowledge that is explanatory and technical. The interest is in facts, generalizations, cause and effect, laws and theories.

Implicit in the course is the view of learning that Freire (1972) refers to as the "banking system". Information is passed on to students and students withdraw the information when required. The emphasis is on knowing in the empirical analytical way--recalling previously organized ideas.

The choice of exemplary teaching models is another indication of how the teaching-learning process is viewed. The learning theories used as examples are operant conditioning learning theory, information process learning theory, and social learning theory. Theory is defined as "a plausible or scientifically acceptable general principle or body of principles which governs practice or is proposed to explain observed phenomena". Learning objectives must possess the following characteristics: relevance, precision, feasiblity, observability and measurablity.

Objectives are stated in nomological terms in prosaic language. They are clearly defined and constructed in a way that facilitates measurement. Exemplary

objectives are selected from module six. Upon completion of this students will be able to:

1. Correctly define the term "teaching method";
2. Clearly distinguish between a teaching method and a teaching strategy;
3. List at least six dimensions along which teaching methods can differ;
4. Discuss at least six dimensions along which teaching methods differ;
5. With respect to each of the following methods, describe in your own words the underlying assumptions, essential characteristics, appropriate uses in health care, principles of implementation, advantages, disadvantages, and possible pitfalls:
   a) lecture, teacher explanation/presentation
   b) discussion
   c) role playing/simulation, etc.
   d) interaction/questioning
   e) individualized approaches
   f) humanistic; and
6. In a real or hypothetical teaching/learning situation select (a) teaching method(s) which fit(s) the characteristics of the teaching/learning situation (context, learner characteristics, objectives, etc.).

There is an interest in efficiency, effectiveness, and predictability. In discussing underlying assumptions of various teaching methods, those assumptions are described. Students are asked to recall them in their own words. Critical reflectivity is not encouraged.

The orientation is one of theorizing and practising. The activities are designed to provide an opportunity to engage in the practical application of the principles discussed. The problem solving component is frequently practised. For example, students are asked to solve a problem using Social Learning Theory (p. 164). The

sequence of events in social learning proceed in a linear fashion according to four phases: attention phase; retention phase; reproduction phase; and motivational phase. The problem solving approach model is intended to encourage the student to problem solve; however, the problem is only solved within the context of stated solutions. Students are instructed how to solve the problem, i.e., which model to use, and then asked how to proceed.

Methods of evaluating learning must be systematic, and deal with observable/visible behaviour. They must be objective, relevant practical representative, reliable, and valid (p. 238-243). "The target of evaluation must be visible or capable of being made visible in some way (p. 242 of module 6)."

Students are expected to participate in the reinforcement activities. In the module, Learning Theories and Principles, students are asked to list the three sets of teaching strategies you can use to facilitate information flow from the environment through the learner back to the environment (p.155). These strategies are described in the previous eight pages. The learning does not transcend the curriculum; it is intended to occur within previously defined parameters.

Language such as "Contingency management, contingency contract, extinguishing undesirable behaviour, strategy, task analysis" is used frequently throughout the print package. Military-type vocabulary indicates learning grounded in a technical orientation.

In summary, this curriculum is approached with an empirical-analytic orientation. The interest is in efficiency, effectiveness and predictability. The course emphasizes the importance of recalling previously organized facts. The curriculum is well organized. The assumption is that learning is to occur in previously defined parameters. The learning is to be relevant, precise, feasible, observable and measurable. Learning is not seen to transcend the curriculum. The form of knowledge sought is nomological and law-like. Understanding is in terms of rational thinking, being technically proficient, and knowing the language of

theory. The content specialist/course designer addressed this issue in the interview when she commented that one of the weaknesses that might exist in the course is the apparent lack of the "struggle of learning". She said that the students had all the information at their finger tips and did not experience the type of learning that often occurs when one researches a term paper in the library, i.e., the unintended outcomes. The assignment is practical; some of the students who were involved in teaching were able to use activities from their practising professional lives. The course is epistemological and is controlled by the codification of disciplined knowledge.

Part 4 - Discussion and Recommendations

Strengths of the Program

Based on empirical findings, the strengths were as follows:

1. Course materials were well designed.
2. The teacher was helpful and took the time to respond to the students' needs.
3. The assignments gave students feedback midway through the course. This assignment served many purposes: it allowed the student to interact with the instructor; students were able to learn more because of the insightful comments; it functioned as a pacing mechanism and motivational device; and it helped the teacher to detect those students experiencing difficulties.
4. Personnel involved with designing, implementing and managing the program had a very practical sense of the subject matter.
5. The subject matter and approach to the course is highly practical. Students could relate to the material and many said they used the information in their daily practice.

6. The course encouraged and facilitated study group activities.
7. The material was up to date.
8. Instructions were up to date.
9. All pertinent information was available in the print package.
10. Criteria for success were clearly defined. Students knew what they were expected to know.
11. The administrative services were helpful and supportive.
12. Written comments on the assignments helped to develop a "true dialogue" in which both teacher and student learning can occur.
13. The course was accessible to all students (in the province) who wanted to enroll. Only 21% of the students said they would prefer to take courses on campus; 59% said they preferred the flexibility of distance courses.
14. The print package was comprehensive enough that most students did not need to watch all the TV broadcasts. The broadcasts were most valuable for illustrating and reinforcing concepts from the printed material.
15. The television programs were very good.
16. The course material was very interesting and relevant.

Weaknesses of the course

The course was evaluated from the perspectives of all those people involved with the course. Few weaknesses were expressed with the design, presentation, implementation or evaluation of the course. It is important to note that many students did not find any weaknesses and responded by saying they thoroughly enjoyed the course.

From the student's perspective, the perceived weakness are:

1. The final exam was difficult to comprehend.

2. The chapter on evaluation seemed very important but was not tested.
3. The exam writing schedule presented difficulties. Students said they would have liked to have had more flexibility in choosing the date of the exam. They also wanted more notice of the exam date because they did not have time to make suitable arrangements. Many said they had to change shifts or take holiday time.
4. The turn-around time for exams and assignments was too long.
5. Times for reaching the tutor were awkward.
6. Insufficient two-way communication.
7. The video component was redundant, and unnecessary for many students.
8. Out of province students were unhappy when the teleconference was cancelled two weeks before the final exam.

The perceived weaknesses of the course from the designer/content specialist's perspective are:

1. Students were not adequately challenged with the "struggle to learn". She expressed a concern that there may not be enough potential for unintended outcomes. Unlike their on-campus counterparts, students did not have to search library stacks for books or encounter some of the other difficulties of the campus student.
2. She also felt that students should participate in the teleconference. She considered the possibility of requiring the students to do so.
3. The course could more accurately reflect the ontology of the teaching-learning situation.

From the teacher's perspective the weaknesses were:

1. There could be more teleconference time.
2. There could be more interaction between teacher and students earlier in the course.

Recommendations

Most of those involved agreed that Nursing 310 is an excellent course. It is of high quality and could provide an exemplary model for some types of distance education courses. Given the positive feedback about this particular course very few changes are necessary. If the course was to be revised, the following provisos should be considered:

1. Enhance support services to the students by:
   a) establishing a toll-free line for registering for courses;
   b) making registration by mail an option;
   c) making information on program changes more readily available;
   d) providing more flexibility in the exam schedule or making this schedule available at an earlier date so students can make suitable work and personal arrangements; and
   e) making teleconferencing available at alternative times.

2. Enhance the learning environment with:
   a) more optional supplementary readings; and
   b) more opportunities for discussions between teacher and students.

3. Enhance the contribution of the tutors/instructors to the learning process

by:

a) providing toll free contact with the tutor/instructor; and

b) having faster turnaround times for exams and assignments.

4. Enhance the dissemination of the course content by:

   a) making back-up tapes available to the student; and

   b) coordinating the videos more closely with the print package.

5. Assist and encourage the student's search for comprehension and integration of the course content with:

   a) increased opportunity for students to interact.

6. Enhance the quality of the learning by:

   a) providing teleconferencing facilities for study groups.

CHAPTER VII

CONCLUDING COMMENTS ON THE EVALUATION

The Evaluation Plan

There are many practical considerations that must be taken into account when conceptualizing an evaluation plan and conducting a defensible evaluation. The evaluator needs to define and characterize for others the following: the audience and the information requirements, the particular object to be evaluated, the purpose of the study, the inquiry approach to be employed, the concerns and issues to be examined, the variables to be assessed, the basis for interpreting the findings, the communication mode to be used, the anticipated uses for the findings, and the standards to be invoked in assessing the quality of the work (Madus, Scriven, Stufflebeam, 1986)."

Gooler (1979) sumarizes the elements of an evaluation plan in Figure 5.

Figure 5

Elements of an Evalution Plan

Purpose:	Why evaluate?
Audiences:	Who is the evaluation for?
Issues:	What questions should the evaluation address?
Resources:	What resources are available for evaluation?
Evidences:	What evidences should be collected
Data-Gathering:	How is the evindence to be collected?
Analysis:	How can evidence be analyzed?
Reporting:	How can evaluation findings be reported?

Gooler (1979) emphasizes the importance of the interaction of all eight elements of the evaluation plan. At some point in the plan all elements should be considered. He says that the components must be addressed iteratively: to design a specific evaluation, it is necessary to move back and forth among components until a design is stabilized and the subject matter and methodology are decided upon.

The evaluation plan, or model, described in this thesis characterizes my view of the main concepts involved in evaluation work and provides guidelines for using these concepts to arrive at descriptions, judgements and recommendations. A brief evaluation of the evaluation model based on Gooler's (1979) criteria for an evaluation plan follows.

The evaluation report was intended to serve several purposes. It was undertaken for the purpose of course improvement--to find out strengths and weaknesses of the teaching-learning design and to solicit suggestions from all those participating in the course about how the course could be improved for the learner. It was also intended to gather more generic information about the value or worth of the teaching-learning design for future course planning. Questions are posed so as to facilitate understanding of the unique problems of the distance learner and the ontology of distance education.

The audience was identified as people involved in writing and implementing distance education courses.

The issue and key questions were clearly delineated. At the core of the methodology is a set of epistemological assumptions concerning the ways of knowing and understanding. The questions were posed to the authors, designers, project managers, students and teacher/tutor with these assumptions in mind. The key issues evolved from a synthesis of the literature on distance education, andragogy and evaluation.

The resources for the evaluation were realistically appraised. Before embarking on the evaluation, time, costs, and availability of necessary expertise were carefully

considered.

Appropriate evidences were reasonably collected given the available resources. Evidence was both qualitative and quantitative. Success indicators were synthesized from the literature and used as part of the criteria against which to consider the data.

The data collected was comprehensive--a variety of data collection instruments were used. Since the type of instrument can greatly influence the type of information gathered, the evaluation involved both hard and soft data inquiry methodology. Everyone in the study volunteered their time readily. The return rate on the first questionnaire was 74%. The interviews were not rushed; many were 30 minutes long and conversational in nature. The instructor and the course designer spoke freely about the course and answered all of the interview questions. The personnel in the Extension division responded readily to requests for information.

Because of the purposes for the evaluation, the nature of the information to be analyzed and the resources available, several analysis techniques were used. The data collected was both qualitative and quantative.

The final report is a written report. It is presented in a clear, useable and interpretable manner.

In summary, the evaluation model addresses each element in a comprehensive and complete way. It was specifically designed for the context in which it was conducted. It was realistic in terms of time, money and human resources. The evaluation plan considered the complexity of cost, product and process. The results were presented in a format that will allow the audience to make judgements about the value of a program from a number of points of view. To begin and end with a consideration of student achievement does not give a satisfactory indication of the success of the program; many students seem to achieve regardless, or in spite, of the particular instruction they receive. Success was considered in terms of a number of criteria and from the perspectives of all those involved.

Discussion of the Adequacy of the Design

The adequacy of a design might also be judged by the extent to which the results are generalizable to other groups and other situations. Caution must be encouraged when generalizing these results. The group involved in the evaluation was very homogeneous. They shared similar educational backgrounds, study circumstances and goals. All of the students were females currently involved in the nursing profession. Several were temporarily out of the work setting due to personal circumstances but, all students envisioned the same goal, that of completing a Bachelor of Science degree in nursing . The students in the sample were highly motivated, enthusiastic and self-directed. Many of the problems associated with the distance learner were not as prevalent with this group. The sense of isolation was not as acute as it is for many distance learners. Most students had contact with other students or colleagues who understood both the subject matter and the experience of learning at a distance.

Many of the students in the sample formed study groups, participated in teleconferencing, interacted with peers, or telephoned the instructor. These options are not as avaliable for students enrolled in programs with smaller total student enrolment or in courses with different organizational models.

This course was recently revised and specifically designed for this target group.

The sample is large enough to make generalizations about the success of this course and the reasons for the success but, the sample is not large enough, or varied enough, to generalize with a high degree of confidence, the results for other distance learners in other study programs.

Reflections on the Strengths and Weaknesses of the Evaluation

This conceptual framework would be effective for evaluating any type of distance learning situation. Its strength lies in the fact that it is not inveterately theoretical and it collects enough information to develop a good sense of what the program is like from the perspectives of all those involved. It combines the various perspectives and discloses different aspects of the course. The plan is flexible and reflects a willingness to sacrifice some measure of precision to gain insightful results. Hard and soft data contribute to a better understanding of the program. The plan is based on multi-perspectives and on multi-criteria.

The success of a program is only partially due to a carefully designed course. Program evaluation must examine the infrastructure within which the course is offered. To be entirely successful a course must be offered in a milieu of strong student support. Effective learning in the traditional face-to-face classroom depends on both the successfulness of the plan and of the implementation of the plan. The success of the distance learning experience is likewise dependent on both the curriculum plan and the measures taken to effect the plan. This evaluation framework acknowledges the importance of a well designed course within a strong organizational infrastructure.

There are several weaknesses in the model as implemented. Several technical changes should be made before reusing the evaluation model. Several questions on the questionnaires were ambiguous. Careful validation of the questionnaire would have eliminated this problem. The second questionnaire should have been sent out immediately after the final exam was written. The time of the year (Christmas), the fact that most students were involved in other courses when the second questionnaire was mailed out probably influenced the results.

The semantic differential did not prove to be a valuable measurement tool. The intention was to determine the change in attitude about distance learning from the

beginning to the end of the course. Most students (93%) had previous experience with distance education courses. The question was premised on the assumption that many students would not have previous experience studying at a distance. Consequently, because the semantic differential did not measure what it was intended to measure it was not included in the evaluation report, and I would not include it in future evaluations when the course is so clearly part of a larger program offered at a distance.

Reflections on the Process of the Evaluation

The evaluation process was implemented with facility. Several variables contributed to this. The type of course, the course design, the student sample, the quality of the courseware, and the structure of the student support services contribute to the success of both the course and the evaluation.

The success of the model is dependent on cooperation of the participants. Without triangulation that results from the multiple perspectives, the evaluator can not be as secure with the integrity of the data. Lack of participation would have resulted in an incomplete picture of the evaluand. Everyone involved in the study volunteered time and information readily.

Because of the low response rate to the second questionnaire, caution must be taken about generalizing the results.

Conclusion

This multiperspective evaluation model offers the distance educator a useful and appropriate instrument for evaluating adult learning processes. It takes into account the distance factor and it does not adhere to the tradtional scientific paradigm of inquiry. It has practical application for evaluating a professional undergraduate university courses.

Concluding Comments

Distance education is rapidly becoming an integral component of the national educational provision. It may not be the panacea for solving funding issues and providing cost-effective education that governments might hope for but it does assume the important role of providing access to education for those who, for whatever reasons, cannot or choose not to pursue educational opportunities at traditional institutions. Adequate funding and support services, as well as a proper understanding of the nature of distance education are needed to take full advantage of the potential of distance education.

Effective program evaluation can play an important role in the successful growth of distance education. Good program evaluations are necessary to provide the best possible distance education experience. Mistakes can be corrected and lessons learned for future productions.

Evaluation should be an integral part of course design and development. As grounded theory is developed on the ontology of distance education, courses can be designed to address the specific needs of specific audiences. Evaluations will indicate what technologies best meet the needs and the learning interest of the students.

Student interest can be most successfully maintained by offering carefully organized print packages, using a variety of media rather than a single medium, and by providing a well developed program to support and to encourage students. The Extension Division at the University of Victoria has many provisions to accommodate students learning at a distance. The organisational infrastructure in which a course is offered is essential to the success of the distance learning experience.

Like traditional education, distance education is politically underpinned. As governments begin to recognize distance education as an integral component of the

educational provision and grant sufficient funds for developing new programs and improving existing ones the enterprise will flourish.

Distance education is under close academic scrutiny. Concern has been expressed for the degradation of the quality of education. High standards can be achieved if the model is right. Evaluation is a major device of quality control. Criteria for evaluation must ensure a high level of intellectual development.

Diversity must be built into teaching methods to insure a shift of emphasis from imparting knowledge to encouragement of spontaneous participation in learning and the development of problem solving ability.

It is the distance between the learning act and the teaching act, and the distance between the learner and his/her everyday life that curriculum designers must address. The vast geographical distance separating learner and teacher can be overcome with careful and selective use of appropriate media. The other distances are the real challenges to distance educators.

Suggestions for further research:

All areas of distance education require further research. Some suggestions for further research include the following:

Principles of Andragogy

1. How can courses be designed to most successfully accommodate the principles of effective adult learning?

2. How can participatory learning be encouraged? What teaching model and technologies best facilitate this goal?

3. Uncritical assimilation of previously defined skills or bodies of knowledge can be successfully accomplished using distance education. What educators must work on is a method to successfully develop a critically aware frame of mind at a distance.

4. What are the appropriate resources and technologies for empowering learners at a distance?

Adaptation of educational materials for distance learning

5. How might courses be designed so that choices in course materials and pathways through that material can be made?

Women in Distance Education:

6. Harding (1986) stated that there is a link between the ways in which women think and act and their ability to be more responsive to the needs of other women. To what extent might a female dominated staff contribute to the success of a course by being more responsive to women's needs?

7. Higher education is critical to the improvement of women's conditions. Education is the vehicle to both individual advancement and constructive social change. Does distance education ghettoize women further by keeping them in the home?

Technological Innovation:

8. The more integrated different components of a course are the more attention

must be paid to using each medium for the things that it does best. How can we attain academic and andragogical quality within each component?

9. What is the relative value of various forms of presentation, degree of learner freedom and personal interaction?

10. What is the potential of interactive video to facilitate dialogue between teacher and student, between students and the study group?

Evaluation

11. Formative evaluation is an important part of the learning process. It is much more effective for course improvement than evaluation that merely makes summative judgments of students progress. Formative assignments are a good means of communicating standards to students. How can correspondence (and telephone) exchanges be built in and around the submission of written work?

Program Development

12. How can we develop programs that challenge the intellectual potential of bright, average and mediocre or dull students alike?

13. What are the tuition requirements for teaching graduate degrees at a distance?

14. What are effective models for Masters teaching?

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APPENDIX A

NURSING PROGRAM DESCRIPTION

School of Nursing Program Description

Baccalaureate Program for Registered Nurses:

A program consisting of 34.5 units at a third and forth year level leading to the degree of Bachelor of Science in Nursing (B.S.N.).

The basic purpose of the B.S.N. program is to prepare students with knowledge, skills, methods and values necessary to practice nursing with individuals and groups wherever nursing takes place, such as community health agencies, acute and extended care hospitals and a variety of other settings. The program is also intended to provide the basic competencies to permit graduates to develop the additional skills needed to work in highly specialised situations and to move into leadership positions.

Nursing 310 - The Teaching-Learning Process in Health Care, the course being evaluated is described in the University calendar thus:

> This course is designed to enable health professionals to recognise and take advantage of teaching opportunities in various health care environments. Emphasis is upon the selection and adaption of teaching techniques to a variety of patients/clients/ others and environments and the establishments of criteria for behavioral assessment of teaching effectiveness. (Open to students in Nursing and, with the instructor's permission, to other health professionals.)

APPENDIX B

DESCRIPTION OF THE NURSING 310 COURSE

The description of the course from page 244 of the calender is as follows:

Nurs 310 (formerly 402) (1 1/2) The Teaching-Learning Process in Health Care

> This course is designed to enable health professionals to recognize and take advantage of teaching opportunities in various health care environments. Emphasis is upon the selection and adaption of teaching techniques to a variety of patient/clients/others and environments and the establishment of criteria for behavioral assessment of teaching effectiveness . (Open to students in Nursing and, with the instructor's permission, to other health professionals)

APPENDIX C

DESCRIPTION OF THE DISTANCE PROGRAM

The calender description of Part time and Off Campus Studies is as follows (page 243):

> Some required courses are offered through the Division of University Extension and Community Relations in the evening and the Winter Session (September - April) and in the daytime or late afternoon during May - June and July - August. Most required nursing courses are taught through distance education, as well as on campus in Victoria. In distance eduction courses, the educational media may include print packages, television and audio tapes. telephone tutorials, and when necessary face to face group discussions. Certain courses may be undertaken through the Open Learning Authority or other post secondary institutions with permission of the school.

APPENDIX D

COURSE OBJECTIVES

A. Given a real of hypothetical teaching-learning opportunity, you will be able to:

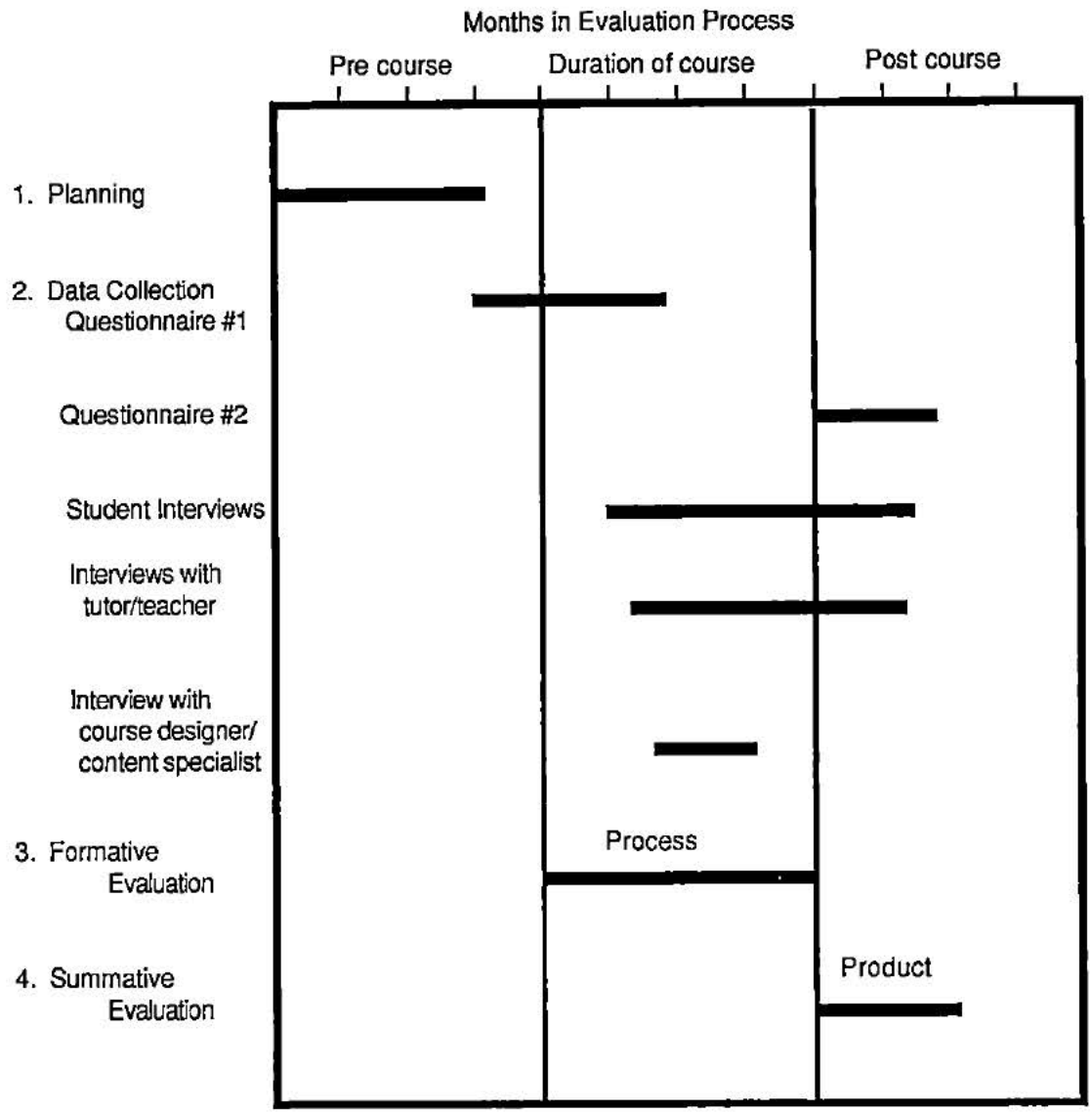
1. Effectively analyze the key components which affect the design and implementation of a teaching plan (learner characteristics, environment).
2. Satisfactorily analyze the "task(s)," e.g., attitudes, values, casts, skills, etc., to be learned.
3. Write appropriate learner objectives, in consultation with the learner where possible, level of performance expected by the learner.
4. Select teaching methods and strategies appropriate to your objective and other characteristics of the teaching-learning situation.
5. Describe some simple methods appropriate in evaluating the attainment of learner objectives and the effectiveness of your teaching.

B. Wherever real teaching-learning opportunities arise, you will:

1. Voluntarily defend the central importance of teaching and learning to the effective practice of your profession.
2. Voluntarily choose to practice the knowledge skills and attitudes implicit in Objectives A, 1 through 5.

APPENDIX E

EVALUATION PLAN



APPENDIX F

QUESTIONS FOR CONTENT SPECIALIST

1. How many times has this course been offered?
2. What kinds of changes have occurred over the years?
3. How many students have successfully completed the course?
4. What are the differences between the on campus course and the distance course? Which was designed first?
5. Do you feel that there is any part of the course which might be presented more successfully in another medium?
6. What feedback do you get from students?
7. What kinds of changes might be made to improve the course further?
8. What kinds of thing have you learned from this course that have application for other distance education courses?
9. Describe how the course was designed and developed.
10. Are there discrepancies between the original goals and intentions of the course and how it appears in its finished state?

APPENDIX G

QUESTIONS FOR THE TEACHER/TUTOR

1. Have you taught this course before?
2. What is your opinion of the organisation and presentation of the course?
3. Do you feel that there is enough flexibility in the course materials and assignments?
4. What is your opinion of the course format? Do you think students have to struggle with the learning in the course? (Is there value to the struggle?)
5. Do you think the course might have been presented more successfully in another medium?
6. Do you feel that there are discrepancies between the original goals and intentions of the program and how the program appears in it's finished state?
7. Can the course accommodate unexpected or unanticipated learning outcomes?
8. Does the course offer enough opportunity for the students to draw from their own experiences and relate them to other students?
9. What is the nature of the teleconference interaction?
10. Is it possible to detect students experiencing difficulty? What efforts are made to support of encourage students experiencing difficulty?
11. What kind of contact did you have with students?
12. Considering your experiences with the course, what changes would you make to improve the course?
13. What have you learned from the course?

APPENDIX H

STUDENT INTERVIEW QUESTIONS (During Course)

The following questions were asked of students, over the telephone while the course was in progress:

1. How many hours per week are you spending on this course?
2. What is a typical study routine for you?
3. Comment on the course in terms of: Flexibility, format, relevance to practice, new insights and understanding, quality of the presentation.
4. Are you interacting with other students?
5. Does the course offer enough opportunity to draw upon your own experiences?
6. Are you enjoying the course?
7. Are you experiencing any difficulties with: the course, contacting the institution, or technical difficulties?
8. Do you feel that the university offers adequate student support?
9. Are the broadcasts offered at a convenient time?
10. Have you participated in a teleconference?
11. Were you able to keep up with the course?
12. Do you think it would be easier to take the coures on campus?

APPENDIX I

STUDENT INTERVIEW QUESTIONS (Post Course)

The following questions were asked of a sampling of the students over the telephone upon completion of the course:

1. Did you enjoy the experience of being a distance student?
2. What is you impression of the organization of the course?
3. What changes might improve the course for the distance learner?
4. Were the objectives clear?
5. Do you feel the evaluation process was fair?
6. Do you think any part of the course might be presented more successfully in another medium?
7. How much time did you spend on the course per week?
8. Did you get the letter grade you expected to recieve?
9. Did the course fulfil your personal goals?
10. Did you at any point feel discouraged, anxious or overwhelmed?
11. What was the most difficult thing about taking the course?
12. Did you use the teleconference? What were your impressions of the experience? Did you feel encouraged to participate?
13. Do you feel that help was available from the institution when needed? Did you contact them? Why?
14. Did you contact the instructor?
15. Do you feel that the course interesting?
16. Do you have any comments on the exam? the assignments?
17. Which aspect of the course do you feel was the most worthwhile?
18. Were there any negative aspects to the course? Explain.
19. Did you form a study group?
20. Do you have any additional comments?

APPENDIX J

CHARACTERISTICS OF PRINT MEDIA

TYPES OF MATERIALS	Specially written correspondence texts or lessons Textbooks and readers: specially written or already published Supplementary items: notes on broadcasts, assignments, instructions, drawings, photographs, maps, charts Journals, newspapers, periodicals Reading guides, bibliographies
PEDAGOGICAL FUNCTIONS	To impart facts To develop skills To illustrated how knowledge can be organised for learning To provide links to tutors/other students
MOTIVATIONAL FUNCTIONS	Student can work at won pace Self assessment questions can provide reinforcement Provides a permanent record of revision Academically respectable Written comments form tutors provide reinforcement
DEMANDS ON STUDENTS	Fairly high levels of literacy required Motivation for and/or previous experience of independent learning for reading needed Tends to impose a linear learning strategy
FLEXIBILITY COSTS	Generally the least expensive and most flexible of the AND media Must be prepared well in advance of use by students Major updating and revision can be costly, but brief supplementary items (notes, errata, etc.) can bequickly in response to student/tutor feedback
CREATION PRODUCTION AND DISTRIBUTION	Special skills required for preparation of self instructional written material (implications for staff training, use of consultants) Technical production skills needed: editing design, illustration, printing, storage Distribution arrangements; post bulk deliveries to local centers, rail/road, air transport

APPENDIX K

CHARACTERISTICS OF AUDIO VISUAL MEDIA

TYPES OF MATERIALS	Slides, filmstrips, film loops, film, videotape Audio-tape and/or discs and slides, pictures, diagrams Radio broadcast TV broadcasts
PEDAGOGICAL FUNCTIONS (examples)	Audio (eg. radio, audio-cassettes) - to convey primary source material (drama, music...) - to teach language skills - to provide information rapidly (radio broadcasts) - to provide supplementary 'tutorials' on areas of difficulty Audio-visual (eg. film. TV, tape-slide) - to demonstrate experiments - to convey primary source materials (eg. human or animal behaviour, drama, case studies, documentaries) - to illustrate working components (eg. of machinery) - to illustrate principles involving dynamic change (slow motion, use animation)
MOTIVATION FUNCTIONS (examples)	Publicity and student recruitment To give feeling of identity with staff, and other students To act as a stimulus for group work via viewing or listening groups (broadcasts, films, tape-slide) To complement print materials and stimulate students To help pace students' learning (fixed broadcast times) To allow student to control and rehearse his learning 1 (audio-tapes)
DEMANDS ON STUDENTS	Fixed broadcast times and/or viewing and listening group times can be convenient for students Transient nature of broadcasts mean students needs adequate preparatory and follow-up guidance if broadcasts are to be integrated with other materials
FLEXIBILITY AND COSTS	Open channel broadcasting schedules impose strong constraints on student study patterns and on delivery of associated non-broadcast materials to students Access to transmission frequencies and appropriate air time for broadcast can be a problem Production costs are lower for radio than for TV Non broadcast audio-visual materials can be very costly to provide to each student

APPENDIX L

Instruments

1. Students

    1. pre-course questionnaire of biographical data, attitudes and interests, perceptions of the relationship to the distance study course.
    2. guided interview process of course and study
    3. concluding comments - postcourse questionnaire
    4. follow-up interview

2. Instructor/ designers / tutors

    1. guided interviews - during and upon completion of the course

3. Evaluator

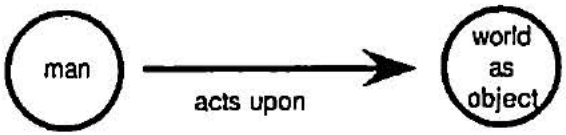
    1. examination of course materials - make explicit the tacit assumptions, and intentions held. (What orientation is the course grounded in? Is there a discrepancy between the praxis?)

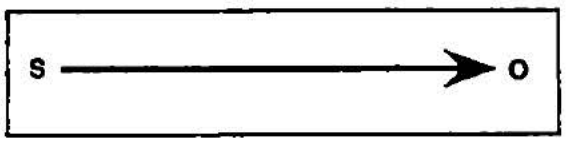
APPENDIX M

ORIENTATIONS

Empirical-Analytic (Technical) Orientation

Man / world relationship
"man *and* world"





Reality is out there.

Life in this world can be explained with certainty, predictability

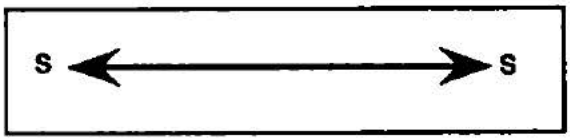
Theoretical Studies
Behavioral Theory
Systems Theory
Cybernetics
Structural functionalism

Some scholars
Descartes (I think; therefor I am)
Locke
Skinner
Vienna Scholars

Evaluation (Ends-Means)
Achievement Oriented
Goal Based Evaluation
Criterion Referenced Evaluation
Cost Benefit Evaluation

Situational Interpretative Orientation

Man / world relationship
"man-in-his-social world"



Reality is intersubjectively constituted.

Life is a mystery.

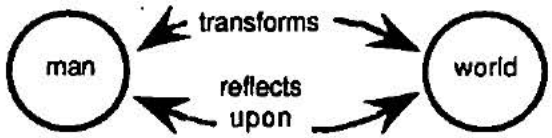
Theoretical Studies
Phenomenology
Sociology of Knowledge
Ethnomethodology
Linguistic Analysis
Hermeneutics

Some scholars
Schutz, Berger & Luckman
Garfinkel, Goffman
Husserl (To the things themselves)
Spiegelberg, Cicourel
Palmer, Hirsch

Evaluation (Situational Interpretative)
Phenomenological Interpretative Evaluation

Critical Orientation

Man / world relationship
"man-in-his-world, with his world"



Reality is in praxis (thought and action).

Life can be improved.

Theoretical Studies
Critical Theory
Critical Social Theory
Psychoanalysis

Some scholars
Gouldner, Adorno
Wellmer, Marcuse, Habermas
Frankfurt Scholars, Utrecht Scholars
Paulo Freire

Evaluation (Critical)
Discovering underlying assumptions, interests, values, motives, perspectives, root metaphors, and implications for action to improve human condition.

Uncovering idealogies.

APPENDIX N

ORIENTATIONS TO CURRICULUM INQUIRY

THREE ORIENTATIONS TO CURRICULUM INQUIRY

(T. Aoki)

Man experiences three root activities: WORK, COMMUNICATION,and REFLECTION. These activites yield three forms of knowledge: NOMOLOGICAL, SITUATIONAL INTERPRETATIVE,and CRITICAL.

Empirical-Analytic (Technical) Orientation	*Situational Interpretative Orientation*	*Critical Orientation*
Root Activity: Intellectual and technical WORK (relating man to natural world)	*Root Activity*: COMMUNICATION (Relating man to social world).	*Root Activity*: REFLECTION (relating man to self and social world).
Interest: in intellectual and technical control of world. Interest also in efficiency, certainty,and predictability.	*Interest*: in experientially meaningful, authentic, intersubjective understanding (in terms of meanings to actors).	*Interest*: in improving human cond ition by rendering transparent tacit assumptions and hidden assumptions and by initiating a process of transformation designed to liberate man.
Knowledge Form: Nomological knowledge (facts, generalizations, cause and effect laws, theories).	*Knowledge Form*:: Situational knowledge. Knowing of structure of interpretative meanings.	*Knowledge Form*:: Normative knowledge. Knowledge of thought and action to improve humanness and human/social condition.
Understanding is in terms of facts, etc.	*Understanding* is in terms of meanings people give to situations.	*Understanding* is in terms of reflection.
Knowing: empirical knowing.	*Knowing*: giving meaning.	*Knowing*: critical knowing that combines reflection and action.
Explaining: giving causal, functional, or hypothetico-deductive reasons.	*Explaining*: striking a resonant chord by clarifying motives, common meanings, and authentic experiences.	*Explaining*: tracing to underlying unreflected aspects to call for action.

APPENDIX O

EVALUATION CHECKLIST

1 = Excellent
2 = Very Good
3 = Satisfactory
4 = Satisfactory with modifications
5 = Unsatisfactory

Quality of the Presentation

	1 2 3 4 5	Comments
• Are the texts and pictures integrated into one coherent presentation?	☐☐☐☐☐	_____
• Are there explanatory drawings and text units?	☐☐☐☐☐	_____
• Is the typography of the print component laid out for learning effectiveness?	☐☐☐☐☐	_____
• Are the divisions in the text logical?	☐☐☐☐☐	_____
• Is there considerable spacing of chapters, sections, and paragraphs?	☐☐☐☐☐	_____
• Do headings and subheadings help to structure the content?	☐☐☐☐☐	_____
• Are italics and bold type used to single out key words or key concepts?	☐☐☐☐☐	_____
• Is there careful integration of text and audio-visual materials and, where relevant, practice activities?	☐☐☐☐☐	_____
• Do the materials look appealing? Is there adequate attention paid to marketing and packaging?	☐☐☐☐☐	_____
• Is the material self-explanatory?	☐☐☐☐☐	_____

- Are there adequate support materials for the audio-visual presentations? ☐☐☐☐☐ _____
- Is the material clear, unbiased, and factually accurate? ☐☐☐☐☐ _____
- Does the material represent differing points of view and interpretations? ☐☐☐☐☐ _____
- Is the technical information accurate and up-to-date? ☐☐☐☐☐ _____
- Are (learner/ tutors) those using the materials satisfied with them? ☐☐☐☐☐ _____

Appropriatness of the media choice

	1 2 3 4 5	Comments
• Is there enough flexibility in media choices to accommodate different learning styles?	☐☐☐☐☐	_____
• Is the media chosen for its own sake or is it valuable as a means to the study objectives?	☐☐☐☐☐	_____
• Is the media choice accessible to all learners?	☐☐☐☐☐	_____
• Can the information be updated easily?	☐☐☐☐☐	_____
• Is the media choice suitable to the educational aim?	☐☐☐☐☐	_____
• Is the media choice suitable for the subject matter?	☐☐☐☐☐	_____
• Do the media permit learner control?	☐☐☐☐☐	_____
• Is the media choice cost effective?	☐☐☐☐☐	_____
• Are there mechanisms in the course to collect feedback?	☐☐☐☐☐	_____

Fit with learner needs and expectations

	1 2 3 4 5	Comments
• Are there strategies to bring about learner autonomy?	☐☐☐☐☐	_____
• Does the approach stress learning rather than teaching?	☐☐☐☐☐	_____
• Is there authentic dialogue?	☐☐☐☐☐	_____
• Is the format of the course designed to encourage stimulating reconsideration, a search for more information, a practical application and verbal articulation?	☐☐☐☐☐	_____
• Is the vocabulary and sentence structures suitable for the intended learner?	☐☐☐☐☐	_____
• Is the material designed to encourage interaction with the tutor, the teacher, other students or the institution?	☐☐☐☐☐	_____
• Is there flexibility in choosing activities and resources?	☐☐☐☐☐	_____
• Does the study material take into account prior knowledge, skills, and attitudes that the learner possesses?	☐☐☐☐☐	_____
• Does the approach stress facilitation of learning rather than teaching?	☐☐☐☐☐	_____
• Is the quality and presentation academically acceptable?	☐☐☐☐☐	_____

Appropriatness of Presentation

	1 2 3 4 5	Comments
• Does the study guide give complete explanations with elucidating examples?	☐☐☐☐☐	_____
• Is there a systematic survey of the main points?	☐☐☐☐☐	_____
• Are the learning units a suitable size for the subject matter presented?	☐☐☐☐☐	_____
• Is the information presented clearly and logically?	☐☐☐☐☐	_____
• Does the introduction elucidate the study objectives and function as an advance organizer?	☐☐☐☐☐	_____
• Are advance organisers part of the cognitive structure?	☐☐☐☐☐	_____
• Is the textbook or printed material designed specifically for the course?	☐☐☐☐☐	_____
• Are study guides built into the course?	☐☐☐☐☐	_____
• Is adequate attention paid to orientating the learner?	☐☐☐☐☐	_____
• Are the instructional techniques appropriate for the learner?	☐☐☐☐☐	_____
• Is there a minimum of backwards and forwards referencing or referencing to other materials?	☐☐☐☐☐	_____
• Is the evaluation process clearly stated?	☐☐☐☐☐	_____
• Is there a discrepancy between the stated objectives and the evaluation methodology?	☐☐☐☐☐	_____

Practice Opportunity

	1 2 3 4 5	Comments
• Does the study guide provide exercises and refer to what students have already learned?	☐☐☐☐☐	_____
• Are there self checking exercises and submission tasks?	☐☐☐☐☐	_____
• Does the course have a conversational manner?	☐☐☐☐☐	_____
• Is there a range of tasks?	☐☐☐☐☐	_____
• Are the different teaching methods and techniques suitable to the different kinds of educational aims?	☐☐☐☐☐	_____
• Is there an opportunity for students to draw from their own situations and draw conclusions that are correct and fruitful?	☐☐☐☐☐	_____
• Are students required to consider special points, to take notes, review, to make tables and summaries, and to answer questions and solve problems?	☐☐☐☐☐	_____
• Is there reinforcement feedback built into the study unit?	☐☐☐☐☐	_____
• Are the assignments formative? Are standards communicated through formative assignment?	☐☐☐☐☐	_____

APPENDIX P

2048 Carrick Street
Victoria, B.C.
V8R 2M6
September 20, 1988

Dear Student,

I am presently completing a Master of Arts degree at the University of Victoria. My thesis study is on developing an evaluation model for distance education programs. An understanding of your interests and concerns while taking a distance course and, an insight into your perceptions of the distance study experience, will furnish valuable information which will lay the foundation for future amendments to courses. Information from this study will be used to determine: 1) the value and effectiveness of this course; 2) student attitudes towards distance education as a means of providing further education; and, 3) changes that might be made to course materials and delivery methods to improve the experience of learning at a distance.

The study involves a questionnaire in the early stages of the course, a telephone interview, and a post-course questionnaire from each student. I am asking you to put your name on the questionnaires in order to group them. The responses on the first questionnaire will be compared with the responses on the post-course questionnaire. Although the results of your questionnaires will be used, your name will remain confidential. I will be making telephone contact with a random sample of students during the course.

As a fellow student I realize that your time for study related activities is precious but, your input to this study would be extremely helpful. I hope that you will take the time to complete the questionnaires as your input will help to improve the quality of the distance learning experience. The information provided will be used solely for the completion of my graduate studies.

If you have any questions concerning the study or are interested in the results I would encourage you to call me at #592-4072.

Please use the enclosed self-addressed envelopes to return the questionnaires.

Thank you for your cooperation.

Sincerely,

Ellen Pelto

APPENDICES Q AND R

STUDENT PRECOURSE AND POST-COURSE QUESTIONNAIRES

The questionnaires were adapted from questionnaires used in a study done by D. Gooler, T. Hastings and J. Wardrop: Evaluating Geography Courses: A model with Illustrative Applications.

APPENDIX Q

QUESTIONNAIRE #1

Name:_____

1. Marital Status:
   - _____ A. Single/widow/divorced
   - _____ B. Divorced with children
   - _____ C. Married
   - _____ D. Married with children

2. Number of dependents (residing with you):_____

3. Student Gender: female ( ) Male ( )

4. Age when commencing the course:

   22-28 29-35 36-45 46-55 over 55

5. How many years since you last attended school or college:
   - _____ A. less than 1
   - _____ B. 1 - 5
   - _____ C. 6 - 10
   - _____ D. 11 - 20
   - _____ E. more than 20

6. How many hours per week, on average, are you currently employed?
   - _____ A. not employed
   - _____ B. 20 or fewer
   - _____ C. 20 - 39
   - _____ D. more than 40

7. Proximity to an instituiton offering this same course face-to-face:
   - _____A. Reside within driving distance to nearest tertiary institute offering the course on campus.
   - _____B. Do not live within driving distance to a campus offering the course.

8. Study style preference:
   - _____A. Would prefer to take the course on campus.
   - _____B. Would prefer to devote full time to classroom work.
   - _____C. Prefer the flexibility offered by distance courses.
   - _____D. Have previously enrolled in other distance study courses.
   - _____E. Successfully completed other distance education courses.

9. Do you know any other students enrolled in the course?
_____Yes _____ No

10. What are the total number of units you are enrolled in this semester?
(A) 3 or fewer
(B) 4 - 6
(C) 7 - 9
(D) 10 - 12
(E) more than 12

11. How many credits have you previously earned at a distance?
(A) 0
(B) 1 - 6
(C) 7 - 12
(D) 13 - 18
(E) 19 - 24
(F) 25 or more

12. What grade do you expect to receive in this course?
_____ A+ _____ A _____ A-
_____ B+ _____ B _____ B-
_____ C+ _____ C
_____ D
_____ F
_____ Unconcerned about grade

13. What is the most important reason you enrolled in this distance course?
_____ A. On-campus sections conflict with work schedule.
_____ B. On-campus sections conflict with non-work schedule.
_____ C. I prefer taking couses at home.
_____ D. Because I am interested in the content.
_____ E. Transportation problems
_____ F. Others (please explain)_____

14. Would you have enrolled in this course if you had not had to do so?
_____ Yes _____ No

15. What is your career objective?

16. a) How would you rate this course in terms of the priorities in your life?_____
b) What takes priority over studying? (list in order of importance)

17. In comparison with other fellow students, are you a

_____ very fast reader
_____ fast reader
_____ average reader
_____ slow reader
_____ very slow reader

18. Which of the following would you classify as your learning interests?

_____ A. Desire for information and intellectual development.
_____ B. Desire for a better employment opportunities.
_____ C. The job requires educational updating.
_____ D. Credits towards a degree.
_____ E. Desire to be a better parent, husband or wife.
_____ F. To help with present job or job change.
_____ G. To improve self image.
_____ H. Taken as part of a professional program.
_____ I. Other (Please specify)_____

19. On the following page there is a series of scales, all of which are relevant to "distance learning". On each respective scale I would like you to indicate your overall impressions of "distance education". The words at the two ends of each scale are opposite in meaning. Place your "X" on the scale at the point which describes your impression of "distance learning". The following illustration of one such scale. "good-bad," explains the meaning of the possible alternative responses.

If you feel your impression of distance learning is very closely related to one end of the scale, you should place a mark as follows:

Good _X_:___:___:___:___:___:___Bad

OR

Good ___:___:___:___:___:___:X__Bad

If you feel that distance learning is only slightly related to one side as opposed to the other (but not really neutral), then you should mark as follows:

Good ___:___:X:___:___:___:___Bad

OR

Good ___:___:___:___:X:___:___Bad

The direction toward which you check, of course, depends upon which end of the scale seems most characteristic of "distance learning". If you consider your impression of "distance learning" to be neutral on the scale, both sides of the scale equally associated, then place your mark in the middle space:

Good ___:___:___:X:___:___:___Bad

Important: Place your mark in the middle of the spaces, not on the boundries:

DISTANCE LEARNING

theoretical ___:___:___:___:___:___:___ practical

sophisticated ___:___:___:___:___:___:___ unsophisticated

concrete ___:___:___:___:___:___:___ abstract

difficult to learn ___:___:___:___:___:___:___easy to learn

relaxed___:___:___:___:___:___:___:___ tense

academically isolated___:___:___:___:___:___:___academically integrated

comprehensive ___:___:___:___:___:___:___narrow

dragging___:___:___:___:___:___:___:___ lively

satisfying ___:___:___:___:___:___:___:___ dissatisfying

precise ___:___:___:___:___:___:___vague

vocationally worthless ___:___:___:___:___:___:___ vocationally valuable

technically innovative___:___:___:___:___:___:___:___ technically conventional

deep ___:___:___:___:___:___:___:___ superficial

inferior ___:___:___:___:___:___:___:___ superior

theoretical ___:___:___:___:___:___:___:___ applied

boring ___:___:___:___:___:___:___:___ interesting

important ___:___:___:___:___:___:___:___ unimportant

static ___:___:___:___:___:___:___:___ dynamic

APPENDIX R

Post-Course Questionnnaire

Name_____

This is the follow-up questionnaire to the one you took at the beginning of this course. Some of the questions on this questionnaire will be similar to those on the questionnaire you filled out before. Do not bother to think about how you answered them at that time. Answer them as you feel right now.

1. What letter grade do you expect to receive from this course?

_____ A+	_____ A	_____ A-
_____ B+	_____ B	_____ B-
_____ C+	_____ C	
_____ D		
_____ F		
_____ Unconcerned about grade		

2. How much effort, in comparison to other courses, did you exert on this course?

1	2	3	4	5
least		average		most
effort		effort		effort

3. How much time did you spend per week on this course?_____

4. While taking the course, did you contact (check as many as appropriate)
   _____ other students taking the course.
   _____ the instructor.
   _____ other professionals in the area.
   _____ the tutor
   _____ the administration (i.e. University Extension)

5. Would recommend this course to others? _____ Yes _____ No

6. Which of the following situations most resembles your impressions of the course?

_____ watching a television program/ video tape
_____ attending a lecture
_____ taking part in a seminar
_____ watching an an 'open-line' television show
_____ doing a 'live' television broadcast from a studio
_____having a conversation with a friend
_____ listening to a cassette tape

7. Do you feel that personal help was available from the institution when needed?

_____: _____ : _____ : _____: _____
always sometimes never

8. Do you feel that the course should continue in its present form? Explain

9. What changes might improve the course for the distance learner? Explain

10. What is your opinion of the general level and quality of the communication in this course?

Highly _____ : _____ : _____ : _____ : _____ : _____ : _____ Highly
acceptable unacceptable

11. Participation by all students was encouraged.

strongly _____ : _____ : _____ : _____ : _____ : _____ : _____ strongly
disagree agree

12. It is more difficult to understand the material presented in the distance mode than if it had been presented 'face-to-face'.

strongly ____ : ____ : ____ : ____ : ____ : ____ : ____ strongly
disagree agree

13. The content of the course was altered as a result of participants questions and comments.

strongly ____ : ____ : ____ : ____ : ____ : ____ : ____ strongly
disagree agree

14. It is helpful to talk to people in ones own discipline when enrolled in the course.

strongly ____ : ____ : ____ : ____ : ____ : ____ : ____ strongly
disagree agree

15. Two-way communication consisted of :
____ asking for information
____ student providing information
____ asking for additional explanation
____ institution providing additional information
____ providing information about administrative matters

16. Most of the two-way communication which occurred during this course appeared to be carefully planned.

strongly ____ : ____ : ____ : ____ : ____ : ____ : ____ strongly
disagree agree

17. The content of this course was very interesting.

strongly ____ : ____ : ____ : ____ : ____ : ____ : ____ strongly
disagree agree

18. Which of the following would you classify as your learning interests?

_____ A. Desire for information and intellectual development.
_____ B. Desire for a better employment opportunities.
_____ C. The job requires educational updating.
_____ D. Credits towards a degree.
_____ E. Desire to be a better parent, husband or wife.
_____ F. To help with present job or job change.
_____ G. To improve self image.
_____ H. Taken as part of a professional program.
_____ I. Other (Please specify)_____.

19. How much did you meet your personal goals during this session?

Not at all _____ : _____: _____: _____ : _____ : _____ : _____ completely

20. Was it clear to you what the objectives of this course were?

Not at all _____ : _____: _____: _____ : _____ : _____ : _____ completely

21. On the following page there is a series of scales, all of which are relevant to "distance learning". On each respective scale we would like you to indicate your overall impressions of "distance education". The words at the two ends of each scale are opposite in meaning. Place your "**X**" on the scale at the point which describes your impression of "distance learning". The following illustration of one such scale. "good-bad," explains the meaning of the possible alternative responses.

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Good _X_:___:___:___:___:___:___Bad

OR

Good ___:___:___:___:___:___:_X_Bad

If you feel that distance learning is only slightly related to one side as opposed to the other (but not really neutral), then you should mark as follows:

Good ___:___:_X_:___:___:___:___Bad

OR

Good ___:___:___:___:_X_:___:___Bad

The direction toward which you check, of course, depends upon which end of the scale seems most characteristic of "distance learning". If you consider your impression of "distance learning" to be neutral on the scale, both sides of the scale equally associated, then place your mark in the middle space:

Good ___:___:___:_X_:___:___:___Bad

Important: Place your mark in the middle of the spaces, not on the boundries:

DISTANCE LEARNING

theoretical ___:___:___:___:___:___:___ practical

sophisticated ___:___:___:___:___:___:___ unsophisticated

concrete ___:___:___:___:___:___:___ abstract

difficult to learn ___:___:___:___:___:___:___easy to learn

relaxed___:___:___:___:___:___:___ tense

academically isolated___:___:___:___:___:___academically integrated

comprehensive ___:___:___:___:___:___:___narrow

dragging___:___:___:___:___:___:___ lively

satisfying ___:___:___:___:___:___:___ dissatisfying

precise ___:___:___:___:___:___:___vague

vocationally worthless ___:___:___:___:___:___:___ vocationally valuable

technically innovative___:___:___:___:___:___:___ technically conventional

deep ___:___:___:___:___:___:___ superficial

inferior ___:___:___:___:___:___:___ superior

theoretical ___:___:___:___:___:___:___ applied

boring ___:___:___:___:___:___:___ interesting

important ___:___:___:___:___:___:___ unimportant

static ___:___:___:___:___:___:___ dynamic

22. Please indicate the most worthwhile aspects of this course to you.

23. Please give any negative aspects of this course for you.

24. If you have any addtional comments or concerns regarding any aspect of this course or this evaluation process, then briefly describe them below.

    Note: Please attach any additional pages as required.

APPENDIX S

SUCCESS INDICATORS

Summary of success indicators:

1. Judgment of principles expressed through interviews.
2. Completion rate/degrees granted.
3. The extent to which those associated with the project are satisfied with what it does.
   - The extent to which distance is a desirable, satisfactory, or preferred delivery system.
   - The extent to which students are able to realize personal goals.
   - The extent to which students feel supported and integrated into the organisation.
   - The extent to which students are able to access post-secondary education.
   - The extent to which program aims are realized
4. Quality of the education available. Education or instruction?
5. The extent to which the costs are relative to the learning achieved.
6. The extent to which other institutions or employers recognize the qualifications acquired.
7. The extent to which the program utilises the central principles of effective practice in facilitating adult learning.
8. The extent to which the courseware fits the learning needs of the intended learners and is congruent with the learning objectives.
9. The extent to which didactic strategies match the intentions of the course.
10. The extent to which the course is an integral part of the national educational provision or a fringe form of educational provision.
11. The extent to which the objectives of the course are worthwhile achieving.
12. The extent to which the teachers' goals are consistent with the curriculum as designed.
13. The amount of learning that took place.

APPENDIX T

Registered Nurses Association of British Columbia: Position Statement

Future Education Requirements for Nurse Registration:

The Registered Nurses Association of British Columbia holds the position that by the year 2000, the minimum educational requirements for all new graduates entering into the practice of nursing in British Columbia should be a baccalaureate degree in nursing. RNABC sees this as the minimum level of education required to prepare the beginning practitioner to deliver sage and competent nursing care.

This position is a plan for the future. RNABC will continue to recognize the knowledge, skills and experience of diploma nurses who are registered before 2000 and who meet current practice standards. Registered nurses who have gained the experience and maintained the skills necessary to provide safe, competent nursing care will continue to be valued members of the profession.

The Association recognizes that this major change can be achieved only with the cooperation of all those who will be affected, and is committed to working towards the goal in collaboration with others.

Registered Nurses Association
of British Columbia

June, 1982
Revised September, 1988

APPENDIX U

EXECUTIVE SUMMARY

Nursing 310 is a course required to complete a baccalaureate degree in nursing at the University of Victoria. The course is available to students both on campus and at a distance through the Extension Division. This evaluation is on the distance education course.

The course consists of a comprehensive integrated interactive print package (including a study guide, all references, assignments, and timetable), a teleconference component and six videotapes aired on the Knowledge Network of the West, the educational broadcasting system in British Columbia.

A random sample of 100 students was chosen from 224 students enrolled in the the September 1988. Students were from all geographical regions of British Columbia as well as from the Yukon, Northwest Territories, Washington and several other Canadian provinces.

Seventy four percent of the students responded to the first questionnaire. A follow-up questionnaire or telephone interview was conducted with all respondents to the first questionnaire. A random selection of students were interviewed during the course. Data were collected from the content specialist/course designer and the teacher.

Some of the major highlights include:

- Most students (73%) were between the ages of 29 and 45 years of age; 68% were married; 34% had one or more children.
- Ninety three percent worked full-time or part-time; the other 7% were out of the workforce temporarily with small children.
- When asked to classify their learning interests the three top choices were: a desire for more information (68%), better employment opportunities (77%) and credit towards a degree (78%).

- An external influence affected enrolment. A position adopted by the Canadian Nurses Association in 1982 stated that the minimum level of entry to practice should be a baccalaureate degree by the year 2000.
- Fifty nine percent of the students choose the flexibility of distance education, 23% preferred taking courses on campus.
- The course was developed and instructed by the School of Nursing faculty thus ensuring consistent academic standards for courses taught on campus and through distance education. The distance education print package is used on campus. Although it is used slightly differently, the content, scope and sequence is the same.
- Academically the distance education students do as well as the campus students. Marks ranged 62% to 98% with a mean of 84%. The on-campus course, with a similar size sample had a mean in the mid-eighties.
- Students expressed an overall satisfaction with the course. Ninety three percent of the students said they would recommend the course to others.
- The Extension Department at the University of Victoria is doing an excellent job of increasing access to its nursing program. A Bachelor of Science degree in nursing can be completed without residency requirements.
- The University of Victoria has a highly visible nursing program. It is the only program of its type in North America.
- Of the 224 students enrolled in the course only 20 did not continue to completion. Of the students who responded to aquestionnaire sent out from the Extension Department, none stated dissatisfaction with the course, all students who "dropped out" did so for personal reasons.
- The university recognizes student support services as being an important variable in the successful completion of courses. Many provisions have been implemented to facilitate distance students. Results indicate a high level of satisfaction with the support services.

- Several strategies were implemented to provide an opportunity for guided didactic conversation and two-way communication.
- Students have some opportunity to interact with other professionals. The course provides role models on television, through case studies and via teleconference thus providing opportunity for some professional socialization.
- Course materials are well designed.
- The content specialist/ course designer reported an overall satisfaction with and pride in the course. If it were to be improved it would be by challenging the student with more of a "struggle to learn".
- The teacher was satisfied with the course.
- Response to the teleconference was mixed. The teleconference bridge was only full several times. Participation was highest when the course commenced and just before the final exam.
- There seems to be a bias in favor of using broadcast medium however, many students interviewed did not watch the broadcast. All students interviewed claimed to have missed one or more broadcasts.
- The Bachelor of Science Nursing program is growing rapidly and is meeting the needs of many nurses. Enrolment has doubled in the past two years.

Vita

Surname: Pelto Given Names: Ellen Louise

Place of Birth: Vulcan, Alberta Date of Birth: October 2, 1950

Educational Institutions Attended:

Simon Fraser University	1968 to 1972
University of British Columbia	1973 to 1974
University of Victoria	1987 to 1990

Degrees Awarded:

B.A.	Simon Fraser University	1972

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Title of Thesis: An Evaluation Framework for Distance Education

Author Ellen Pelto

30 April 1990