THE EVALUATION OF DISTANCE EDUCATION TECHNOLOGIES USED IN THE DELIVERY OF AN INTRODUCTORY UNIVERSITY CREDIT COURSE IN CHILD CARE

by

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We accept this thesis as conforming to the required standard.

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ABSTRACT

An evaluation of a distance education course, Child Care 200 (A & B), was conducted and focused on developing a profile of who took the course, when and why students dropped out, the impact of the tutor on the educational experience, and the effect of teleconferencing. Eighty-three students served as subjects in four treatment conditions: the control group which received all technologies in both halves of the course (A & B); two groups which received the same technologies as the control group but were denied access to the tutor in either the first or second half of the course; and a fourth group which consisted of Independant Learners who because of geographical isolation received only the print package.

Results indicated that students who took the course via distance education were older than on-campus students and demonstrated characteristics expected of an older population; specifically because of employment, family, and other obligations they were unwilling to travel to centres of higher education. The majority of students who dropped out cited these same obligations, or outside pressures as causal factors for dropping out. Results also indicated that the absence of a tutor had a negative effect on student satisfaction and completion rates

but no effect on content mastery, student motivation, or course material utilization. Although other studies indicated the contrary, teleconferencing was found to be intrusive and had a deleterious effect on the students' learning experience. As addenda to the evaluation project report discussions of distance education, technologies of distance education, and a critique of the present evaluation, are included.

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The author wishes to thank the members of the Child Care 200 Course Team for their support and advice with regard to the evaluation. I would also like to express my gratitude to the group leaders and students who through their participation and cooperation made the evaluation possible. Further, I must thank the members of my thesis committee (Jim McDavid, Public Administration; Frances Ricks, Child Care; Lorne Rosenblood, Psychology; and, Wes Shera, Social Work) for their direction and help in the conceptualization and production of this thesis.

GUIDE TO THE READER

In March of 1983 the author was given the opportunity to be involved in the evaluation of a distance education course, Child Care 200, an introductory course for the School of Child Care. Involvement was relatively unique in that the evaluator worked closely with the Course Team in the development and presentation of the course as well as its evaluation. The course and the evaluation were designed during the spring and summer of 1983 and offered from September, 1983, to April, 1984. The evaluation culminated in the writing of a management report which addressed the relevant issues and questions raised by the Course Team. This report was submitted to the Course Team and University Extension in August of 1984 and forms the focal point of this thesis.

The thesis represents a Master of Arts in Interdisciplinary Studies in Evaluation. Interdisciplinary Studies is a relatively new program at the University of Victoria allowing students to select courses and thesis committee members from a wide variety of disciplines relating to a specific topic area, in this case program evaluation. The degree program behind the present thesis consists of course work from the School of Social Work, the School of Public Administration, the Department of Economics, the Department of Psychology, and the School of

Child Care. These disciplines, excluding Economics, each provided a member of the Thesis Committee. Further, the External Examiner selected for the thesis defense represented the School of Nursing.

The effect of bringing together such a varied group of courses and committee members was to create a program and thesis representative of a broad range of academic research viewpoints and beliefs. Each discipline had their preference in terms of research paradigm as well as presentation format; whereas psychology prefers the traditional thesis format, the School of Public Administration supports the management report format. In meeting the requirements of the various disciplines, the present thesis evolved through several stages representing negotiation at the committee level, and finally, agreement on the need for a unique presentation format. Therefore this thesis is neither exclusively presented in a research thesis format, nor a management report format, but a blending of the two.

The Management report which was produced and submitted to University Extension constitutes Chapter III. This management report is imbedded in and contextualized within the more traditional thesis format which addresses critical evaluation issues and their impact on the evaluation, Chapters I, II, and IV. Because of the special nature of the thesis and its format it is necessary to guide the

reader through its reading in order that optimum usage of the material be achieved.

Start by reading chapter III. This is the management report and provides an overview of the project, project methodology, results, and, discussion/recommendations. This reading will afford the reader a quick overview and grasp of the evaluation project.

Following Chapter III the reader should then return to Chapter I for backround information on distance education, evaluation in distance education, the course Child Care 200, and the evaluation rationale. Chapter II contains a discussion of the methodology used in the evaluation. However, as it contains an expanded discussion of the methodology already described in chapter III, unless the reader has a particular concern or interest in the methodology, this chapter could be passed over without jeopardizing the overall understanding of the evaluation or thesis.

The final chapter to be read, Chapter IV, contextualizes the evaluation project within the broader issues in the field of evaluation. It is a critique of the evaluation project combining a recounting of the evaluator's experiences and the assessing of the evaluation's validity, reliability, and utilization, on both theoretical and practical grounds.

For the readers convenience a brief directory of what

is contained in each chapter follows, presented in the order of suggested reading.

Chapter III

This report is a self-contained document that was submitted to University Extension in August 1984. It contains a project description, the evaluation questions and their rationale, the methods used to respond to these questions, results and discussion, and finally the summary and recommendations. It also contains the original appendices including three reviews of the literature (regarding print, teleconferencing, and, tutors) and examples of the data collection instruments used. As the appendices are presented with the management report they appear near the middle of the thesis rather than at the end.

Chapter I

Chapter I provides a historical perspective of distance education which accounts for moving Child Care 200 from an on-campus to off-campus course. Further the history of distance education was useful in designing the course evaluation. The program goals, evaluation objectives, and evaluation questions are presented.

Chapter II

This chapter contains a discussion of the methodology used in the evaluation project. It is an expansion of the project report's methods section contained in Chapter III

describing subjects, design, instruments for data collection, and procedures.

Chapter IV

Chapter IV is a summary and critical discussion of the evaluation project. It includes discussions on such issues as ownership of the evaluation, involvement of the information users in the evaluation process, the quality of the evaluation, and evidence regarding the evaluation's utilization. In fact it stands as a "critique" of the evaluation project.

CHAPTER I

INTRODUCTION

Background and Context of the Study

This chapter provides a historical perspective of distance education demonstrating that its present form is the product of a 200 year evolutionary process. Further it considers the use and role of evaluation in distance education focusing on the need and apparent mistrust that educators have for evaluation research. Finally the rationale for the evaluation of Child Care 200 begins with a review of the course, and, presents program and evaluation goals.

Distance Education A Historical Perspective

Adult Education (Hudson, 1851), Supervised Correspondence Study (Mitchel, 1939), Part-Time Education (Rosen, 1965), Correspondence Instruction (Mackenzie, Christenson, & Rigby, 1968), Home Study (Stein, 1971), Correspondence Education (Kambwasa & Kaunda, 1973), Distance Education (Holmberg, 1977), and, Distance Teaching (Rumble & Harry, 1982), are the many terms which have been applied to the activity of educating adults outside the traditional face-to-face on-campus model. This diversity of

terms and lack of consensus regarding taxonomies reflects differing technologies, historical development, and aspirations of those involved in educating adults off-campus. More recently, Daniel, Stroud, and Thompson, in their preface to the 1982 Vancouver conference proceedings of the International Council for Correspondence Education (ICCE) claimed that the term "distance education" enjoys relative consensus of usage:

> "The delivery of course content to adult learners at a distance, through the use of various delivery technologies and strategies."

Distance education today is the result of an evolutionary process of educational developments, mostly the product of cumulative applications of technologies (print, telecommunications, etc.) and educational theories of how to instruct the target population and is best understood within a historical framework. In the western industrialized world formal adult education can be traced to pre-industrial England and the desire for religious knowledge. Mutual improvement societies operated within the then existing codes and laws of the established church (circa 1690) and were created to foster the betterment of mankind through biblical study. Of them Hudson (1851) wrote: "the first movement in adult as in infant education was sanctified by that important object the dissemination of religious truth" (p.1).

While the origin of admitting adults to school (the

first formal act of creating an adult education system) is difficult to pinpoint, it is recorded to have occurred in Wales as early as 1740. The Welsh Circulating Schools were teaching both adults and children literacy, again, for the purpose of bible study.

The advent of the Industrial Revolution realized the need for adult education to grow in directions other than theological. Mechanic's institutions were created to educate adults, with the Anderson Institution being conceived in principle in 1796 having as one of its goals:

> "...that the ladies in Glasgow, may have an opportunity, for a small sum, and in the early part of life, of being at several of these courses of lectures, by which, their education for domestic affairs will not be interrupted..." (p. 1, Hudson, 1851).

While pertaining to "the ladies" this statement reflects the awakening understanding that there was a need to educate within the constraints of the adults' schedule allowing for obligations be they domestic or employment. This flexibility sharply contrasted with the impact that was affected by the pedagogical styled course of instruction as delivered in the regular day-school manner.

Even when adult education was firmly entrenched in Great Britain, a large portion of the population was not being served; those unable through reasons of distance to attend face-to-face classes. In response to this, and with the availability of the recently established postal system (circa 1860) adult education created the technology of

correspondence.

Over the ensuing years the growing need for adult correspondence instruction was met through an ever increasing number of correspondence institutions. It was during the period from 1880 to 1890 that many correspondence colleges started and flourished, some of which are still operating today (Keegan & Rumble, 1982).

The British model for the development of correspondence education was used in other countries with only minor variation. Correspondence or external studies became academically legitimized in New Zealand in the 1880's (University of New Zealand); Australia, 1911 (University of Queensland); U.S.A., 1874 (Illinois State University); and Canada, 1889 (Queens University) (Keegan & Rumble, 1982).

Although widely used, educators became concerned with two shortcomings inherent in the correspondence model; the absence of the human element, and the lengthy turn-around time required for students to receive feedback on their work (Deighton, cited in Hoyt & Frye, 1972). However in the first half of the 20th century, radio and telephone became available at manageable costs and educators were quick to see the utility of these technologies in alleviating these concerns (Dichanz, 1982). The addition of telecommunication technologies to correspondence education was seen by some as enhancing the distance education experience, whereas others saw these new technologies as a

replacement for the old-fashioned method of education by correspondence. Such technologies allowed the student and the instructor to be involved in immediate dialogue thereby approximating the experience of the on-campus student.

Although the introduction of new technologies to the activity of adult correspondence education occurred at different times in different places, the use of technology in North America, Europe, and Great Britain proceeded along convergent paths. Radio was used in Britain in the 1920's by the BBC for the broadcast of adult education programs (the use of television commenced in 1959) (Barnes, 1982). These broadcasts were one-way transmissions as the technology for incasting was not yet available on a practical scale. Consequently both radio and television used the lecture format and while having introduced the human element, did not contain provision for discussion or immediate feedback.

The restriction of one-way information flow ended with the introduction of the telephone. Hughdahl (1978) traced the use of the telephone reporting that the first instructional application of this new technology was in 1939 when homebound secondary students in Iowa received instruction by telephone. In 1947, the first post-secondary instruction was reported at the University of Illinois. In 1958, the use of amplified telephone technology was introduced, and in 1960 the University of Omaha used the

teleconferencing format for the delivery of undergraduate courses.

More recent technological developments include two-way interactive radio and television, satellite links between learning centres, computer terminal/learner/instructor interaction, micro-computer programs, video tapes, and video discs (Ruggles, 1982). These technologies have been used in distance education achieving varying degrees of success. While some claims have been favourable in terms of course completion and enrollment (Phillips & Young, 1982), many have indicated less than expected performance (Schimeck, 1982). These disappointments have stemmed from a number of sources, some related to the technological limitations, ie: quality, speed, and personability of feedback and interaction, while others related to the dollar cost of advanced telecommunication technology.

Although distance education has become in Potter's (1981) words "a global affair," and "has become an increasingly common form of education in many countries of the world" (Daniel, Stroud, & Thompson, 1982), the reasons for its use are generated from two different sets of needs. In the western world, the need has been to reach the adult learner who has been denied access to higher education because of distance (Perraton, 1982). Whereas in developing countries, although distance is a factor, the primary need is economic development.

Whatever the originating need, distance education continues to grow. Perraton (1982) reported that between 1960 and 1975 more than twenty distance education institutions were started in Africa, and "between 1972 and 1980, the number of correspondence institutions in Australia listed in the Commonwealth directory grew from 15 to 46" (p.16).

The number of autonomous distance education institutions which are independant of traditional university structures also grew rapidly during this period: Britain's Open University was started in 1971; Athabasca University, Alberta, in 1970; the Central Broadcasting and Television University, Beijing, in 1979; the Universidad Estatal a Distancia, Costa Rica, in 1970; the Fernunisversitat, Federal Republic of Germany, in 1974; and Everyman's University, Israel, 1970. Also started in the early 1970's were the Allama Iqbal Open University, Pakistan; the Universidad National de Education a Distancia, Spain; and the Universidad Nacional Abierta, Venezuela (Rumbel & Harry, 1982).

This broadening of the distance education institutional base, combined with the complexity and diversity of new technologies and educational instruction systems has created a complex and varied field of educational activity. It is this complexity that both demands and challenges evaluation.

Evaluation in Distance Education

> "Inevitably, distance education advocates and adversaries have come to the fore. And just as inevitably, both groups tend to argue their claims relatively free of data" (p.43, Gooler, 1979).

Distance education is a relatively young enterprise and as a result has only a small body of knowledge, and few if any underlying theories of distance learning which are data based (Coldeway, 1982). There is however, a current drive for distance education information prompted by the need for accountability to compete for fiscal resources (Rumble, 1982), as well as increasing professionalism in the field wanting to know the best way to educate adults at a distance (Rekkedal, 1982).

While educators call for information, Bates (1981) suggests that they have a "profound suspicion" of the research required to gather it. Further, Bates claims that while publicly organizations express a need and desire for research information, resistance is high. Referring to the Annan Committee for the Future of Broacasting in the United Kingdom and their view of the attitude of those involved in educational broadcasting towards research, Bates quotes them as stating: "It was indeed extraordinarily difficult to get any evidence on the reality, as distinct from aspirations, of educational broadcasting" (p.215). The broadcasters were convinced of the effectiveness of their broadcasts but had little evidence to support this "act of faith." The Annan Committee reported that while many supported the concept of

research they were "suspicious of such research, they preferred to rely on the subjective appraisals of those involved" (p.215). Griffith (1979) acknowledged educators' distrust and suggested five considerations accounting for this:

- some research is poorly done,
- some research uses inappropriate methodologies,
- some research is for research sake only, with no practical value to those studied,
- some research is performed in ways that hinder utilization, and,
- some research is used in exploitive ways.

Referring to research into radio and television, Bates summarized that the source of this attitude was that "most research into the effectiveness of educational television and radio had been spectacularly unproductive" (p.215).

These sentiments are transferable to distance education as a whole, possibly due to the unusual and hostile environment of distance education. Gooler (1979) states that the evaluation environment in distance education is different to that in education and suggests four dimensions on which differences occur: Distance itself, the nature of the learners, the motivation of the learners, and the modes of delivery. The difficulty added to the evaluation by the distance factor is addressed in the Guide to Tutors, a handbook published by the Open University (1973) which

states that in terms of research:

> "...when one is confronted with a teaching system in which many different, highly complex disciplines are being taught in a wide range of ways and in which most of the learning takes place in the student's own home, where his learning habits are very difficult to observe, the problems appear almost overwhelming," (p. 23).

It was added that in the case of the Open University other complications exist: the fact that there are no normal student entry requirements, an interdisciplinary approach of interchangeable courses, an unconventional manner of student assessment, and the fact that everything is under continual review. This according to the handbook, leaves the researchers:

> "feeling as though he is being asked to take detailed measurements of the dimension of a highly active octopus using an uncalibrated piece of elastic and without in any way hindering the octopuses movements" (p.23).

The differences between the relative merits of scientific research and evaluation have been described and debated for some time (Sommer, 1977). This debate is echoed in the distance educators' mistrust of research. More specifically they argue that scientific constraints effectively reduce the utility of the evaluation outcome. In calling for a new model of information gathering in the area of distance education broadcasting Bates (1981) spoke of the difference between scientific and evaluation research:

> "Evaluation research is then a constant battle between trying to hang onto the essentials of a

> scientific approach - accurate observation, reliable information which can safely be generalized to the whole population or target group, the elimination of alternative explanations for the data, and, if possible the development of theory of how learning from television or radio takes place - against the pressure of time, lack of resources, and political and operational constraints on the decision-making process" (p.226).

Although Bates recognized the differences between research and evaluation many writers do not. The literature contains both terms used in what appears to be in an interchangeable manner. Focusing on evaluation, it is important to define the term in order that its usage be better understood.

Nevo (1983) reviewed the evaluation literature and found that there were two schools of thought regarding the definition of evaluation differing on the dimension of judgement. The Joint Committee on Standards for Educational Evaluation (1981) states that evaluation is the "systematic investigation of the worth or merit of some object" (p.118, Nevo). However, the Stanford Consortium, headed by Lee J. Cronbach rejected the judgemental aspect of evaluation, countering with evaluation as a "systematic examination of events occurring in and subsequent of a contemporary program - an examination conducted to assist in improving this program and other programs having the same general purpose" (p.118).

For the purpose of this discussion the definition of the Standards Committee will be used because others such as

Sommers (1977) offer similar definitions; the dictionary definition contains the judgemental element; and, a personal belief is that evaluation includes the dimension of judgement.

Critical Issues in Distance Education

In reviewing the literature in distance education Coldeway (1982) suggests that current educational research and evaluation can be described as falling into one of five categories:

1) position papers that discuss the phenomenon from the authors perspective with little attempt to define terms and variables,
2) descriptions of practice at a particular institution,
3) papers reporting general research findings using variables that are so broad and loosely defined (eg: tutoring versus non-tutoring) that replication would be practically impossible,
4) research studies with precisely defined variables (eg: a particular approach to tutoring) that could be replicated, although they rarely are,
5) research that applies to distance learning although not conducted with this application in mind (p. 29).

Coldeway adds that "the last is potentially the largest category of all" (p. 29).

Therefore, in terms of receiving assistance from the literature there is very little which pertains directly to distance education or is of a quality capable of giving direction. Consequently educators to date have been left to rely largely upon their own beliefs and experiences.

In spite of this, trends and critical issues can be identified. Bates (1981) suggests that issues are defined by the questions asked and whether they respond to a go/no-go decision or to an improvement decision. The Open University Guide to Tutors (1973) states that critical issues are identified within practical constraints:

> "The choice of what research to do depends largely on the kinds of questions which seem most urgently to need answering, and the kinds of answers which available research methods can provide and on the anticipated value of such answers for the future decision making" (p. 24).

In spite of the process by which critical issues are identified it is evident in reviewing the literature that there are primarily six areas of inquiry currently being explored in distance education literature. They are: student characteristics, content mastery, dropouts, student support, cost effectiveness, and educational models and technologies.

Student Characteristics: It is necessary to describe distant 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 & McKenzie, 1981). This is done usually as a matter of routine to give the course promoter an understanding of the student, but it is also done in the interest of marketing and preparing for future demand (Waniewicz, 1982).

However, there is currently another push in the activity of examining student characteristics. That being the positing of a link between the students learning characteristic or style and the degree of success achieved across models of distance education. In response to this, the description of learners has focused more closely on personal aptitudes and learning styles (Coldeway, Spencer, & Stranger, 1980).

Content Mastery: A persistent concern of the distant educator is content mastery and how it compares with that of regular on-campus tuition (Gooler, 1979; Open University, 1974). In spite of the fact that studies in correspondence education (Mishanchuk, 1983) and courses using telecommunication technology (Black, 1981; Hoyt & Frye, 1982; Jeffry, 1983) demonstrate comparable levels of content mastery, this issue continues to be a concern. The reasons for this is that each course with its particular combination of strategies and technologies presents the possibility of failure; content mastery provides one barometer as to the success of the course and model used. As a result, while the literature presents an overall good track record for

distance education, on an individual program level, mastery is still a concern and consequently will continue to appear in the literature as a critical issue.

Dropouts: Shale (1982) reports that in general, distance education typically has a dropout rate of between 30 and 60 percent but that this rate can vary depending on the method of calculation (Coldeway, 1982). Orton (1977) notes two methods of establishing this rate. The most common simply compares the number of students completing the course with the number who had originally enrolled. Orton suggests that an alternative method, one more sensitive to detecting course related problems removes the number of students who enrolled but did not start the course work (and presumably dropped out for non-course related reasons). In this manner the dropout rate more accurately reflects the impact of the course itself.

Factors affecting the rate of dropouts have not been fully delineated. Clearly many students drop out for non-course related reasons such as illness and family problems, but students also drop out for course related reasons such as the course material, and the manner of presentation. Dropping out does not appear to be a function of student intelligence or aptitude (Childs, 1963) but it has been suggested that the personal support received by the student may be a key factor (Robinson, 1981).

Student Support: Related to the issue of dropouts is

the question of student support. In regular on-campus tuition the student receives staff and peer support of an instructional, administrative, and, interpersonal nature. Many view this support as necessary for learning (Store & Armstrong, 1981) while others see it as important for student satisfaction thereby effecting dropout rates (Rekkedal, 1982). Others view the issue of student support as extraneous to the real purpose of distance education (Keegan, 1982).

The issue of student support is intertwined with the use of tutors, telecommunications, and the basic models of distance education. Student support is critical not simply because it forms a large portion of distance education activities but because of the high costs involved in the face of economic constraints. Student support is expensive and money spent on its provision must be justified.

Cost Effectiveness: In today's economic climate distance education is being challenged to provide a good educational experience while demonstrating that it is being done in a cost effective manner. A number of characteristics of distance education make this a difficult proposition. The first is the problem of establishing the criterion for determining cost effectiveness; what do you compare distance education to? As there is no exact counterpart to distance education, no other way for this group of students to learn, we must be satisfied with using

close alternatives for comparison. One problem with this is the differing costs reflective of differing course development and delivery strategies. In distance education the preparation of the teaching materials and the setting up of the administrative system are more expensive than they are for on campus tuition (Rumble, 1982). In view of the difficulty of comparing off-campus with on-campus courses, an alternate method of establishing cost effectiveness would be to compare the course in question to the most reasonable alternate course and method of off-campus delivery.

In spite of the problems of establishing cost effectiveness, distance education in the third world is seen as being cost effective (Orivel & Jamieson, 1982). Distance education in developed countries may not be however, possibly as a result of its reliance on expensive telecommunication technologies (Shah, 1982). Cost effectiveness is a critical issue and one which will require close scrutiny in the future.

Educational models and technologies: The purpose of evaluation and research in distance education is to produce knowledge affecting the ways that distant learners are taught. The distance education models used are the product of the following process; the examination of student characteristics and how students interact with the learning model used, student content mastery, student dropouts, and cost effectiveness of the distance education model. These

distance education models differ on many dimensions: the reasons for having distance education, ie: distance versus economics (Perraton, 1982), the structure of the material (Penney, 1982), and the mode of interaction between student and instructor (Cumming & McKay, 1982). Distance education models also differ in technologies used (tutors, print, and current telecommunication technologies). The creation and evaluation of distance education models continues to be an important issue in distance education.

Rationale for Evaluation of Child Care 200

The Division of University Extension is to "provide continuing education in all academic areas to students throughout the province." This is facilitated via "cooperation between Extension and various faculties, departments, and schools within the University...." and encourages the "offering of approved degree-credit courses to meet the needs of students at centres throughout the province" (Objectives of the Division of University Extension, 1980, p.1).

In 1978 an Extension component was established in the School of Child Care. For the following three years the School worked towards Extension's goals by the "sending of resource personnel from Victoria to northern and interior communities to offer professional development workshops and/or credit courses, and the utilization of School personnel to perform many Extension activities, ie.

conference organizing" (p.1, Extension Activity Proposal). In 1981 this role was re-examined within the context of budget constraints and the changing needs of the profession of child care work.

The re-examination resulted in a philosophical shift from viewing the School of Child Care in a resource delivery role, to a resource mobilization role. The school determined to help communities develop local resources, and to use existing School of Child Care credit and professional development offerings to complement or supplement community based educational offerings. This was evidenced by the School offering Child Care 200 and Child Care 210 via community colleges and/or satellite sites, so that students would be able to complete year one and year two of the B.A. in Child Care program in their home community. Further in 1982 Child Care 200 was formatted for distance education being offered in two parts and described in the University of Victoria's calender as:

> "Child Care 200A: Core Concepts in Child Care I. Emphasis will be placed on several relevant theories which relate to the assessment, understanding and management of childrens' behavior.
> Child Care 200B: Core Concepts in Child Care II. Specific strategies and techniques of child management which promote behavior change in children will be explored. Ethical issues in the practice of Child Care will also be examined" (p.221).

The rationale given for offering this course by distance education was the continued demand for the course in the face of increasing costs of sending staff to distant

communities. It was anticipated that distance education technologies would be more cost effective while retaining comparable standards of educational experiences to the previous model of sending personnel out into the field. Therefore there were two program goals:

1) to deliver Child Care 200 off-campus at a level of quality equal to or surpassing the previous off-campus offering and the concurrent on-campus version,
2) to deliver this course at a lower cost than the previous off-campus course.

In terms of format, Child Care 200 was described as being: "a teleconference course with a substantial print base (text and study guide). The course will be offered with tutor assistance (one tutor per 8-10 students) and teleconference instruction once a month for the duration of the course..." (p.1, Project Information Sheet).

The rationale for offering the course using this particular combination of technolcgies was relatively straight forward. Extension had established a model of distance education, which based on what the literature stated regarding its efficacy, included teleconferencing. New equipment had recently been purchased (an electronic bridge to replace the older manual type) and it was now possible at the University of Victoria to provide teleconferencing that was transparent and cost effective.

Consequently the Course Team opted to use teleconferencing believing that it was an appropriate technology. The Course Team included a print base which was indicated by the literature and their own experience to be the primary source of information and an integral component of any distance education course. The tutor role was included to provide the human element thought necessary for learning, and, with the addition of class meetings, the Team believed that they had developed an effective course delivery package.

Impetus for evaluation came from two sources: the mandate to evaluate given by extension, and the Course Team's need for information concerning specific program issues.

Extension's need to hold the course accountable was to be met via financial accounting, the evaluation of students' performance on exams and assignments, and via the present evaluation which was approved by them. Because of the mandate's vagueness any evaluation activity would have served as evidence of meeting Extension's requirement.

To provide information for program improvement was the most important objective and the most openly discussed by the Course Team. The Course Team wanted to improve the course on two dimensions: a) the learning experience, ie: print materials, tutor interaction, etc., and, b) availability: can the course be offered at a lower cost increasing its potential for delivery to smaller groups of

students and to facilitate packaging and marketing outside of British Columbia.

The specific evaluation questions included:

1) Who took this course?
2) When did people drop out of this course and why?
3) Which functions were performed by which staff roles?
4) What was the effect of not having a Regional Leader on the remaining staff and course roles?
5) What was the effect of not having a Regional Leader on student performance?
6) To what extent did the quality of teleconference transmission affect the learning experience?

These questions were established to respond to the Course Team's desire to find ways of course improvement. The critical issues of content mastery, dropouts, student support, student characteristics and by virtue of the study, educational models and technologies, were touched on to varying degrees.

CHAPTER II

METHODOLOGY

Subjects

All students who enrolled or started work on Child Care 200 delivered off-campus by the University of Victoria from September 1983 to April 1984 (N=83) served as subjects. In comparing on-campus with off-campus students, students then currently enrolled in the on-campus version of Child Care 200 (N=48) were used. Involvement in the evaluation was not a requirement of the course but was presented as a course "obligation" with the students being encouraged to participate. All students opted to participate.

Sixty-six subjects self-selected into seven learning centres: Dawson Creek (N=8), Powell River (N=16), Kamloops (N=4), Vernon (N=7), Nelson (N=13), Victoria (N=8), and Penticton (N=10). In addition, 17 students who because of geographic isolation could not join a learning centre, operated as independant learners.

Originally learning centres were to be considered subjects by virtue of the inability to randomly assign students. As it turned out, learning centres could not be randomly assigned either. Therefore individual students were retained as subjects for reasons discussed in Chapter IV.

Design

To examine the effect of the Regional Leader it was necessary to use a design comparing a Regional Leader group (RL) with a non-Regional Leader group (NRL).

Therefore there were two treatment conditions created:

A - in which all students received all technologies, (print, teleconferencing, class meetings, tutors) and,

B - where all technologies are available except the tutor.

It was decided to switch treatment conditions for Child Care 200B, the second half of the course, to control for possible between group differences. This reversing of treatment conditions necessitated the use of a control group to control for the time factor and possible differences in course material between Child Care 200A and Child Care 200B.

Due to the appearance of a number of students taking this course who lived too far from others to attend class meetings a third treatment group arose:

C - where students received the print package and brief one-to-one telephone calls from the Content Specialist every two weeks.

The evaluation design can be described as follows:

	Control Group	Group One (RL/NRL)	Group Two (NRL/RL)	Independant Learners
200A	A	A	B	C
200B	A	B	A	C

Data Collection Instruments

Questionnaires designed for use in this study formed the major data gathering component with course records, staff logs, and telephone interviews supplying additional information.

Specifically ten data gathering instruments were used, (Contact Logs and Audiotapes were to have been used but were not for reasons discussed in Chapter IV):

Student Profile Questionnaire

Student Feedback Questicnnaire

Who-Did-What Checklist

Post-Course Unit Questionnaire

Student Dropout Interview

Student Grades Record Sheet

Attendance Records

Library Use Records

Telephone Log

Teleconference Transmission Quality Questionnaire

Student Profile Questionnaire (see Appendix G, p.135). The Student Profile Questionnaire gathered information which generated a profile of the student body. The questionnaire focused specifically on such characteristics as family, education, employment, employer support.

Student Feedback Questionnaire (see Appendix H, p.141). The Student feedback Questionnaire focused on the formation of study groups, and the identification of alternate sources of help by students. It also contains questions which explore dimensions such as student satisfaction (with specific aspects being addressed such as teleconferencing, staff, print, etc.).

Who-Did-What Checklist (see Appendix I, p.147). This checklist contains twenty-nine functions which comprise activities of an administrative, instructional, and, support nature. Students were asked to attribute these functions to the person or persons who performed them, the Regional Leader, the Content Specialist, Co-Students, or, Other Staff in Victoria.

Post-Course Unit Questionnaire (see Appendix J, p.150). This questionnaire addressed the issue of motivation as indicated on a six-point Likert-type scale with questions regarding: exercise completion, hours of work spent on the course, and a self-rating question which asks the student to estimate their motivation quotient for the previous two weeks. Student satisfaction was also examined in this

manner.

Student Dropout Interview Guide (see Appendix K, p.152). The telephone interview focused on two questions: when did you stop working on the course, and why did you stop working on the course?

Student Grades Record Sheet (see Appendix L, p.154). Student performance on assignments and examinations were recorded by the staff in Victoria.

Attendance Records (see Appendix M, p.156). Attendance at the Saturday class meeting was recorded by the Regional and Student Leaders.

Library Use Records (see Appendix N, p.158). Student usage of the University library's facilities was reported by the University library's Infoline service.

Telephone Log (see Appendix O, p.160). For a one week period, staff reported the telephone calls' content, ie: support. Staff also noted the initiator of the call. Contact made by the student with the course staff was also considered to be an indication of motivation.

Teleconference Transmission Quality Questionnaire (see Appendix P, p.162). This questionnaire asked Regional and student leaders to rate the transmission quality only, of the various teleconferences.

Procedure

Subjects. Ideally, the assignment of learning centres (subjects) to treatment conditions would be random.

However, in the present study this was not possible since recruitment for Regional Leaders (April to June, 1983) failed to produce the required personnel. Consequently a number of learning centres were automatically assigned to the non-Regional Leader condition.

In terms of design, this situation was tolerable for the first half of the course and the first half of the evaluation. However, it was necessary that Regional Leaders be found for these non-regional leader areas before the commencement of Child Care 200B if treatments were to be reversed controlling for between group differences. Fortunately Regional Leaders of comparable quality were found and there were no delays or problems.

The learning centres who had Regional Leaders in the first half were randomly assigned to either the control group (continuing to keep the Regional Leader) or to the experimental group which lost their Regional Leader in 200B. In this manner the learning centres in the Control group and in the Regional Leader/non-Regional Leader were randomly assigned.

To demonstrate expected homogeneity between treatment groups, students were, as part of the Student Profile, tested on dimensions considered to be relevant to the issue of homogeneity: expected satisfaction and motivation, amount of planned time devoted to this course, distance from the learning centre, age, and education.

Measurements. Measurements were administered as per the Evaluation Schedule (Appendix Q, p.164). The Regional Leaders were given all the evaluation materials for 200A in a prepackaged format with a detailed schedule of directions. The materials were packaged in envelopes which corresponded to each of the six class meetings. For example, the envelope marked class meeting #1 contained the Student Profile questionnaire, computer answer sheets, pencils, and a return addressed and stamped envelope for mailing the completed questionnaires to Victoria. The Regional Leader was required to take the right envelope to the meeting, use it, and then mail it. If for some reason there was confusion, the Regional Leader could refer to the schedule; if that failed the evaluator could be reached by telephone. Materials for 200B were organized in an identical fashion.

In August, 1983, Regional Leaders were brought together for a two day workshop on their role in the delivery of Child Care 200. The background to the evaluation was presented, relevant issues discussed, and evaluation measures and procedures described. Evaluation measures consisted of questionnaires, logs, telephone interviews, and, course records.

All questionnaires were administered by the Regional Leader or designate. Students were informed in terms of intent and instructed in questionnaire completion. Subjects marked their responses on computer Optical-Scan answer

sheets (see Appendix S, p.174).

In order that the information supplied be as representative of the students' true feelings and opinions as possible, the students were informed of the following safeguards designed to ensure confidentiality:

a) the information supplied becomes the property of the Project Team,

b) the information supplied by students is confidential and will not be shared with others except in general terms designed to conceal the identity of the students,

c) all questionnaire response sheets are to be destroyed once the evaluation is completed. If data are to be kept in other forms, (ie: computer cards) identification numbers are to be removed so that there can be no connection made between the data supplied and the student.

It was expected that a degree of anonymity would also have been inferred through the use of identification numbers rather than names, and in the use of the optical scan reporting sheet itself.

Once the students completed the questionnaires, they placed the answer sheets into a large envelope which was then sealed in the presence of the students by the Regional Leader and subsequently mailed to the Victoria.

Telephone Logs were kept by Regional Leaders. They

recorded number, duration, type of contact made between staff and students along with who initiated the call. Logs were forwarded to Victoria at the end of Child Care 200A, and again at the end of 200B.

A telephone interview was conducted by the Evaluator whenever a student appeared to have dropped out of the course.

Attendance Sheets were kept by Regional Leaders and forwarded to Victoria at the end of each semester. Student Grades were recorded by the Content Specialist and submitted at the end of each semester. Library Use Records were kept by library staff and submitted at the end of the course.

CHAPTER III

THE EVALUATION PROJECT REPORT*

Introduction

This is the final report on the evaluation of Child Care 200. The course was adapted from an on-campus version and delivered as a distance education course over a nine month period commencing September 1983 and ending May 1984. The evaluation was done at the request of the Division of University Extension, University of Victoria, and focused on: developing a profile of students who took the course, identifying student dropouts, describing course roles in distance education, examining the effect of not having a tutor (Regional Leader) on student performance, and assessing the intrusion of teleconferencing.

The report outlines procedures used to evaluate the distance education experience of Child Care 200 and describes the results obtained from the evaluation process. A brief description of the course precedes the discussion of the evaluation and reviews of the literature relevant to this study are available in appendices C, D, and E.

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*This chapter contains the evaluation report as it was submitted to the Division of University Extension in August 1984.

Project Description

Child Care 200: Core Concepts in Child Care, was offered via distance education in the fall of 1983 (Child Care 200A) and in the winter/spring of 1984 (Child Care 200B).

Calendar descriptions and stated learning objectives for 200A and 200B were as follows:

> "Core Concepts in Child Care: 200A. Emphasis will be placed on several relevant theories which relate to the assessment, understanding, and management of children's behavior" (p. 221). "upon successful completion of this course, the student should:
>
> i) be familiar with the introductory theories, techniques and management of a behavior modification approach as it relates child care interventions with troubled children;
>
> ii) be familiar with the key strategies and theoretical approaches of Adlerian theory as they relate to Child Care interventions with troubled children;
>
> iii) know certain basic concepts of terminology of an ecological orientation to general systems theory and demonstrate beginning application skills;
>
> iv) be able to review case reports within a given format and design appropriate goals, success

indicators and methods for intervention" (p.1, Project Information Sheet).

"Core Concepts in Child Care: 200B. Specific strategies and techniques of child management which promote behavioral change in children. Ethical issues in the practice of Child Care will be examined" (p.221). "Upon successful completion of this course, students should:

i) be familiar with many of the current roles and functions

ii) be aware of the basic ideological and ethical issues concerning the professional child care worker;

iii) be able to formulate and examine in depth a relevant question as it relates to child care;

iv) improve and develop their ability to examine and debate a current and critical issue in child care practice" (p.1, Project Information Sheet).

Delivery of Child Care 200 was dependant upon the following components: the print package, audiovisual aids, learning centres, class meetings, telephone usage, a Regional Leader, a Content specialist, a Course Consultant, and, student evaluation.

The Print Package

The print material included text books, core readings,

and study guides. Appendix C (p.109) contains a review of the literature detailing what is known about the use of print in distance education.

Audio-Visual Aids

The Dream Speaker, a film about adolescent suicide, was circulated throughout the province for viewing between early October and mid November.

Learning Centres

This term refers to the meeting place which provided the organizational location of the class meeting, the Regional Leader and the point of contact between the Content Specialist and the students.

Class Meetings

Commencing on the twenty-fourth of September, 1983, and continuing until December third, 1983 (200A); resuming January twenty-eighth, 1984, and ending March twenty-fourth, 1984 (200B), students attended class meetings every second Saturday from ten o'clock in the morning until approximately one o'clock in the afternoon.

Class meetings allowed students to:

i) interact with the Regional Leader,

ii) meet with other students,

iii) access the Content Specialist to clarify, question, and discuss course content,

iv) take part in simulations, learning exercises,

class discussions and examinations.

While the structure of the class meeting was responsive to changing student needs, roughly two thirds of the meeting involved discussion and activities under the supervision of the Regional Leader, with the remaining one-third spent in contact with the Content Specialist.

Telephone Usage

The telephone medium had two components: teleconferencing and telephone contacts. The first component involved group calls between the students during all class meetings and the Content Specialist in Victoria. The students at the learning centres sat around a telephone convener, or speaker phone, and spoke to the Content Specialist and to students at other learning centres. The teleconference medium, its development, and its use in distance education is discussed more fully in Appendix D (p.115).

The second component involved the use of the phone for direct and individualized contact between the student and the Regional Leader. During the weeks where there was no class meeting, the Regional Leader contacted students by telephone. The main purpose of this call was support, and could be either of an academic nature, ie: encouragement on assignments or performance, or of a personal nature, helping out with a personal problem which could be affecting student performance in the course.

Regional Leaders and Content Specialist

The terms Regional Leader and Content Specialist were chosen to represent the general term, "tutor". This was done to more accurately reflect the function of the position without the bias and confusion normally attached to the word "tutor" (Appendix E, p. 122, reviews the literature on the use of tutors in distance education). In Child Care 200, the role of the Regional Leader was one of support, while the role of the Content Specialist was one of instruction.

The Regional Leader was hired on the basis of the following criteria: knowledge, group process abilities, managerial abilities and type of degree held. Previous enrollment in Child Care 200 was seen as an asset. Regional Leader responsibilities included duties related to course mastery such as reviewing the course manual, attending training workshops, being familiar with course delivery strategies, and being conversant with University regulations. The Regional Leader also had course delivery responsibilities such as ensuring that learning centre facilities were open, the equipment was in order and operating, students were notified about any change in meeting time or venues. Under the direction of the Content Specialist, the Regional Leader facilitated learning activities during the class meeting, offered support to the students and graded assignments as delegated by the instructor.

The Content Specialist was hired on the basis of knowing the course content and ability to instruct. The Content Specialist was involved in course and study guide development as well as the training of the Regional Leaders. During the course the Content Specialist was in contact with the students via the teleconference to clarify, elaborate, and explain concepts and issues contained within the course. The Content Specialist interacted with the students in two ways: question and answer, and direct learning activities (Appendix F, p.129, contains job descriptions for Regional Leaders and the Content Specialist).

Course Consultant

The Course Consultant was the instructor of the on-campus Child Care 200 course and graded papers, exercises, and examinations for the off-campus course.

Student Evaluations

The evaluation of student performance on learning objectives occurred through the use of assignments and examinations. These were forwarded to the Course Consultant in Victoria for grading. The assignments and tests were identical to those used for on-campus course instruction. There was also provision for ungraded feedback in the form of pre-class exercises.

Evaluation Questions and Rationale

The questions which were generated for this evaluation were based on the information needs of the project team and paralleled the information needs found in the literature.

It is one of the characteristics of the adult learner that the material must be relevant and applicable to the life experience and current situation of the individual (Knowles, 1972). This means that issues such as personal life, type of work done, career and educational goals, and areas of interest are relevant to the issues of course content and design. Therefore the Course Team wanted to have a profile of the students taking the course so that in the event of a rewrite, they would be able to align the content and presentation of the material to the needs and interests of the students. The Course Team also wanted to know how people heard about this course, and know if there were large geographical areas not being reached.

Dropout or wastage rates vary considerably depending on the manner of calculation (Coldeway, 1982; Orton, 1977) and are reported to be in the 30-60% range (Shale, 1982). Unusually high dropout rates may tell the course planners that something is wrong, but tells them very little that can contribute to a revised and improved product. The Course Team felt that knowing when the students dropped out and why they dropped out would give them more precise information which could be useful for modifying and improving the

course.

The literature suggests that the human element in distance education (tutors, instructors, facilitators, counsellors, teachers, etc.) performs a multitude of functions: student support, academic counselling, content clarification, motivation, personal counselling, discipline, instruction, facilitations, assistance in dealing with red tape, etc. (Cochran & Meech, 1982; Lampikoski, 1978; L'Henry Evans, 1982). It has been suggested further (Love, 1978), that these functions be grouped into three categories: administration, instruction, and support. Whereas the Course Team wanted to understand the role relationships of the Regional Leader, the Content Specialist, Co-Students, and Other Staff in Victoria, they wanted to identify who really did what; subsequently they determined to examine who did what with regard to administration, instruction, and, support functions.

The role of the Regional Leader (tutor) was of particular interest to the Course Team. It was speculated that this course could be successfully delivered at less expense without Regional Leaders. Futher, as noted in the literature by Holmberg (1979), "No conclusive proof has been established either to prove the necessity of face-to-face elements or to reject them as conventional elements" (p.25). Therefore to determine whether the course could be delivered at less expense, by not requiring face-to-face elements, two

issues were considered: the impact of not having a Regional Leader on the remaining course roles, and the impact of not having a Regional Leader on student performance.

Research on teleconferencing had indicated it was effective as a technology for delivering distance education courses and provided a positive learning experience for students (Hoyt & Frye, 1972; Hugdahl, 1978; Jeffry, 1983). In view of this, and because the University of Victoria equipment was state of the art (therefore expected to operate as a transparent medium) the evaluation questions omitted all but a passing request for feedback. When it became apparent that teleconferencing was not transparent and appeared intrusive to the group and learning process, it was decided to assess the quality of these particular teleconferences, and to what extent the quality affected the learning process.

Very specifically then, the Course Team wanted to know:

1) Who took this course?
2) When did people drop out of this course and why?
3) Which functions were performed by which staff roles?
4) What was the effect of not having a Regional Leader on the remaining staff and course roles?
5) What was the effect of not having a Regional Leader on student performance?
6) To what extent did the quality of teleconference

transmission affect the learning experience?

With regard to questions four and five, it was hypothesized that where no Regional Leader was present, the functions otherwise performed by the Regional Leader would be performed by Co-Students, the Content Specialist, Other Staff in Victoria, and others outside of the course structure. Further, it was posited that students who had Regional Leaders would experience greater satisfaction and motivation, have a lower dropout rate, and be equal in content mastery and utilization when compared to students who did not have a Regional Leader.

Methods

Subjects were 83 students who took Child Care 200 via distance education from the University of Victoria, September 1983 to April 1984. As a result of geographical distribution students self-selected into seven student groups or learning centres with an additional seventeen students operating as independant learners (IL). Students in Dawson Creek, Powell River, and Kamloops (N=27), formed the Control group, with Vernon and Nelson (N=23) forming the Regional Leader/non-Regional Leader group (RL/NRL) and Victoria and Penticton (N=16) the non-Regional Leader/Regional Leader group (NRL/RL).

Data required to answer the evaluation questions were gathered using the following measurements (Appendix R, p.171, describes the measurements used for the evaluation

questions).

The Student Profile Questionnaire was designed to generate a profile of who took the course. The questionnaire focused specifically on such characteristics as family, education, employment, etc. (See Appendix G, p.135).

The Student Feedback Questionnaire focused on student satisfaction, utilization of course material, use of study groups, and the use of sources of help not associated with the course (see Appendix H, p.141).

The Who-Did-What Checklist determined which staff or course role performed which of the administration, instruction, and support functions (see Appendix I, p.147).

The Post-Course Unit Questionnaire collected information on student satisfaction and motivation (see Appendix J, p.150).

The Student Dropout Interview focused on the student's reasons for dropping the course and date dropped (see Appendix K, p.152).

Student Grade Record Sheet reported grades received on assignments and examinations including final percentage and letter grade (see Appendix L, p.154).

Attendance Sheets recorded student attendance at class meetings (see Appendix M, p.156).

Library Use Records contained information on student usage of the University's Infoline (see Appendix N, p.158).

The Telephone Log was used to categorize telephone contacts between students and Regional Leaders along the dimensions of administration, instruction, and support functions (see Appendix O, p.160).

The Teleconference Transmission Quality Questionnaire gathered information regarding the level of teleconference transmission quality and the level at which the Regional Leaders and contact students thought that it was not intrusive to learning (see Appendix P, p.162).

With regard to research design, the original design of twelve learning centres randomly assigned to three treatment conditions was abandoned. Reduced student enrollment, difficulties in Regional Leader recruitment, and the presence of students who because of geographical isolation could not be involved in a learning centre accounted for the shift to four treatment conditions:

Independant Learning Group - No Regional Leader, no co-students in 200A or 200B. Teleconference contact was replaced with direct telephone calls from the Content Specialist.

Control - Regional Leader present in both 200A and 200B.

RL/NRL - Regional Leader in 200A, no Regional Leader in 200B.

NRL/RL - No Regional Leader in 200A, Regional Leader in 200B.

Although access to the Regional Leader differed between treatment conditions, all students received the print package, prescribed assignments and examinations, audiovisual aids, and had contact with the Content Specialist. Excluding the Independant Learner Group, students met at learning centres, and used the teleconference to access the Content Specialist.

Learning centres where no Regional Leader was readily available became the NRL/RL group for 200A and Regional Leaders were subsequently recruited for 200B. The remaining learning centres were randomly assigned to the Control or RL/NRL group. These four groups were tested for homogeneity on expected satisfaction motivation, distance from learning centre, age, education, and time available for course.

Regional Leaders were instructed in data collection and course administration/facilitation at a training session in August 1983. Regional Leaders and contact students not in attendance at the training session were informed of evaluation administration and course administration/facilitation via telephone and letter. Questionnaires and logs were the responsibility of the Regional Leaders and contact students (Student Profile Questionnaire, Student Feedback Questionnaire, Who-Did-What Checklist, Post Course Unit Questionnaire, Attendance Sheets, and Telephone Logs) and were administered according to a predetermined schedule (see Appendix Q, p.164). All

respondents marked their answers on computer Optical-Scan answer sheets (see Appendix S, p.174) and put them into a manila envelope which was sealed and mailed to Victoria.

In order that student responses be as candid as possible, they were informed by the Regional Leader or contact student of the the following safeguards designed to ensure confidentiality.

a) The information supplied becomes the property of the Course Team;

b) the information supplied by students is confidential, not to be shared with others except in general terms designed to conceal the identity of the student;

c) all questionnaire response sheets will be destroyed once the evaluation is completed. If data were kept in other forms, (ie: computer cards) identification numbers would be removed.

The Evaluation Team conducted Student Dropout Interviews via telephone contact as dropouts were identified. The team also administered the Teleconference Transmission Quality Questionnaire to the Regional Leaders and contact students at the termination of 200A and of 200B.

The Course Consultant recorded student grades and the University Library recorded student usage of the Infoline service and submitted them to the Evaluation Team.

The inability to randomly select or assign either the

students or learning centres, unequal N's occurring in both learning centres and treatment conditions, and the high mortality rate of subjects, necessitated that results be reported using means and standard deviations. Confidence in the results rests upon magnitude, concurance with expectations as generated by the literature, and corroborative evidence found within the present evaluation itself.

Results and Discussion

Homogeneity of treatment groups. With regard to how satisfied students expected to be with the course and how motivated they were at the beginning (as indicated on a six-point Likert scale) all conditions reported satisfaction ratings between 4.70 and 5.14, and motivation ratings between 4.57 and 5.29. The differences noted were not significant.

In reporting time devoted to the course (see Table 1, Appendix A, p.77), the IL indicated a willingness to spend more time on the course than the other three groups. This may be due to the wording of the question which asked how many hours outside the class meeting will you devote to course work? Independant Learners may have reported total time available for the course, whereas the other students reported total time available minus an adjustment for attendance at the class meeting.

Distances travelled by students to the class meetings

varied between groups. As can be seen in Table 2 (Appendix A p.77), more students in the RL/NRL group travelled further to attend the class meeting than did their Control and NRL/RL counterparts.

The groups differed on the dimension of age (see Table 3, Appendix A, p.77) It is noteworthy that for students under 25 years of age, the IL and Control groups were virtually identical with 20.0% and 21.4% respectively. The NRL/RL group was significantly younger with 50.0% of the students under 25 years of age whereas the RL/NRL group was somewhat older with only 10.0% of the group's students being under 25 years. Differences were also noted in age brackets over 30 years with the RL/NRL and Control groups reporting older student populations.

Although all groups reported similar levels of high school completion the NRL/RL group took higher education courses more often, took more humanities courses, and were more experienced in distance education (see Table 4, Appendix A, p.77). Their experience in higher education also occured more recently with 85.7% stating that it had occured within the past 5 years. This contrasts with the IL group at 57.1%, the Control group at 64.3%, and the RL/NRL at 42.9%. These data are not surprising in light of the fact that the NRL/RL reported a higher incidence of younger students.

In summary, all four groups reported similar levels of

expected satisfaction, motivation, and with the exception of IL, time to be devoted to the course. Differences were obtained in education, distance travelled, and, age. In view of these differences, the four treatment groups could not be considered homogeneous.

Based on the literature concerning the demographic variability of distance education students (Waniewicz, 1982), it was expected that variation would exist within the total student population. However, the variability clustered unexpectedly and was not equally distributed across treatment groups. This raises the question whether the variability prevents meaningful comparison of treatment conditions. Where similarities existed (expected satisfaction, motivation, and expected time to be devoted to the course), the variables required statements by the students regarding their expectations of self and for self. In contrast to this, where dissimilarities existed (education, distance travelled, and, age) the variables represented student characteristics. Expectancy theory (Harel and Conen, 1982; Jones, 1977) and Motivation theory (Atkinson, 1964; Beck, 1978; Ferguson, 1976) would argue that these variables of similarity would be more critical in establishing comparability in terms of the outcome indicators of satisfaction and motivation. Students who can indicate levels of expected satisfaction and motivation and can predict time for studying have mentally anticipated some

occurance and outcome. This mental anticipation, it would be argued, in turn actually affects outcome. What this would mean in this case is that because the groups were equal with regard to expected satisfaction, motivation and time devoted to the course, equal outcomes could be expected.

On the other hand, any comparability due to similarity may be offset by the dissimilarity factors. Previous education and age are known indicators of performance and learning style. While previous education and age may not affect satisfaction and motivation directly, they may account for performance differences in learning tasks which in turn could affect satisfaction and motivation.

WHO TOOK THIS COURSE?

The majority of students were between 20 and 30 years of age (56.7%) with 38.1% in the 30 to 40 year age range (a comparison between on and off-campus students is available in Appendix T, p.176). Most students (70.1%) were married and 56.4% reported having children living in their home.

Students came from most college regions in British Columbia but often in disproportionate numbers in terms of the regions populations. Malaspina, Okanagan, Selkirk, and Northern Lights college regions produced larger numbers of students than would be predicted in view of their general population. The Lower Mainland regions of Fraser Valley, Capilano, Kwantlin, Douglas, and Vancouver produced few

students relative to their population. This may have been due to the fact that course recruitment was not directed at students in these regions. The remaining college regions: Camosun, Cariboo, East Kootenays, New Caledonia, North Island, and Northwest, produced students in proportion to their populations.

In establishing learning centres throughout the province, the Course Team planned to approximate the on-campus experience in terms of distance travelled to class. This attempt was partially successful with 61.9% of the students living within 20 kilometers of the learning centres (see Table 2, Appendix A, p.77) as compared to 93.5% for on-campus students.

In terms of education (see Table 4, Appendix A, p.77), the majority of students (85.9%) reported completing highschool with 61.5% continuing on to higher education. Reflective of their age, for over one third of the students this education had occurred more than five years ago. The majority of students (77.9%) reported having taken humanities courses prior to this course from several sources: Credit courses at university (43.3%), non-credit professional training (33.4%), university transfer courses at college (20.0%), and college credit courses (21.7%).

Many students (80.5%) reported that they were working in the human service area with over half working full time (54.8%). Of those working 80.6% were paid, and one third of

the students had been working more than five years. Most students (73.3%) were employed by private agencies and societies while 18.3% reported working for the Provincial Government (private practice and "other" accounted for the remaining 8.4%). Child Care Counsellor/Worker was cited most often as the students job description (42.4%), with Daycare Worker indicated by 11.9% of the students. Family Support Worker, Foster Parent, Social Service Worker, and Homemaker accounted for 13.6%. 32.3% reported "other".

While conflict between work and the course were not common (19.0%), where it did occur students received time off with pay (35.7%), time off without pay (7.1%), and permission to switch shifts (7.1%). A small number of working students (23.7%) reported that their employer paid their tuition, while some (13.8%) reported employer contribution to other costs such as books, etc. Another conflict area was between the class meeting time and their usual Saturday activities: spending time with family (55.6%), doing housework or chores (23.8%), being involved in recreation or sports (23.8%), sleeping in and relaxing (15.9%), working at job (9.5%) and "other" (9.5%).

The reasons most often reported by students for taking this course was to gain credit towards a degree (53.8%). Personal interest ranked second (35.4%) with career development third (32.1%). A small number of students indicated that they were taking the course at their

employer's request (9.0%). As indicated by their reasons for taking this course, students approached it with a positive attitude, reporting an average expected satisfaction rating of 4.9 and an average motivation rating of 5.0 on a six point Likert scale. To further indicate their motivation (see table 1, Appendix A, p.77) 37.7% anticipated spending 5-6 hours per week outside the class meeting and almost one third (29.9%) said they would devote more than 7 hours per week.

Student recruitment was facilitated through: sending out a course brochure, information available at the B.C.C.C.S.A., 1983 conference at Naramata, and the School of Child Care at the University of Victoria. Regional Leaders did some recruiting as well. When asked where they found out about the course, students most frequently mentioned the brochure (see table 5, Appendix A, p.77) and friends and colleagues second. In considering the four modes of information and recruitment used by the Course Team, the brochure was the most effective.

Although not a prerequisite to this course, it was interesting to note in terms of future course delivery strategies that virtually all students (97.4%) reported owning a telephone.

WHEN DO STUDENTS DROP OUT AND WHY?

Three definitions are relevant to reporting and discussing when students drop out and why:

1) Student: one who has registered, or attended the first class meeting as indicated by a completed Student Profile.
2) Dropout: a student (as defined above) who demonstrated complete noninvolvement with the course, ie: no course work was being done, and the student stopped attending the class meeting.
3) Nonreregistered student: a student who had successfully completed Child Care 200A but did not register for Child Care 200B.

In terms of the course as originally envisioned by the Course Team (all technologies available) which was experienced by the Control group, students reported dropping out for mostly non-course related reasons. This alone offers no impetus for course modification. It is also indicated that students who had Regional Leaders were more likely to complete the course than students who did not have Regional Leaders.

With regard to dropouts, excluding for the moment nonreregistered students, (see Table 6, Appendix A, p.77), students dropped out of 200A and 200B at approximately the same rate (19.3% (N=16) versus 20.0% (N=9)). Of the 25 students who dropped, 17 were contacted and seven said that

they dropped out for non-course related reasons such as illness and family pressures. Ten cited course related reasons as cause for dropping, such as: dissatisfaction with being an individual learner or in a class meeting with no Regional Leader; course work load and personal time constraints; and dissatisfaction with content.

Apart from students who dropped the course, a futher 19 did not register for 200B. Of the 15 contacted, 10 cited non-course related reasons for not reregistering such as moving, illness, and lack of time; five gave reasons which were "course" related such as missing the groups support, dissatisfaction with content, format, and, not having a Regional Leader. In both the case of dropouts and nonreregisterers, the majority of course related reasons were statements of dissatisfaction in not having or losing a Regional Leader.

In line with these reasons for dropping out or not reregistering, the IL experienced the highest rate of dropouts and nonreregistered students, and consequently the lowest completion rate. By comparison, the Control group experienced the lowest dropout and nonreregistered rates and produced the highest completion rate.

While the RL/NRL and NRL/RL groups generated approximately the same course end completion rates where there was a Regional Leader present in 200A, the combined dropout and nonreregister rate was lower than for the

non-Regional Leader group; in 200B where the Regional Leader condition was reversed, this finding was reversed as well. Clearly students preferred having Regional Leaders and not having one or losing one affected drop out and completion rates.

In considering the feasibility of offering this course without a Regional Leader, the monetary and nonmonetary costs of student dropout and nonreregistrants must be considered. The cost to the student dropout is obvious: lost opportunity to increase skills, lost opportunity in terms of time used and money spent, and perhaps an accompanying sense of failure. The cost to the University includes reduced revenue through refunds (without reduced administration costs), and lost future revenues as a result of students not taking subsequent course, not to mention adverse public opinion.

WHICH FUNCTIONS WERE PERFORMED BY WHICH COURSE OR STAFF ROLE?

The Course Team wanted to know if the expectations and guidelines contained in the job descriptions for the Regional Leaders, Content Specialist, and to a lesser degree the other staff in Victoria were predictive of what actually happened given the demands of the students.

Job descriptions specified that Regional Leaders were to provide support, administration, and clarification of instructions given by the Content Specialist. The Content

Specialist was to focus on instruction with minimal administration and support while the other staff in Victoria were to focus on administration, support and no instruction (see Appendix F, p.129, for job descriptions). The Co-Students were viewed as providing support. To examine who did what, students in the Control group indicated who performed each of the 29 functions which had been previously grouped into three function constellations: instruction, administration, and support. The percentage of students who assigned functions to a particular role was calculated and function percentages within their assigned constellations were then averaged. In examining the results, a difference of 20% or greater was defined as being significant.

Figure 1 (Appendix B, p.98) displays evidence that in general the staff roles were performed as expected with the notable exception being the reduced performance levels on all constellations for the Content Specialist. Intrusive teleconferencing might have been responsible for the depressed levels. However as both the Content Specialist and Other Staff in Victoria used the teleconference medium, this becomes a dubious explanation. Although speculative, the depressed levels may have resulted from differences between staff on dimensions such as familiarity with the students, familiarity with the teleconference medium and inter-personal style. Alternately, and/or additionally, students may have been saying that when instruction and

support are offered from two sources (Regional Leader and Content Specialist) the physically present Regional Leader will be perceived as performing the functions to a greater degree and more often, leaving the Content Specialist with lower ratings. Whatever the cause, the role of the Content Specialist appeared to be the least utilized and possibly the most expendable of the three staff roles.

The Regional Leader role was further examined across the three treatment conditions (see Figure 2, Appendix B, p.98). What is apparent from Figure 2 is the similarity between the Control group and the group that started with a Regional Leader on support, instruction, and administration levels. Even more apparent and more interesting was the effect of introducing a Regional Leader into the non-Regional Leader group; levels of support and instruction increased dramatically. The cause of this unexpected and dramatic increase might be explained as the impact of a Regional Leader upon a group which had coalesced through trial and error in 200A and then "relished" in having a Regional Leader, Having "endured" not having one.

Students' attribution of support, instruction, and administration functions to Regional Leader were as expected, and were corroborated by data from an analysis of telephone calls (see table 7, Appendix A, p.77). In 200A when the Regional Leader initiated telephone contact, the calls were predominantly supportive and when students

contacted the Regional Leaders, the calls were mainly instructional. In 200B the telephone log was administered and again calls placed at that time emphasized instruction and support.

In summary, with the exception of the Content Specialist, the staff roles were performed as expected. The Regional Leader and Co-Student roles proved to be major components in terms of the students' course experience while the Content Specialist role was underutilized. This is possibly due to the nature of the instruction and support functions and the impact of distance, questioning the necessity of this role in future course offerings.

WHAT IS THE EFFECT OF NOT HAVING A REGIONAL LEADER ON THE REMAINING COURSE OR STAFF ROLES?

Interest in whether students would turn to others (in the absence of a Regional Leader) for support, instruction, and assistance with administration came out of wanting to know whether it was feasible to reduce costs by not having a Regional Leader. An attendant question was: which other role(s), if any, could be enhanced and thereby meet those needs being met by the Regional Leader? As expected, students sought help from Co-Students, the Content Specialist, and Other Staff in Victoria (see Figures 3a & 3b, Appendix B, p.98).

In 200A when the Regional Leader was not available, students turned to Co-Students for help with instruction and

course administration; to the Content Specialist for help with course instruction, and to Other Staff in Victoria for help with administration. In 200B, the students in the groups which had their Regional Leader removed increased their use of Co-Students for instruction and administration.

Contrary to expectations, when a Regional Leader was introduced into an existing group (see Figure 3b, NRL/RL) Other Staff dropped in administration. This, in view of the fact that the Regional Leader also increased in support and instruction (see Figure 2, 200B, NRL/RL) and study group usage declined (see Table 8, Appendix A, p.77) suggests that when introduced into an existing group, the Regional Leader has a centralizing effect in that more course functions get performed locally by the Regional Leader and Co-Students at the class meeting.

More interesting when considering the effect of not having a Regional Leader, was the fact that the support function stayed relatively stable indicating that students did not turn to other roles to replace lost support. The literature (Stein, 1960; Williams, 1982) and the results presented in the previous section indicated that support was a key dimension in distance education, and that the Regional Leader (tutor) was the prime source. With this in mind, one wonders why, when Regional Leader support was not available, students did not turn to the most obvious alternate sources of support, their Co-Students, and the Content Specialist.

Possibly the type of support offered by the Regional Leader was, from the students' point of view, more course-related than personal and consequently not easily replaced by Co-Students or the physically distant Content Specialist. In other words, the Regional Leader may have been in a unique position as the sole provider of one particular type of support.

Although study group usage declined in the second half of the course (see Table 8, Appendix A, p.77) students continued to recognize the importance of the study group in getting support and help with content mastery. In fact 90% of the students stated that if they took a similar course in the future, they would form a study group for those two purposes.

The decline rate for study group usage varied (see Table 8, Appendix A, p.77) between groups and was greatest when a Regional Leader was introduced and lowest when one was removed. The reduced study group usage when a Regional Leader was introduced suggested an increased reliance on the recently introduced Regional Leader for functions otherwise performed by the study group. Students also received support and help with content from sources outside the course. The increased involvement with outside sources in 200B (see table 9, Appendix A, p.77) was probably due to an exercise contained within the course which involved interviewing a child care professional. Therefore, no

reliable conclusion could be drawn from these data with regard to having/not having a Regional Leader. It is worthwhile noting, however, the importance given to using outside sources for support and help with content mastery in 200A. In terms of where this help comes from, students turned primarily to colleagues (56.5%), secondly to family members, (26.1%), and thirdly to friends (17.4%).

In summary, the data indicated that when there was no Regional Leader, other course roles increased their performance in instruction and administration. This increase was greatest for Co-Students indicating that they would be the most likely of the roles (Co-Students, Content Specialist, and Other Staff in Victoria) to compensate for not having a Regional Leader. However, the support function was not picked up by Co-Students yielding speculation of there being two types of support, course related, and personal; thereby suggesting that the Regional Leader may be the students preferred source of course related support.

WHAT WAS THE EFFECT OF NOT HAVING A REGIONAL LEADER ON STUDENT PERFORMANCE?

The impact on student performance of not having a Regional Leader was examined through the use of five indicators: student satisfaction, content mastery, student motivation, completion rates (reported in an earlier section) and course material utilization. These indicators are key in establishing whether or not the dollar cost

savings in not having a Regional Leader is offset by nonmonetary costs to students such as reduced satisfaction, motivation, content mastery, utilization, and lower completion rates.

Student Satisfaction

The importance of considering satisfaction in examining nonmonetary costs lies in its predictive nature of course completion, subsequent enrollments, and among other things, good public relations. It was expected that students with a Regional Leader would be more satisfied than students without one, as evidenced by overall satisfaction, satisfaction with specific course components, expected versus outcome satisfaction, and general satisfaction measured over time. The majority of measures for this indicator yielded support for this hypothesis.

Typical of the Regional Leader effect was student satisfaction with the "course in general" (see Figure 4, Appendix B, p.98). Noticeably the RL/NRL group and NRL/RL group change positions on satisfaction ratings, confirming that satisfaction is tied to the presence of a Regional Leader. The positive effect of the Regional Leader on general satisfaction was also reflected in student willingness to take a similar course, to recommend this course (see Table 10, Appendix A, p.77) and in student preference of one part of the course over the other (see Table 11, Appendix A, p.77). Student satisfaction ratings

on specific course components reveals that three course components which might be described as within the Regional Leader's influence (class meeting, study guide, and course content) were rated more positively when a Regional Leader was present (see Table 12, Appendix A, p.77). It could be argued that by controlling the class meeting, adjusting and modifying study guide use, and helping students with content, the Regional Leader improved students' access to course content yielding higher satisfaction ratings on these course components.

The two course components (Content Specialist and teleconferencing) which were outside the Regional Leaders' control were rated lower. This is possibly due to the students' frustration and perhaps dissatisfaction at identifying the need to improve on these course components, dropping them as course components, or consulting with Regional Leaders on how to handle dissatisfaction and unworkability, but not being able to.

Another angle on student satisfaction was apparent from students reporting most/least liked aspects of the course (full reporting of these results is available in Appendix U, p.186). Briefly, students cited course content as the most liked course component, in both 200A and 200B. In 200A the teleconference was least liked, being replaced by format as the least liked in 200B.

When student expected satisfaction was contrasted to

satisfaction at the end of the course (see Figure 5, Appendix B, p.98) end-of-course satisfaction ratings were consistently lower; perhaps a comment on human nature as much as anything else in that once you get what you thought you wanted, it becomes "this is not it". More importantly, being in, or anticipating being in, a Non-Regional Leader group yielded lower ratings on expected and end-of-course satisfaction.

In rating how satisfied they were with the course "in general" at different points in time, having a Regional Leader did not make a difference (see Figure 6, Appendix B, p.98). However the IL's relatively flat line contrasted to the other apparent random fluctuations suggesting that the fluctuations may reflect a phenomenon outside the experience of the Il group: notably course delivery variables such as group exercises, teleconferencing, and group dynamics which occur in class meeting. Also, the nonspecific wording of the question "satisfaction in general" has a narrower focus for the IL group whereas other groups had more factors that could affect their satisfaction at any point in time. In other words, "satisfaction in general" at different points in time was measuring satisfaction with the course as packaged for IL and the course as packaged interacting with delivery strategies for the others.

In summary, as noted earlier when there was no Regional Leader the performance of instruction and administration

functions were partially absorbed by other roles. Apparently, something that the Regional Leader did affected student satisfaction since most measures yielded higher ratings on satisfaction when a Regional Leader was present. As suggested earlier, perhaps the availablity of course related support, largely unavailable from other sources, accounts for the satisfaction. The fact that the Regional leader had an effect on satisfaction and that the source of that satisfaction may not be easily substituted for by other roles suggests caution when considering the removal of the Regional Leader from future course offerings.

Motivation

Contrary to expectations, motivation was not found to be affected by the presence or absence of the Regional Leader. Motivation levels at the outset of 200A in contrast to those at the beginning of 200B (see Table 13, Appendix A, p.77) suggest that the differences in ratings may be attributable to change in course structure rather than not having a Regional Leader. Both the RL/NRL and NRL/RL were different in format from what they had at the beginning of 200A and both reported lower motivation. Motivation measured during the course (see Figure 7, Appendix B, p.98) produced ratings which appeared random suggesting that the Regional Leader had no effect. Further, attendance levels as an indication of motivation showed no difference between groups attributable to the Regional Leader (see Figure 8,

Appendix B, p.98). The marked variablity in attendance is most likely caused by the small number of subjects in each group (affording one or two students great impact on the percentage attendance levels) in combination with localized events such as student reaction to an unsatisfying teleconference or class meeting, adverse winter weather, and illness. Students dropping out at different times may also have been a contributing factor.

Another indication of student motivation was their use of the MacPherson Library's (UVic) Infoline service. In 200A a total of four requests were made by students in the RL/NRL group and the NRL/RL group. In 200B the number of requests increased to 19, coming from the RL/NRL group and the Control group. This increase in Infoline service looks to be more related to curriculum and/or awareness of availability rather than influence of a Regional Leader.

While removing Regional Leaders did not affect time devoted to homework (see Table 14,* Appendix A, p.77), and proportion of pre-class exercises completed (see Table 15, Appendix A, p.77), a marked increase in measures was notable when a Regional Leader was introduced into an existing

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* Original data was obtained by having students choose discrete categories ie: 1-2 hours, 3-4 hours, in making eight different observations over time, of time spent on homework. The data in Tables 14 and 15 contained the collapsed score for 200A (observations 1-4) and 200B (observations 5-8) using estimated median scores for categories, 1.5 hours, 3.5 hours, etc. to tabulate approximate averages.

group. It seems likely from these data that the presence of "classroom personnel" had the effect of increasing usually expected course behaviors e.g., do your homework and exercises!

In summary, students who did not have a Regional Leader had motivation levels comparable to students who did; therefore it must be concluded that while changing the course may have affected motivation, the presence or absence of the Regional Leader, itself, did not.

Content Mastery

The primary concern in any discussion regarding change in course delivery strategies is whether student mastery of course content is affected. The literature clearly establishes that content mastery is dependent primarily upon the print base and not on delivery strategies (Kaye, 1981; McKenzie, Postgate, Scupham, 1975; Misanchuck, 1982; Ruggles, 1982; Subramanian, 1981). Comparison of grades received by students supported what has been established in the literature with the exception of the NRL/RL group in 200B (see Table 16, Appendix A, p.77). The drop for the NRL/RL group was unexpected having taken place where the Regional Leader had been introduced into an existing group where, if any change were to have occurred, it would have been expected to be upward. A closer examination of subject scores did not attribute the depressed rating to one or two low scoring individuals.

In consideration of the data presented previously in this report, one would expect that the students in the NRL/RL group (who were more satisfied, performed more course functions and did more homework) to achieve greater content mastery. As this was not the case, speculation allows that students may have relied more heavily on the Regional Leader to receive content, than on their own efforts to access content via the print package; why read it, if someone will give it to you? The increased homework may reflect time spent on exercises such as interviewing a child care professional, debate preparation and other activities, which, while course related, did not address what would eventually appear on examinations. Possibly students in this group focused more on the experiential aspects of the course in the presence of an active/directive Regional Leader and less on content, thereby accounting for the increased satisfaction in the face of decreased mastery levels.

In either case, the drop in the NRL/RL ratings did not detract from the overwhelming evidence that content mastery was not impaired in groups where there were no Regional Leaders. In addition it was found that content mastery was not affected where there were no Co-Students or teleconferencing. Student mastery of content appears to be firmly rooted in the print package.

Course Content Utilization

Table 17 (Appendix A, p.77) indicates that as anticipated, in 200A the utilization of course material in arenas like home, work and community did not vary between groups and that having/not having a Regional Leader did not affect utilization. However, students who did not have a Regional Leader in 200B reported decreased utilization of the course content. In view of the fact that utilization went up, however marginally, for the other groups, it makes the decreased usage for the RL/NRL even more dramatic. The nature of the course work in 200B may have contributed to this exaggerated difference in that 200B focuses on self and the field of Child Care. The previous section on roles revealed that this group did not report the same levels of support, instruction, and administration as they had in 200A. Possibly students felt abandoned and resisted owning the course materials. Overall, the course material was primarily used at work, followed by use with family and friends (see Table 18, Appendix A, p.77).

When asked how they would use the study guide following the course, students saw the 200A guide primarily as a work reference and the 200B guide as a personal reference (see Table 19, Appendix A, p.77). In spite of acknowledging the study guide's utility, few suggested others buy it. Students were favorably impressed with the guides on the dimensions included in Table 20 (Appendix A, p.77).

In terms of nonmonetary costs to the students, this section considered student performance on satisfaction, motivation dropout rates, content mastery, and utilization of course material. The cost to students who took this course without the Regional Leader was reduced satisfaction and increased dropout rates. Student motivation, content mastery, and course material utilization were not affected by not having a Regional Leader. The issue, then, is deciding whether to offer this course without Regional Leaders becomes focused on the question, how much are student satisfaction and low dropout rates worth?

TO WHAT EXTENT DID THE QUALITY OF TELECONFERENCE TRANSMISSION AFFECT THE LEARNING EXPERIENCE?

The potential benefits of the teleconference link between the Content Specialist and the students were seriously eroded by the poor quality of the teleconference transmission. Figure 9 (Appendix B, p.98), displays the fact that the quality of transmission received by the learning centres surpassed the minimum level identified by the Regional Leaders as that being required for a positive learning experience only twice.

In six teleconference transmissions, the signal received by learning centres varied greatly, probably due to the B.C. Tel lines, and/or teleconference equipment specific to each location. Another source of transmission difficulties was the teleconference bridge itself, with

improved transmission seen in 200B following the change from the University of Victoria's equipment to that owned by the Western Broadcasting Company of Vancouver.

Unless quality and dependability of transmission can be improved, the use of this medium should be approached cautiously in future course offerings.

Summary and Recommendations

The evaluation revealed that off-campus students were significantly different from those taking the course on-campus. Off-campus students were older, more likely to be employed, married, and to have children, and were atypical of the regular on-campus student in that they were less mobile to continue higher education. If Child Care 200 was to act as an introductory course for students wanting credit courses without and/or prior to coming to the University, it's difficult to speculate as to how many of these students would become on-campus learners. Considering the demographics however, it seems clear that few off-campus students will ever attend the University of Victoria. This challenges the recruitment assumption of the course.

In light of the fact that the off-campus population was different it is not surprising that their needs were different requiring a focus on practical information relevant to workers in the field, more along the lines of professional development. However, having said that, caution should be exercised in any course modification which

might jeopardize its status as a university credit course. While most students will not become on-campus students, they recognized the value of university credit and saw it as a desirable outcome for taking the course. This balancing of the two course purposes is an important task in the modification of Child Care 200.

Geographical distribution of students indicated good provincial representation excluding regions within the lower mainland and urban Vancouver areas. These areas, depending on University policy regarding encroachment upon other institutions' catchment areas, may be areas for recruitment in the future. Results showed the brochure was the most effective method of recruitment and one which should be used in the future.

When all course roles were available (Regional Leader, Content Specialist, Co-Students and Other Staff in Victoria), the physically present Regional Leader and Co-Students proportionately performed most of the course functions, thereby having the greatest impact upon the students' learning experience. The Other Staff in Victoria, while performing a minor role, performed as expected in contrast to the Content Specialist which did not. The Content Specialist was originally conceived as a key role providing instruction, support and some administration. In its present form, this role did not work and offered little justification for its continued use.

The main thrust of this evaluation was to address the question of whether this course could be offered without Regional Leaders. When Regional Leaders were not used, students turned primarily to their co-students for help with course instruction and administration. This means that when considering replacing Regional Leaders students are an obvious possibility. However, in considering this, students would probably require assistance such as study group formation and use, learning how to run a class meeting, being familiar with resources within their community and at the University of Victoria, and how to deal with course content needs, to mention a few.

It is necessary to be cautious when considering dropping Regional Leaders since students who did not have a Regional Leader were less satisfied and less likely to complete the course. On the other hand not having a Regional Leader had no effect on other indicators of student motivation, utilization of course material, and most importantly, mastery of course content. This brings us to the question, how much is it worth to have higher completion rates and more satisfied students? While this question must be considered within the context of available fiscal resources, it is important to realize that it is a matter of degrees rather than a clear choice between totally satisfied students and totally dissatisfied students.

Although results indicate the possible expendability of

both the Regional Leader role and the Content Specialist, the Course Team would be advised to select one, but not both. In terms of financial savings dropping the Regional Leader makes more sense; they are, as a group more costly, and more difficult to recruit, train, and monitor. Keeping the Content Specialist maintains the University at the centre of control for the course, preventing the learning centres, each with a Regional Leader and reduced contact with Victoria, from becoming semi-autonomous and delivering different versions of the course.

Once Regional Leaders were dropped, two course modifications could be considered which may increase student satisfaction and course completion. The first one, mentioned previously, is the enhancement and reinforcement of the co-student role; the second calls for changes to the role of the Content Specialist.

Although not generated by the data, a centralizing of administration and instruction duties, which were formerly performed by several staff in Victoria, could be incorporated in a revised Content Specialist role. These duties could include the grading of assignments and examinations (formerly done by the Course Consultant), supervision of texts and material distribution (formerly done by the Team Leader), and registration, (formerly done by the Team Leader). If teleconferencing can be offered at high quality, consistently and dependably, the Content

Specialist would give the lecture, field questions afterwards, and handle administration.

The enhancement of both the Co-Student role and the Content Specialist role, combined with improved teleconferencing and the print package could serve to reduce the dissatisfaction of not having a Regional Leader. Not only would money be saved and nonmonetary costs to students decreased, but increased centralization and quality control would allow for marketing and expansion, both within and outside British Columbia.

APPENDIX A

TABLES

TABLE 1: PERCENTAGE OF RESPONDENTS WITH REGARD TO ESTIMATED TIME DEVOTED TO THE COURSE OUTSIDE OF CLASS MEETINGS

TIME DEVOTED TO COURSE	IL (N=15)	CONTROL (N=28)	RL/NRL (N=21)	NRL/RL (N=14)
1-2 hrs/wk	0.0	0.0	5.0	0.0
3-4 hrs/wk	26.7	35.7	30.0	28.6
5-6 hrs/wk	13.3	34.3	50.0	42.9
7-8 hrs/wk	33.3	7.1	0.0	21.4
9+ hrs/wk	26.7	17.9	15.0	7.1

TABLE 2: PERCENTAGE OF RESPONDENTS WITH REGARD TO THE DISTANCE BETWEEN THEIR HOMES AND THE LEARNING CENTRE

DISTANCE IN KM.	CONTROL (N=28)	RL/NRL (N=21)	NRL/NRL (N=14)
0-20	75.0	33.3	78.6
21-40	21.4	19.0	21.4
41-60	0.0	38.2	0.0
60+	3.6	9.5	0.0

TABLE 3: PERCENTAGE OF RESPONDENTS IN AGE CATEGORIES

YEARS	IL (N=15)	CONTROL (N=28)	RL/NRL (N=21)	NRL/RL (N=14)
15-20	13.3	-	-	21.4
21-25	6.7	21.4	10.0	28.6
26-30	53.3	21.4	35.0	7.1
31-35	13.3	17.9	30.0	21.4
36-40	13.3	28.6	10.0	14.3
41-45	-	7.1	5.0	-
46-50	-	-	5.0	-
51-55	-	3.6	5.0	7.1

TABLE 4: PERCENTAGE OF RESPONDENTS WITH REGARD TO EDUCATIONAL EXPERIENCE

EDUCATIONAL EXPERIENCE	IL (N=15)	CONTROL (N=28)	RL/NRL (N=21)	NRL/RL (N=14)
Finished High School	86.7	89.3	81.0	85.7
Rec'd Higher Ed.	53.5	60.7	47.6	92.3
Taken Humanities	66.7	81.5	71.4	92.9
Distance Education course before	13.3	18.5	28.6	35.7

TABLE 5: PERCENTAGE OF RESPONDENTS WITH REGARD TO HOW STUDENTS HEARD ABOUT THE COURSE (N=78)

Brochure	28.2
From a friend or colleague	20.5
From UVic School of C.C.	16.7
At work	15.5
Community College	9.0
B.C.C.C.S.A. Conference	7.7
Regional Leader	6.4
Other	3.8
Newspaper Advertisement	0.0

* More than one answer was permitted from each respondant, consequently the percent column sums to more than 100.

TABLE 6: PERCENTAGE OF STUDENTS WHO STARTED THE COURSE, DROPPED OUT, OR, WHO COMPLETED THE COURSE

STUDENT STATUS		IL	CONTROL	RL/NRL	NRL/RL	TOTAL
200A						
STARTED	f	17	28	23	15	83
	%	100.0	100.0	100.0	100.0	100.0
DROPPED	f	4	6	5	1	16
	%	23.5	21.4	21.7	6.7	19.3
INCOMPLETE	f	1	0	1	1	3
	%	5.9	0.0	4.4	6.7	3.6
COMPLETED	f	12	22	17	13	64
	%	70.6	78.6	73.9	86.7	77.1
DID NOT REGISTER FOR 200B	f	7	3	3	6	19
	%	58.3	13.6	17.6	46.2	29.7
200B						
STARTED	f	5	19	14	7	45
	%	100.0	100.0	100.0	100.0	100.0
DROPPED	f	3	0	5	1	9
	%	60.0	0.0	35.7	14.3	20.0
INCOMPLETE	f	0	2	0	0	2
	%	0.0	10.5	0.0	0.0	4.4
COMPLETED	f	2	17	9	6	34
	%	40.0	89.5	64.3	85.7	75.6
COMPLETED BOTH 200A AND 200B	f	2	17	9	6	34
	%	11.8	61.5	45.5	40.0	41.0

TABLE 7: NATURE OF TELEPHONE CONTACT BETWEEN REGIONAL LEADERS AND STUDENTS FOR 200A AND 200B

TELEPHONE CONTACTS INITIATED BY		# of CALLS	TOTAL LENGTH (min.)	MEAN LENGTH OF CALL	ADMIN (%)	INSTR (%)	SUPPT (%)
Regional Leaders	200A	14	67.0	4.8	2.7	30.0	67.3
	200B	5	33.0	6.6	0.0	54.6	45.4
Students	200A	15	104.5	7.0	10.5	52.2	41.8
	200B	28	8.0	4.0	3.1	37.5	49.4

TABLE 8: STUDY GROUP PARTICIPANTS' MEAN RATING (AND STANDARD DEVIATION) OF IMPORTANCE OF STUDY GROUPS

STUDY GROUP FUNCTIONS	200A PARTICIPATION		
	Control (90.5% of N=22)	RL/NRL (70.6% of N=17)	NRL/RL (91.7% of N=12)
Personal Contact and Support	4.76 (1.14)	5.08 (1.17)	4.18 (1.94)
Help in Mastering Content	4.20 (1.64)	4.25 (1.42)	3.45 (1.69)

	200B PARTICIPATION		
	Control (76.5% of N=17)	RL/NRL (66.7% of N=9)	NRL/RL (60.0% of N=5)
Personal Contact and Support	4.73 (1.38)	5.50 (0.55)	5.40 (0.89)
Help in Mastering Content	4.29 (1.27)	4.14 (1.68)	5.20 (1.30)

* Means and Standard Deviations were derived from a Likert scale requiring the respondant to choose one of six values ranging from 1=unimportant to 6=very important.

TABLE 9: RESPONDENTS RECEIVING OUTSIDE COURSE ASSISTANCE AND THEIR MEAN RATING (AND STANDARD DEVIATIONS) OF ITS IMPORTANCE

200A P A R T I C I P A T I O N

OUTSIDE ASSISTANCE FUNCTION	IL (27.3% of N=11)	CONTROL (52.4% of N=22)	RL/NRL (47.1% of N=17)	NRL/RL (54.5% of N=12)
Support	4.00 (1.73)	4.50 (0.90)	5.00 (1.19)	4.20 (1.79)
Content Help	3.50 (0.71)	4.08 (0.99)	3.87 (1.64)	3.83 (1.33)

200B P A R T I C I P A T I O N

	IL (66.7% of N=3)	CONTROL (68.3% of N=17)	RL/NRL (56.6% of N=9)	NRL/RL (100.0% of N=5)
Support	5.00 (1.41)	5.00 (0.82)	5.20 (0.84)	4.40 (1.14)
Content Help	5.00 (1.41)	3.73 (1.19)	4.43 (1.13)	4.20 (1.30)

* Means and standard deviations were derived from a Likert scale requiring the respondant to choose one of six values ranging from 1=unimportant to 6=very important.

TABLE 10: PERCENTAGE OF RESPONDANTS WHO WOULD TAKE A SIMILAR COURSE, AND WHO WOULD RECOMMEND THIS COURSE

TREATMENT GROUP		WOULD TAKE SIMILAR COURSE	WOULD RECOMMEND COURSE
IL	200A (N=11)	72.7	100.0
	200B (N=4)	100.0	100.0
CONTROL	200A (N=22)	95.0	90.5
	200B (N=17)	94.1	88.2
RL/NRL	200A (N=17)	76.5	82.4
	200B (N=9)	55.6	55.6
NRL/RL	200A (N=12)	66.7	66.7
	200B (N=5)	66.7	75.0

TABLE 11: PERCENTAGE OF RESPONDANTS STATING PREFERENCE FOR 200B, 200A, AND, NO PREFERENCE

TREATMENT GROUPS	200A	200B	NO PREFERENCE
IL (N=4)	50.00	50.00	0.00
CONTROL (N=17)	41.18	29.41	29.41
RL/NRL (N=8)	62.50	12.50	25.00
NRL/RL (N=5)	0.00	40.00	60.00

TABLE 12: RESPONDENTS SATISFACTION MEAN RATING (AND STANDARD DEVIATION) ON FIVE COURSE VARIABLES

TREATMENT GROUP	CLASS MEETING	CONTENT SPECIALIST	TELE-CONFERENCE	STUDY GUIDE	COURSE CONTENT
IL					
200A (N=11)	--- ---	4.51 (1.08)	--- ---	4.82 (0.87)	4.36 (1.03)
200B (N=4)	--- ---	4.33 (0.58)	--- ---	5.00 (1.00)	4.00 (2.16)
CONTROL					
200A (N=22)	4.00 (0.19)	3.68 (1.29)	2.04 (0.95)	4.95 (1.09)	4.36 (0.79)
200B (N=17)	4.29 (1.05)	3.59 (0.87)	2.94 (1.39)	4.53 (0.87)	4.59 (0.94)
RL/NRL					
200A (N=17)	3.47 (1.59)	3.29 (0.77)	1.59 (0.79)	4.23 (1.09)	4.59 (1.00)
200B (N=9)	2.33 (1.50)	2.89 (1.27)	2.12 (1.25)	3.56 (1.01)	3.11 (1.17)
NRL/RL					
200A (N=12)	2.67 (1.23)	3.36 (0.92)	2.42 (0.90)	3.58 (1.44)	3.75 (0.87)
200B (N=5)	5.00 (1.22)	3.60 (1.34)	2.60 (1.34)	4.00 (0.71)	4.20 (1.09)

* Means and standard deviations were derived from a Likert scale requiring the respondant to choose one of six values ranging from 1=unimportant to 6=very important.

TABLE 13: RESPONDANTS MEAN RATING ON ESTIMATED MOTIVATION AT THE BEGINNING OF 200A AND 200B

TREATMENT GROUP		MOTIVATION
IL	200A (N=15)	5.2
	200B (N=4)	5.3
CONTROL	200A (N=28)	5.3
	200B (N=21)	4.8
RL/NRL	200B (N=21)	4.8
	200A (N=11)	3.8
NRL/RL	200A (N=14)	4.6
	200B (N=6)	3.5

* Means were derived from a Likert scale requiring the respondant to choose one of six values ranging from 1=unimportant to 6=very important.

TABLE 14: REPORTED AVERAGE NUMBER OF HOURS PER TWO WEEK PERIOD SPENT ON HOMEWORK FOR 200A AND 200B

TREATMENT GROUPS	200A	200B
IL	6.8	5.4
CONTROL	5.9	6.5
RL/NRL	5.2	5.4
NRL/RL	4.7	7.3

TABLE 15: AVERAGE OF REPORTED PERCENTAGES OF PRE-CLASS EXERCISES COMPLETED PER TWO WEEK PERIOD FOR 200A AND 200B

TREATMENT GROUP	200A	200B
IL	76.2	76.9
CONTROL	54.6	53.0
RL/NRL	61.3	66.8
NRL/RL	53.8	86.1

TABLE 16: GROUP MEANS AND DIFFERENCES FOR FINAL PERCENTAGE COURSE GRADE RECEIVED FOR 200A AND 200B

TREATMENT GROUP		FINAL COURSE GRADE	DIFFERENCE
IL	200A (N=43)	74.46	+ .20%
	200B (N=13)	74.66	
CONTROL	200A (N=22)	73.84	- .47%
	200B (N=16)	73.37	
RL/NRL	200A (N=16)	71.17	+ .05%
	200B (N=9)	71.27	
NRL/RL	200A (N=13)	73.42	-8.82%
	200B (N=5)	64.60	

TABLE 17: PERCENTAGE OF RESPONDENTS REPORTING COURSE MATERIAL UTILIZATION

		HAVE USED THE COURSE MATERIAL
IL	200A (N=11)	90.9
	200B (N=4)	100.0
CONTROL	200A (N=22)	90.5
	200B (N=17)	94.1
RL/NRL	200A (N=17)	100.0
	200B (N=9)	66.7
NRL/RL	200A (N=12)	91.7
	200B (N=5)	100.0

TABLE 18: PERCENTAGE OF RESPONDENTS REPORTING COURSE CONTENT USAGE AT WORK, WITH FAMILY, AND WITH FRIENDS.

	PERCENTAGE OF RESPONDANTS	
USAGE	200A (N=62)	200B (N=36)
At work	67.73	75.00
With family	58.06	44.40
With friends	45.16	33.33

TABLE 19: PERCENTAGE OF RESPONDENTS REPORTING STUDY GUIDE USAGE AFTER COURSE COMPLETION

	PERCENTAGE OF RESPONDANTS	
USAGE	200A (N=62)	200B (N=36)
Will not use as reference	9.68	11.1
Use as personal reference	46.77	55.56
Use as work reference	83.87	55.56
Encourage others to buy it	24.18	11.1

TABLE 20: REPORTED MEAN RATINGS FOR CHARACTERISTICS OF THE STUDY GUIDE

CHARACTERISTICS	REPORTED MEANS 200A (N=62)	200B (N=36)
Attractive	4.55	4.30
Easy to read and understand	4.87	4.44
Interesting	4.82	4.44
Informative	4.84	4.55
Helpful in understanding text	4.52	4.37

* Means were derived from a Likert scale requiring the respondant to choose one of six values ranging from 1=unimportant to 6=very important.

APPENDIX B

FIGURES

Figure 1: PERCENTAGE OF COURSE FUNCTIONS ASCRIBED TO COURSE ROLES BY RESPONDENTS IN THE CONTROL GROUP

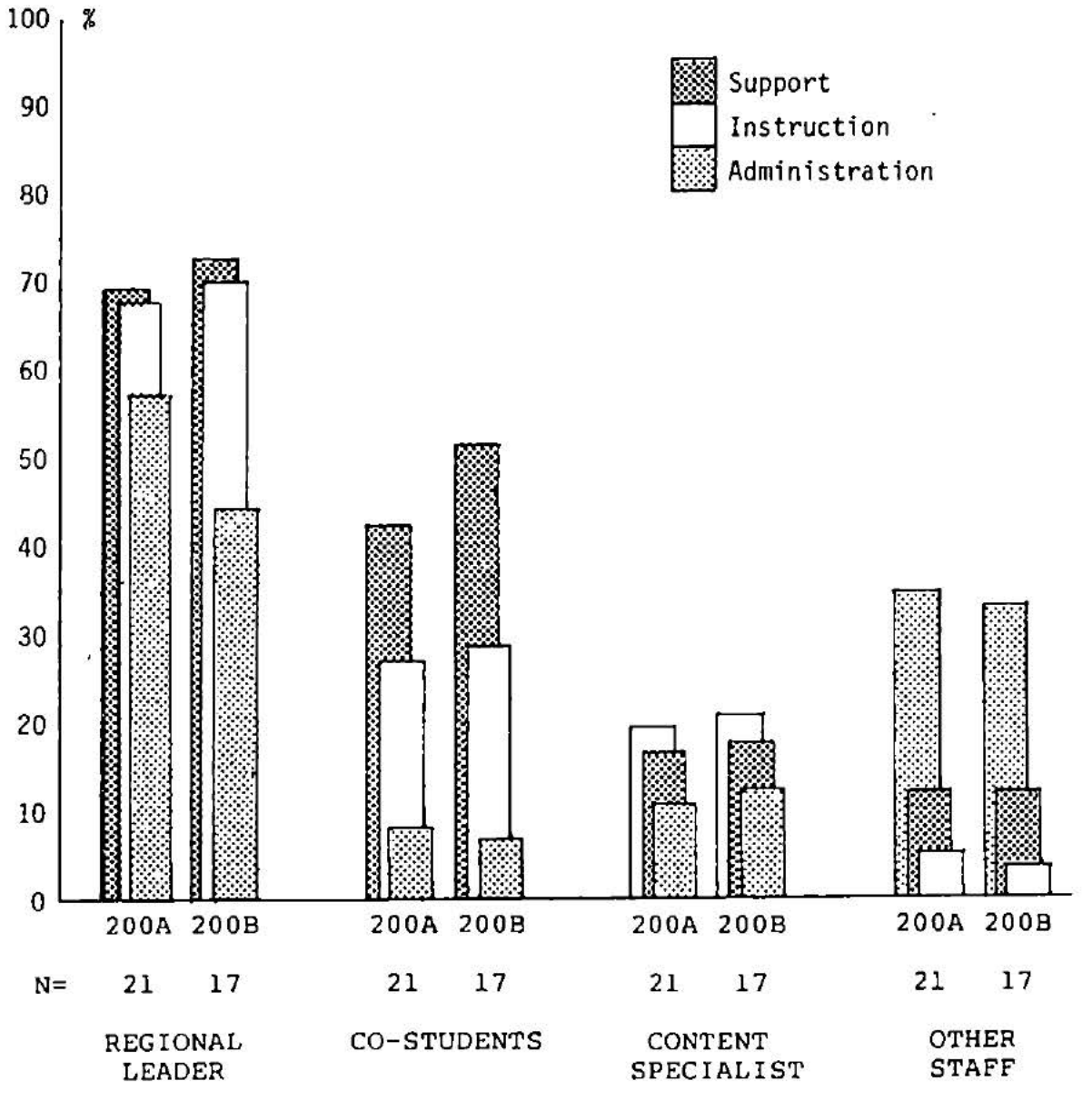


Figure 2: PERCENTAGE OF COURSE FUNCTIONS ASCRIBED TO THE REGIONAL LEADER ROLE IN THREE TREATMENT CONDITIONS

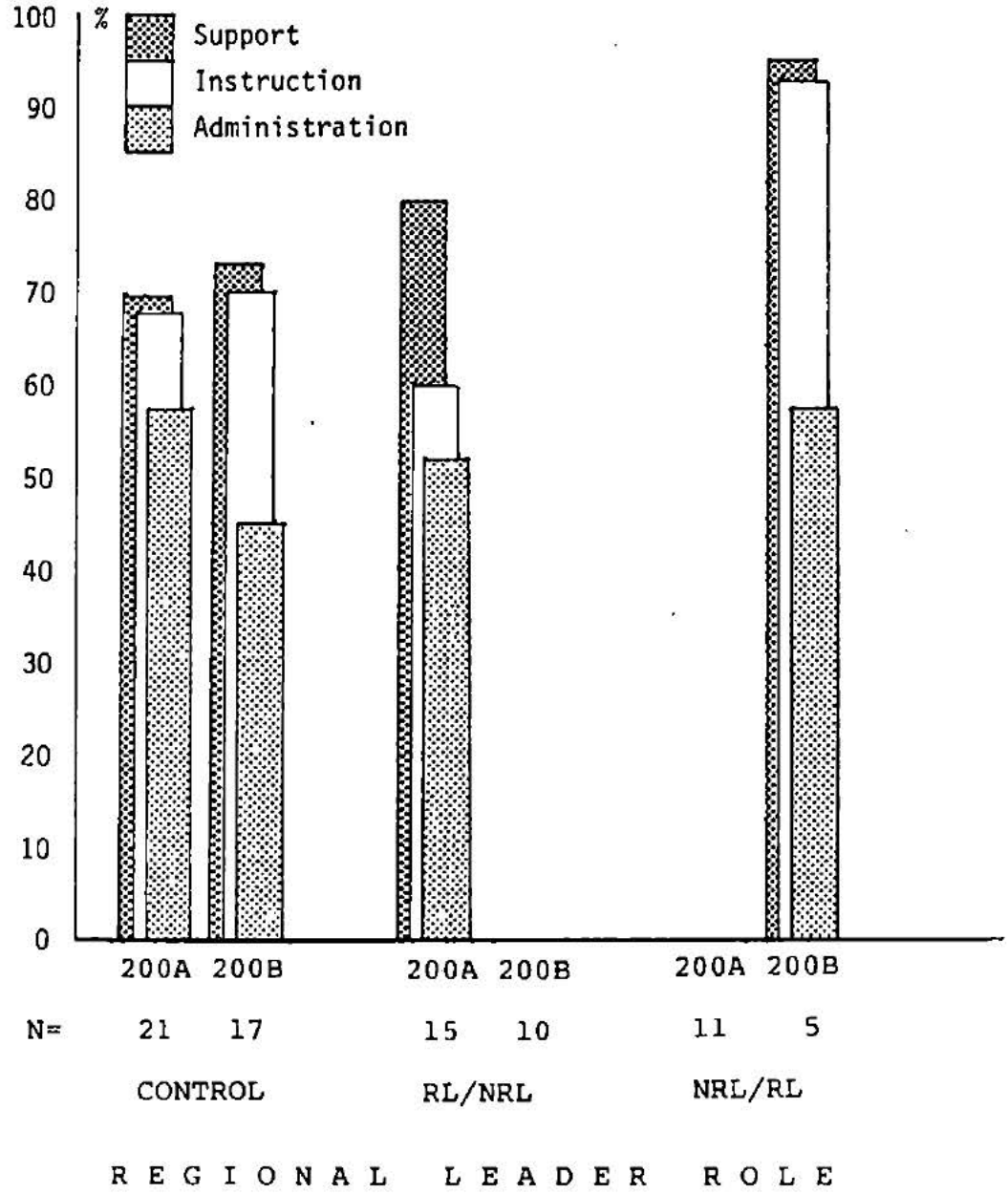


Figure 3a: PERCENTAGE OF FUNCTIONS ASCRIBED TO THE REMAINING COURSE ROLES IN THREE TREATMENT GROUPS IN 200A

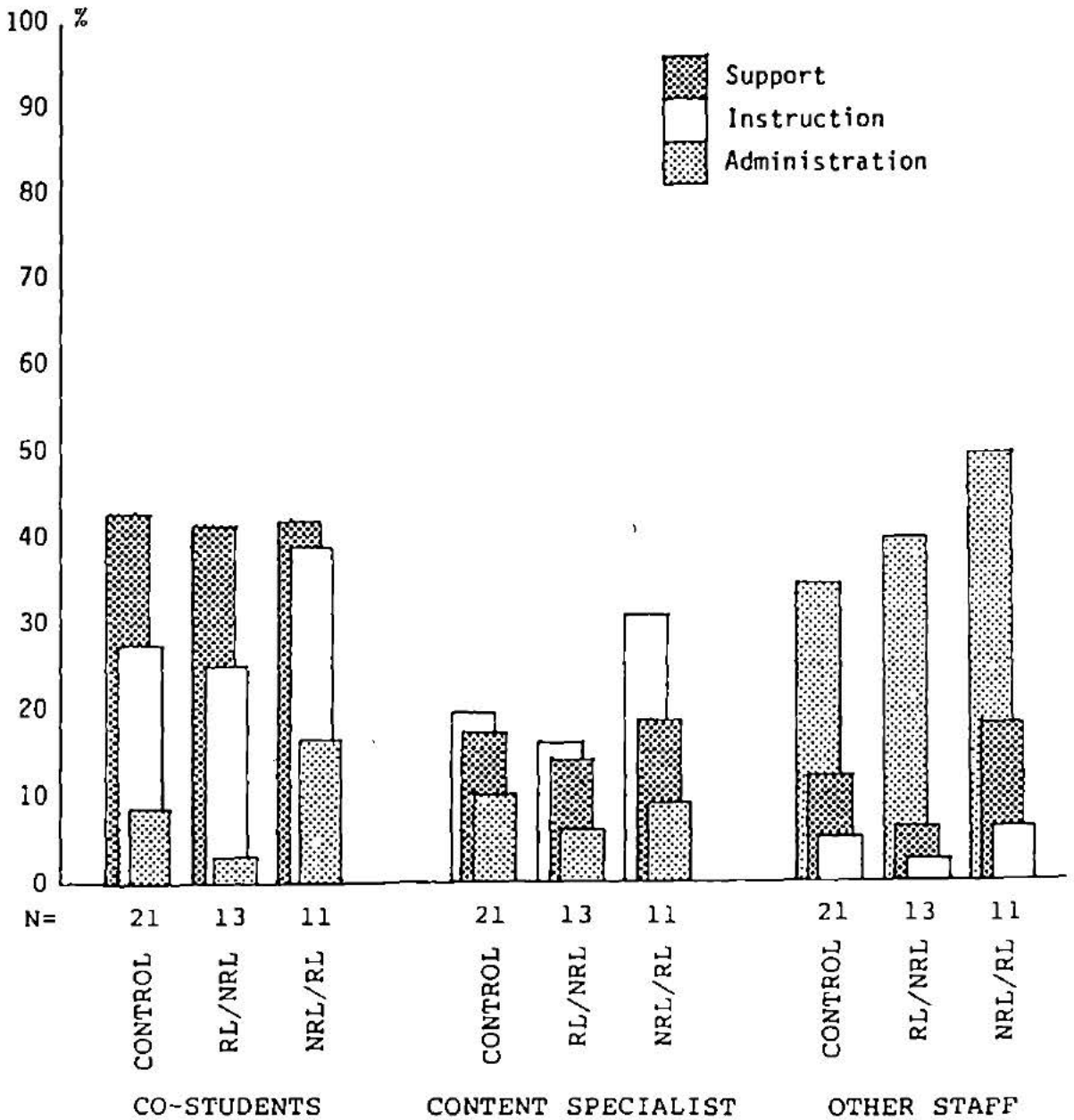


Figure 3b: PERCENTAGE OF FUNCTIONS ASCRIBED TO THE REMAINING COURSE ROLES IN THREE TREATMENT GROUPS IN 200B

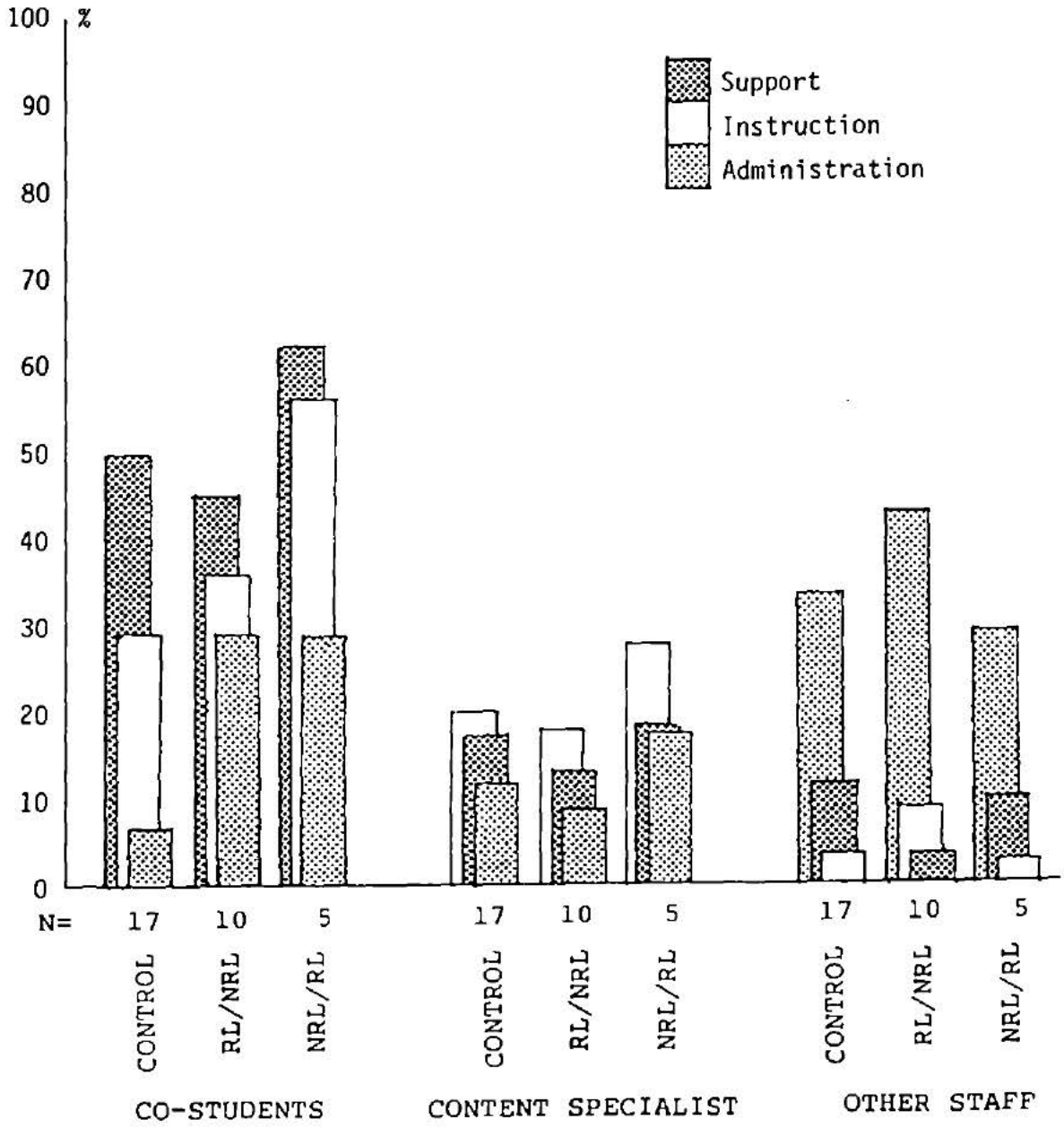


Figure 4: GROUP MEAN RATING ON COURSE SATISFACTION ON COMPLETION OF 200A AND 200B IN FOUR TREATMENT GROUPS

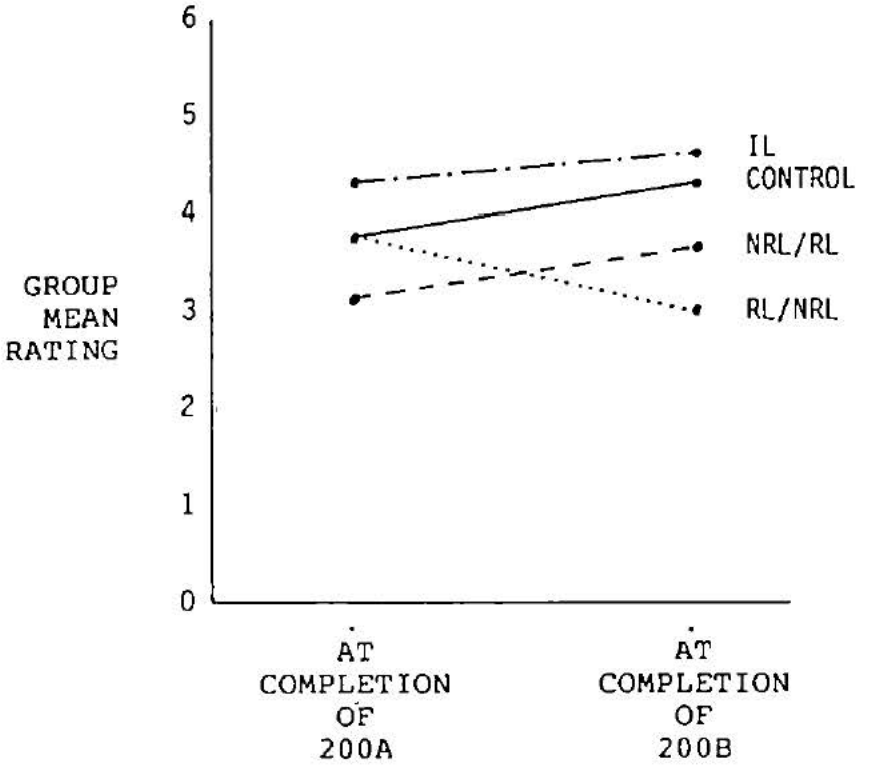


Figure 5: GROUP MEAN RATING OF EXPECTED AND OUTCOME SATISFACTION BY RESPONDENTS IN FOUR TREATMENT GROUPS

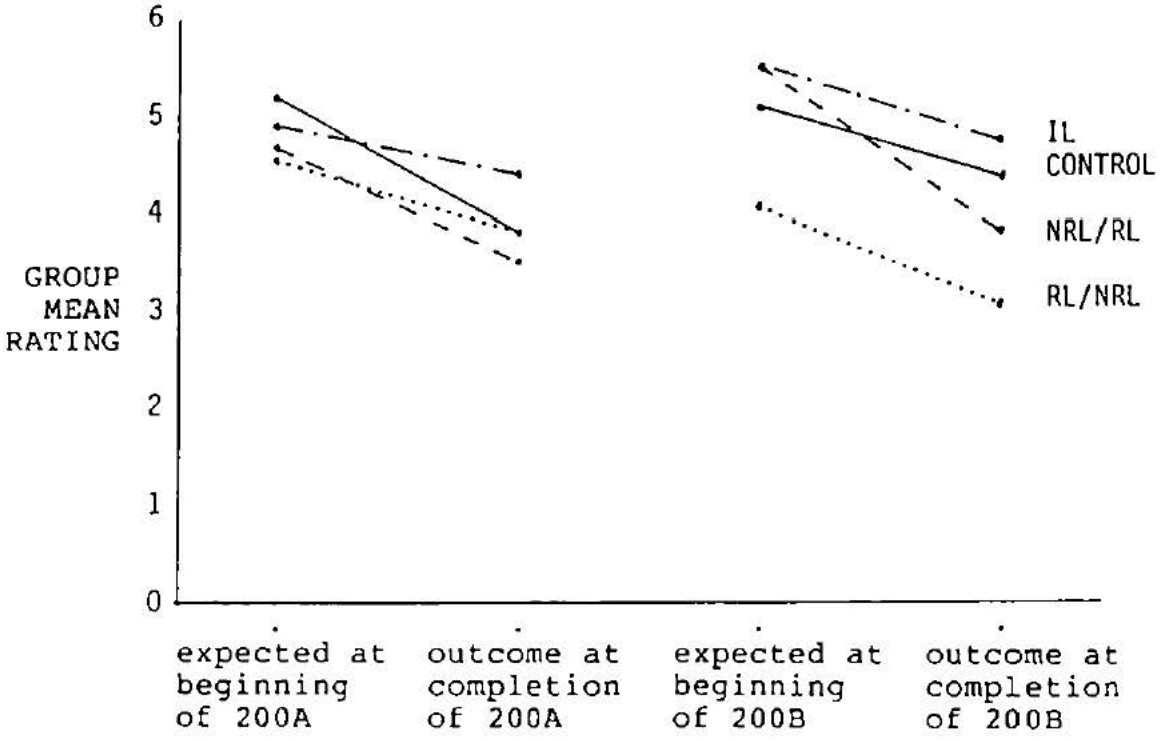


Figure 6: GROUP MEAN RATING OF SATISFACTION ACROSS EIGHT OBSERVATIONS

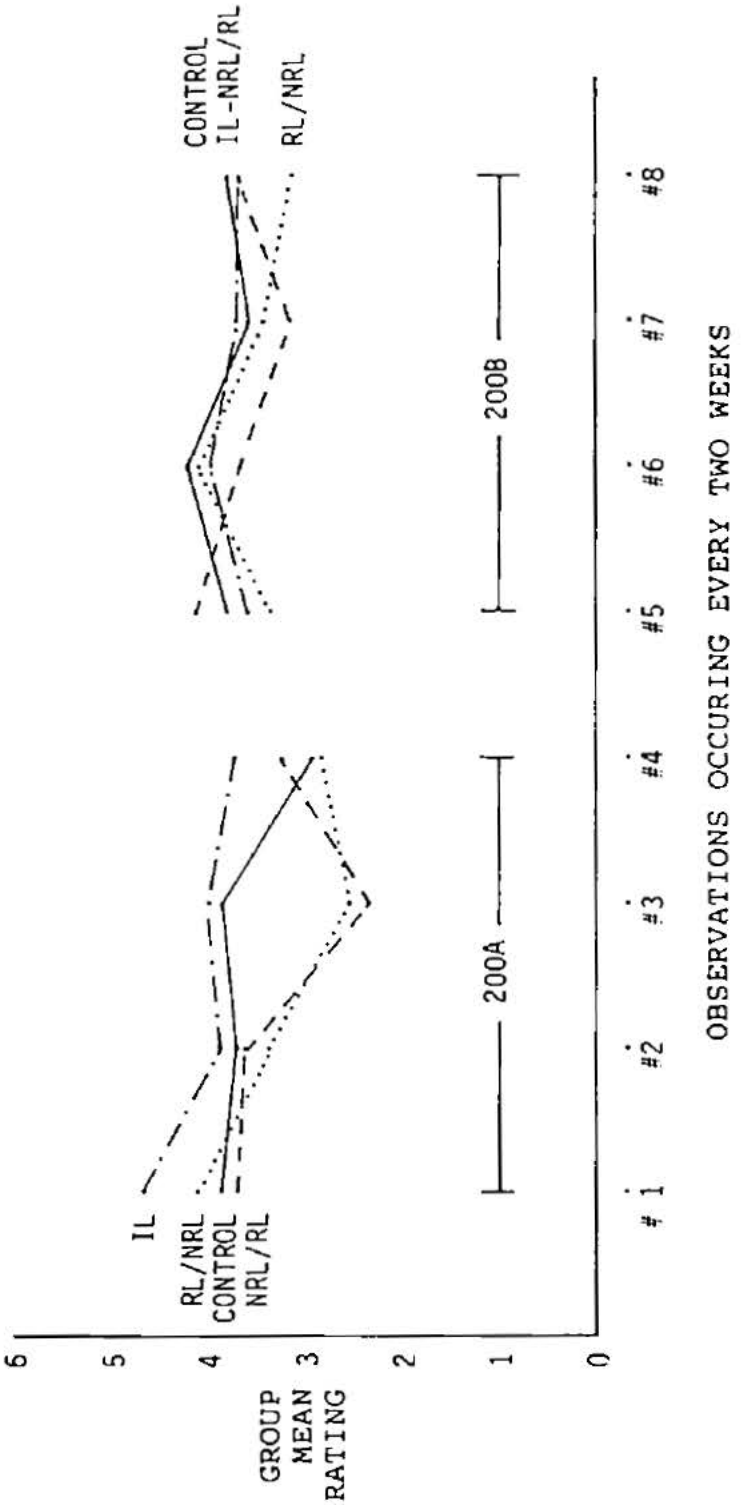


Figure 7: GROUP MEAN RATING OF MOTIVATION ACROSS EIGHT OBSERVATIONS

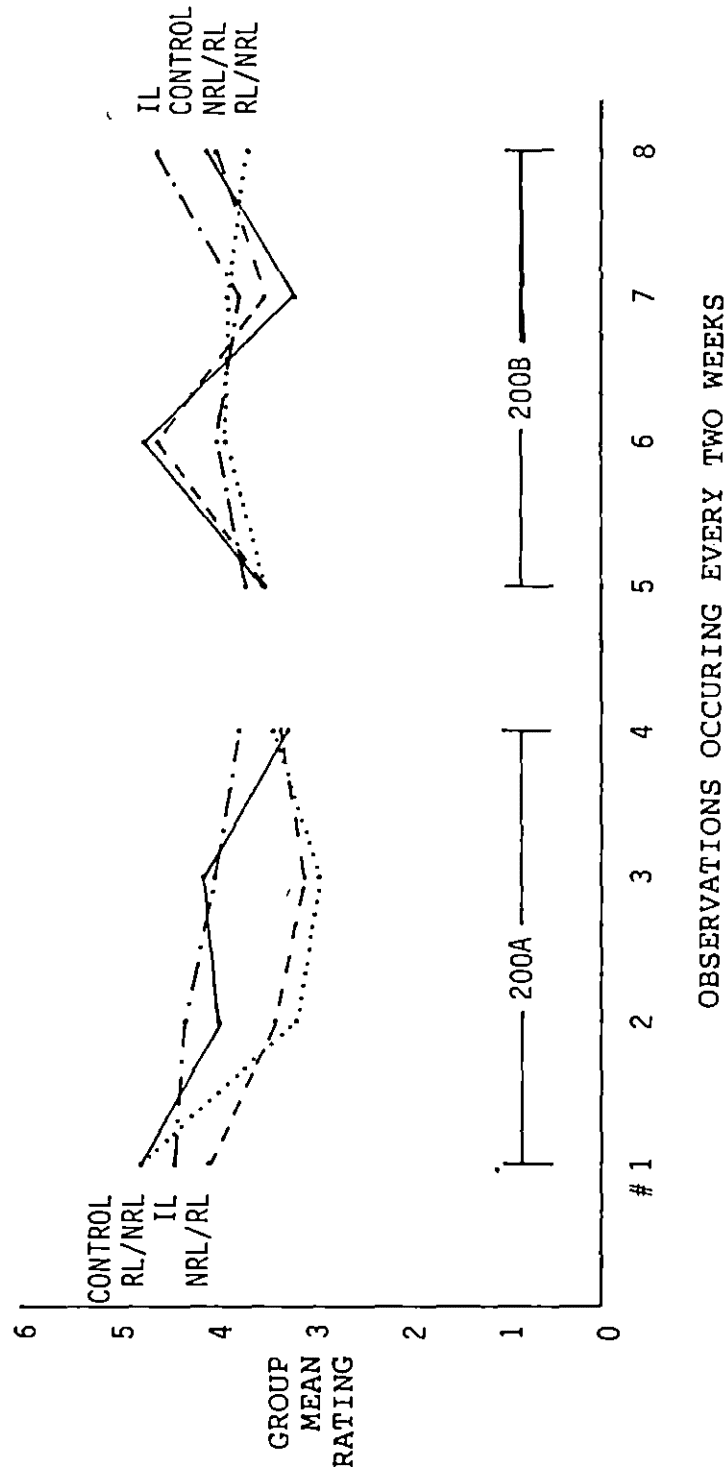


Figure 8: STUDENT ATTENDANCE TAKEN ACROSS TWELVE OBSERVATIONS

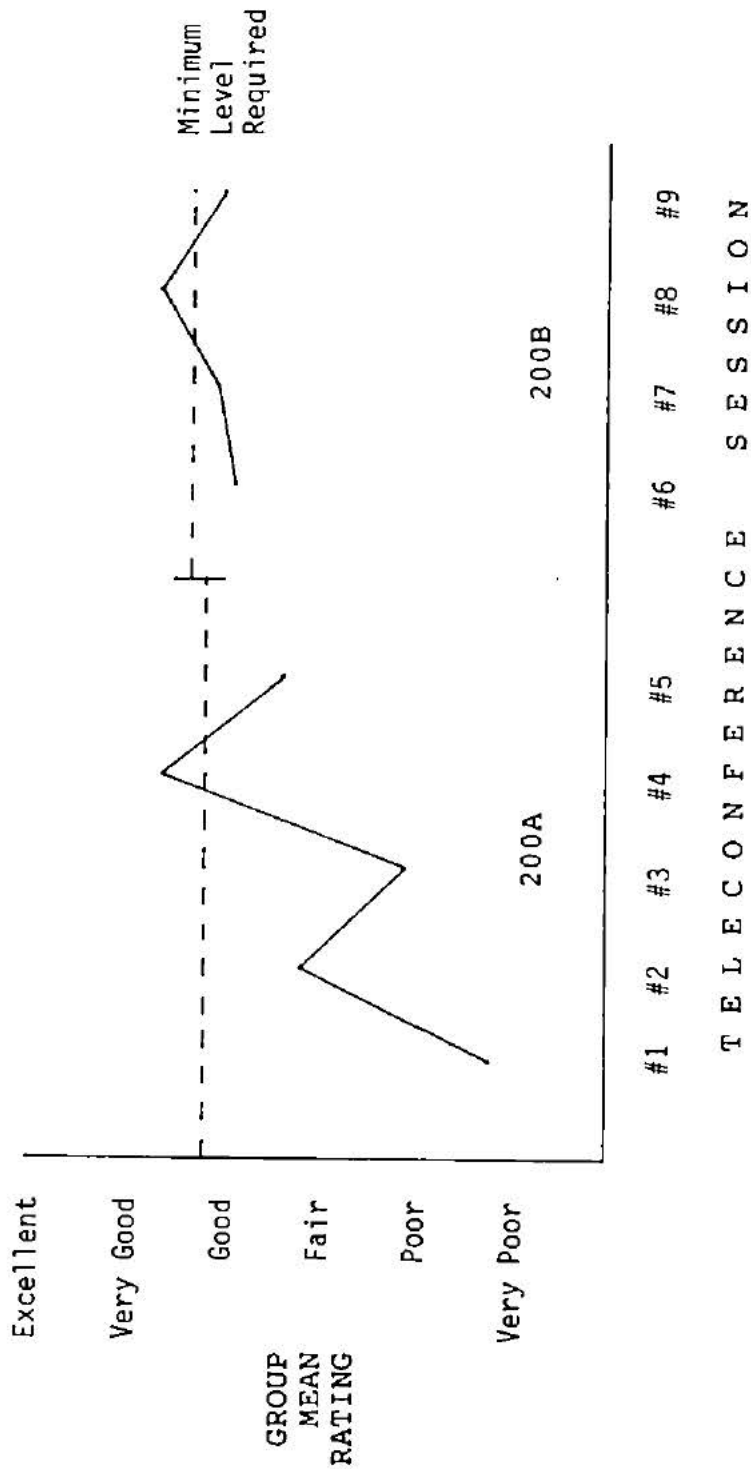
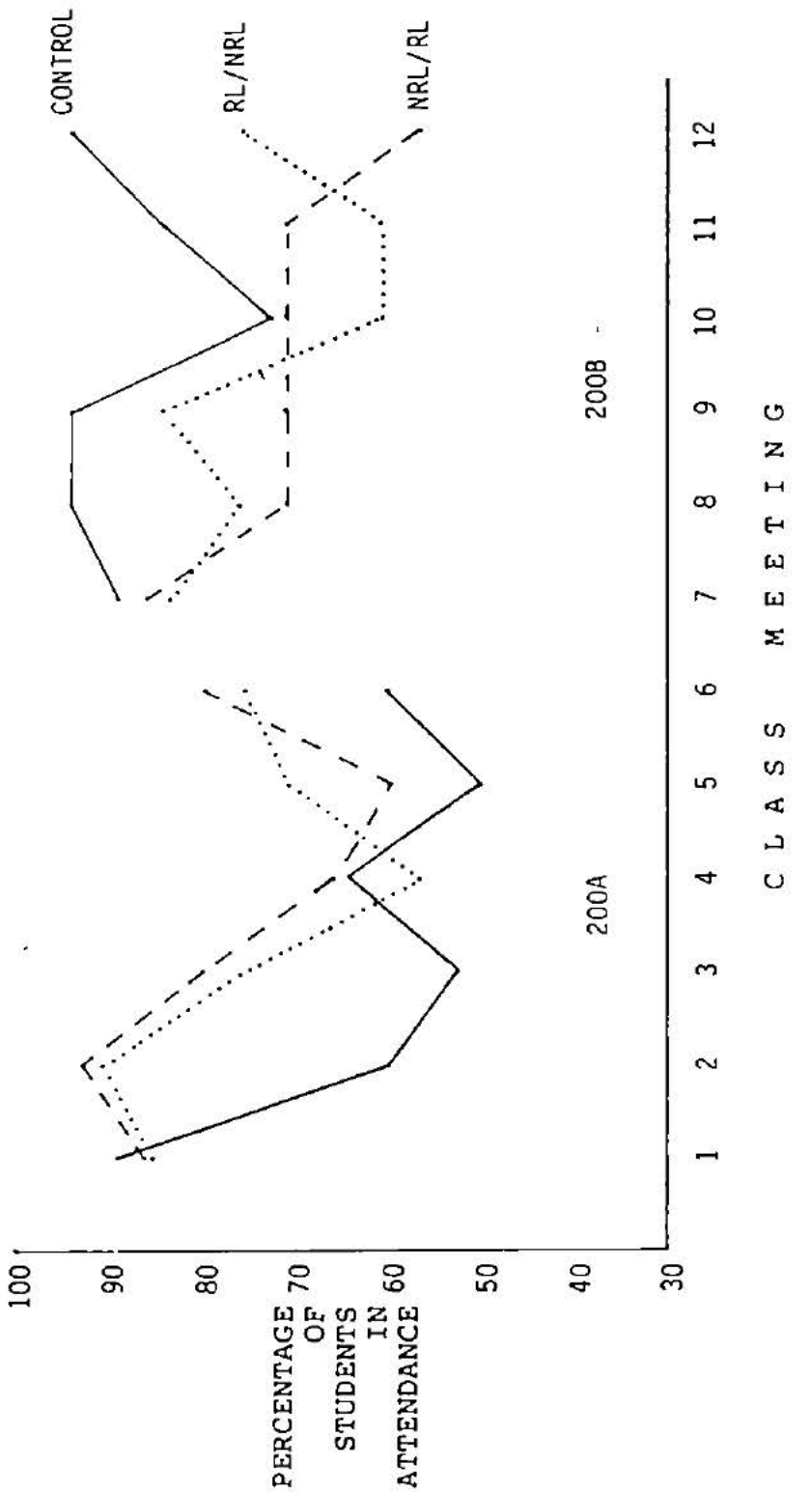


Figure 9: REPORTED TELECONFERENCE TRANSMISSION QUALITY ACROSS NINE OBSERVATIONS



APPENDIX C

PRINT

Print

Print refers to the written material used for the delivery of course content within the context of distance education. This can take many forms including combinations of the following: texts, course manuals, published books, packets of pictures, directed reading, assignments of work for tutorial comment, self-assessment problems, exercises and questions, graded examinations, material ancillary to the other modes of teaching used, eg: notes on broadcast programs, and instructions for kits, etc. (Mackenzie, Postgate, and Scupham, 1975). According to Kaye (1981), "the primary course materials are represented by print, in the form of:

- existing texts and articles with specially written study-guide material;
- specially written lessons or correspondence texts;
- notes on broadcasts audio-visual materials, and practical activities;
- assignment question papers." (page 50).

Kaye continued, identifying the purposes or characteristics of the print medium as including:

"- to impart facts
- to develop skills
- to illustrate how knowledge can be organized for learning
- to provide links to tutors/other students" (page 51),

as well as performing motivational functions. Print however, does not occur in isolation in its distance education application; it is combined with activities involved in the giving of feedback (Childs, 1971; Erdos, 1967). Correspondence education refers to this blending of print and feedback into one course delivery strategy.

The use of correspondence in the delivery of courses to learners who are unable to attend regular classes is not new. Keegan and Rumble (1982) reported that this practice was in operation in several regions of Great Britain and North America as early as the mid to late 1800's.

Over the years the specialized needs of each particular geographical area has exerted an influence over the development of correspondence yielding the different appearances and uses seen today (Edstrom, 1970).

Correspondence education is widely used (Kabwasa and Kaunda, 1973; Mackenzie, Postgate, Scupham, 1975; Tremaine, 1981). In fact it has been suggested (Bates, 1982) that in spite of new technologies there appears to be a trend away from broadcasting and towards print, audiocassettes, and telephone teaching. The fact that correspondence (print) forms the basis of most distance education courses infers a dependance on its particular characteristics and abilities for the delivery of content to the student. As stated by Kaye (1982):

> "Print materials have the advantage of being infinitely flexible in use - no fixed time or place is needed to

> study from them, they provide a permanent record which can be returned to time and time again, and the student can work from them at his or her own pace. Print materials of a different sort can also form a resource for group learning and discussion, with or without the presence of a tutor or animateur" (p. 19).

In the delivery of course content, correspondence is used to surmount two obstacles in the education of students:

1) to overcome a barrier which prevents the student from attending an existing educational program - reaching the atypical student,
2) to fill a gap in the educational network, to offer education where no education would be offered regardless of distance, etc. reaching a large number of students.

The first reason is very much a western concern, spawned by the belief that everyone should have access to education regardless of health, geographical distance (Short, 1974) and economical or time constraints (Glatter & Wedell, 1971). The second reason is a reality of the third world. Limited resources (money, trained teachers, buildings, etc.) (Kabwasa,1970), combined with a burgeoning demand has created a service vacuum, one which correspondence education is potentially able to fill (Edstrom, 1970). Young, Perraton, Jenkins, and Dodd, (1980) stated:

> "In the mid 1980's, ten million children will finish primary school in Nigeria with no chance of going on to secondary school. Of course many will go into employment, many will have benefited from a better primary education than their parents or elder brothers

> and sisters, and many will later enjoy opportunities for further education as adults. But hundreds of thousands will want an immediate chance of some alternative to the education obtained by the more favoured million and a half who get into secondary school... there is an alternative in correspondence education." (p.61)

The view that correspondence itself is able to meet these needs was supported by Keegan (1982) when he said that there are many who believe that correspondence is the core of distance education and that other technologies are trappings of dubious benefit.

These people may, however, be in the minority. Although there are many benefits to learning through correspondence, others felt that the advantages tend to be of a "better than nothing" nature. Many researchers and practioners suggested that correspondence (and distance education) in terms of a total education experience is a poor substitute for face-to-face on-campus instruction (Hugdahl, 1978). Many of the disadvantages cited related to the lack of pacing (Spencer, Peruniak, and Coldeway, 1982), the lack of student supports (Smith & Small, 1982), and most importantly the lack of human contact (Daniel & Meech, 1978). Other more specific problems concern the familiarity of language tone used (Gillard, 1982), the literacy of the students (Kaye, 1982), organization of course material (Holmberg, 1977; Nathanson, 1979), and presentation style (Erdos, 1967). It has also been suggested, particularly in the third world, that difficulties may arise over

inadequacies of native languages to transfer technical knowledge. There also may be some cultural conflicts which tend to inhibit learning (Trillo, 1982).

In spite of these disadvantages, the technology of correspondence education (print) is widely accepted as one which is able to deliver course content to the student, and to assist the student in gaining mastery of the content at a level comparable to that face-to-face instruction (Subramanian, 1971; Misanchuck, 1982).

APPENDIX D

TELECONFERENCING

Teleconferencing

The use of the telephone in distance education commenced in the late 1950's (Hugdahl, 1978). Its development and application was seen as a solution to many of the problems caused by the lack of immediate feedback experienced by courses using correspondence, television, and radio broadcasts. The use of teleconferencing per se (the amplification of telephone signals for group reception) was seen as introducing an immediate didactic aspect to the distance learning experience; it allowed for the presence of an instructor in dialogue with the learning group on instructional material.

The relative newness of this technology is reflected in a review of the literature (Hoyt and Frye, 1972) which revealed a relatively limited number of studies. However, although limited in number they were unanimous in declaring teleconferencing a useful and effective technology for the delivery of course content in applications ranging from university mathematics course (Nunley, 1964*) to the teaching of Hebrew (Edelman, 1968*). In the study by Nunley and a study examining university extension course delivery (Puzzuli, 1976*) teleconference students not only achieved comparable levels of content mastery but actually achieved levels superior to those of on-campus students. Student

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* (cited in Hoyt and Frye, 1972)

attitudes towards the teleconference format were examined by Boswell, Mocker, and Hamlin (1968*) and once again there were no differences between groups.

Working from this base of support, Hoyt and Frye further examined teleconferencing and its impact with two questions:

1) "is the teleconference delivery system as effective as standard classroom procedures in delivering educational outcomes:
   a) when these are assessed from the point of view of the instructor?
   b) when these are assessed from the point of view of the student?
2) Can student predisposition be used to predict which students will profit most from:
   a) the telecommunication method?
   b) the standard classroom method?" (page 16, Eric).

This line of questioning looked beyond academic indicators and considered the views and opinions of the service deliverers, the instructors, and, the students.

Hoyt and Frye reported that there was no significant difference in the effectiveness of the delivery system in reference to educational goals (this concurs with previous

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*(Cited in Hoyt and Frye, 1972)

findings). From the students point of view, in five out of the six treatment groups teleconference instruction was rated as being equal to face-to-face instruction for satisfaction with the method of ccurse delivery, while the sixth group, the teleconferencing mode, generated superior results.

Hoyt and Frye found that students who performed well regardless of treatment conditions were high in motivation and responsibility and that the successful learners in the telelecture groups were more independant, self-assured, and flexible than their on-campus counterparts. In each group, the high success students contrasted with low success students in the area of motivation.

The authors concluded that telecommunication (teleconferencing, and telelecture) "appears to be a viable means for extending the services of the university to off-campus locations" (page 41). However, they cautioned that this study did offer "considerable support for the idea that different people learn best by different instructional methods" (page 52) and that one approach should not be used for all learners in all situations. More recent studies have supported these findings. Hugdahl (1978) examined the use of teleconferencing and found it to be effective in the delivery of a university level music course. Hugdahl noted that teleconferencing had good fidelity and as a bonus, guest musicians in distant cities could be connected with

the system to instruct and demonstrate technique.

In 1983, Gary Jeffry compared multi-point teleconferencing to the on-campus instruction in a senior undergraduate Child Development course. Both groups received identical materials, assignments, and examinations within the same approximate time frame. The course was lecture oriented with provision for student feedback and dialogue with the instructor. Off-campus students met in small groups which were interconnected through a central switching unit. On-campus students thought the course more interesting, and were more satisfied with the rate of instruction than off-campus students. However, although off-campus students were concerned that the course was made more difficult by not having the visual contact with the instructor, they valued the opportunity to have immediate feedback afforded by teleconferencing. More importantly they reported that they would not hesitate to use the system again, and stated a preference for this type of course delivery to education television or correspondence, comparing it favourably to courses instructed locally.

This study raises the question that teleconferencing instruction may be more difficult becasue it lacks visual contact with the instructor. John Short (1974) addressed this question in Teaching by Telephone: The Problems of Teaching Without the Visual Channel in which he considered the benefits of teleconferencing in contrast to the problem

of not having visual contact.

Five advantages to teleconferencing in course delivery were:

1) superior to written communication in that the student has the opportunity to respond to, and question the lecturer;
2) it is cheaper in time and money than having instructor travel to the distant student;
3) remote areas can be served where there would otherwise be no service;
4) it offers new opportunities to the disabled; and,
5) there is the possibility of sharing between educational establishments (page 61, Teaching at a Distance).

Short pointed out that when the visual channel is removed non-verbal communication is blocked, denying the student knowledge of the instructor's i) physical appearance, ii) facial expression, iii) posture, iv) choice of personal space size, and, v) the direction in which the instructor looks. These aspects of non-verbal communication normally give the student a) feedback on one's performance, and, b) communication of the inter-personal attitudes held by the instructor.

Short suggested that the visual channel is particularly important on tasks where feedback regarding the other person's reaction is important, but less so on tasks where

content is the sole purpose of the communication.

Not having a visual channel affects group structure (ie: what is the role fo the chairman?) and group dynamics (how does one catch the eye of the distant instructor in order to have a turn at speaking?). The University of Quebec has kept the face-to-face mode not because of the inabiltiy of teleconferencing to deliver course content, but to preserve the personal contact. John Short stated:

> "The greater the element of interaction required and the less formal the situation, the less suitable one would expect the telephone medium to be." (page 66)

Even with the concerns regarding the loss of the visual channel, the concensus which emerges from the literature is that on dimensions of academic performance, the technology of telelectures, or teleconferencing is at least equal to, or superior to conventional face-to-face instruction. As summed up in a statement made by Jeffry (1983) "in any area or situation in which either travel is difficult or the student population is widely dispersed, teleconference teaching appears a viable alternative to the regular classroom."

APPENDIX E

TUTORS

Tutors

The tutor is one of the most widely used technologies in the delivery of course material to the distance learner; the role is almost universally used and believed critical in the distance education experience. "The most important element in the University's academic support to the student is the tutor" (Shale, 1982). "The most important single factor, however, in the correspondence learning process is the instructor. The instructor is in a tutorial relationship with the correspondence student." (Wedmeyer, 1971). "A key figure in most support systems is the tutor" (Robinson, 1981).

Although wide tutor usage infers an existant benefit, there are those who are not convinced that the tutor role is necessary. As Desmond Keegan (1982) reported:

> "The debate in the distance education literature on the weighting of student support services in a distance teaching university remains unsolved. There are those who claim that an excellent teaching package is all that is needed and that student support services, especially of a face-to-face kind, are peripheral, or even a watering down of the purity of distance teaching." (page 101)

Further to this, in referring to the students' perceived need for personal contact in the distance education system and the role of the teacher/tutor, Mackenzie, Postgate, and Scupham (1975) cautioned:

> "Personal contacts between students and teacher and between student and student are such accepted elements at all levels of education that the need for them in Open Learning systems is liable to go unexamined." (page 41)

The authors also warned that accepting prevalence of tutor usage as evidence of necessity could be an expensive mistake:

> "Yet particularly in large distance-learning systems, this necessity (the need for personal contact) must be carefully considered, for to provide such contact is organizationally complicated and costly." (Page 41)

In view of the prevalence of use and the existance of differing opinions as to the benefit of the tutor role, there is a paucity of research addressing the isues. Dan Coldeway (1982) reported to the I.C.C.E. World Conference in Vancouver:

> "In fact, despite all the testimonials to the importance of tutors, research into the activities and functions are rare and experimental studies of the characteristics and effects of different types of tutoring are almost non-existant." (page 31, Proceedings)

Not only has there been relatively few experimental studies done but existing studies do not offer a clear concensus regarding the benefit of tutor usage. Coldeway (1982) suggests that this could be attributable to a dearth of operationally defined terms. In other words, the literature does not achieve concensus and as a result reports on fundimentally different phenomenon. To one researcher the tutor is the individual grading papers and giving written feedback, while to another it is the supportive person who is in the learners home community offering help in times of distress. Potter (1981) suggests that these idiosyncratically defined terms and uses of

tutors are the result of distance education technologies and strategies having evolved separately in several different areas of the world. Regardless of their origins, these differences in definition have hindered understanding the tutor role.

In spite of different definitions and paucity of data, some reports are worthy of consideration. In 1960, L.S. Stein reported a relationship between tutor personality and student performance. An unplanned departure of one tutor and the arrival of a subsequent replacement formed the comparative contrast. Although this study is cited in the literature, its importance must be tempered as the findings were the product of post hoc observations using no apriori hypothesis, controls, or pretesting.

Shortly after Stein published, Douglas Sjogren (1963) reported the results of an experiment which examined the effect of tutor interaction with students. This study is relatively unique in distance education in the degree to which it adhered to research standards and practices.

The study examined two hypotheses:

1) That encouraging comments from the teacher regarding continuation in the course should reduce the number of dropouts.
2) That greater feedback is more effective on learning performance than little or no feedback.

These hypotheses were examined through the comparison

of outcomes for three treatment groups:

group 1) where the teacher just marked wrong items and suggested where the answer could be found,

group 2) as above plus corrections written in, along with encouraging remarks,

group 3) as in group two plus and attempt to establish "a personal or supportive relationship with the student by way of personalized comment on the papers and the exchange of personal letters." (page 83)

Sjogren reported that on student drop-out rates, and student performance as indicated by grades (content mastery) no significant differences were found between the three treatment conditions.

In contrast to the Sjogren study, Aspey and Roebuck (cited in Williams, 1980) found that there was a positive and significant relationship between the teachers' levels of interpersonal functioning and student gains on achievement tests, attendance, and self-concept.

Williams (1980) went on to examine the effect of interpersonal support training for tutors and found that increased warmth, via increased interpersonal skill resulted in increased student progress. It was noted that tutors who scored high on interpersonal interaction scales were more effective on all student outcome measurements (content

mastery, progress through the course, etc.) than were the lower scoring tutors.

Coldeway (1980b) examined tutor functions and whether or not they could be fulfilled by a peer tutor rather than a highly trained staff tutor was was then the current practice. The peer tutor was defined as an individual who had taken the course before and had done well but did not have further training or expertise in that particular field. Many of the university academics found this sort of question threatening and ultimately unacceptable Because of political pressure the study was restricted to the examination of one peer tutor, clearly restricting the generalizability of the findings. However, the data collected from this study, in conjunction with existing literature on peer tutoring (Schreve, cited in Coldeway, 1980b) suggest that peer tutors are as effective as staff tutors on all dimensions.

Coldeway (1980a) also examined different pay strategies for tutors and the effect that they had on student performance. Tutors were paid according to student performance as indicated by student course completion. This method was tested against the existing method where the tutor received flat rate payment regardless of student completion rates. While it was found that no differnces between the two groups existed for course completion, tutors who were paid on the basis of student performance, produced considerably more documentation than did their flat-rate

colleagues.

As is evident, concensus has not been achieved. The small number of studies and the different conclusions generated yield no conclusion regarding the role of the tutor, or the benefit of using one. Clearly, this is an area which, in view of the use and perceived importance of the tutor role, needs further study.

APPENDIX F

JOB DESCRIPTIONS

RESPONSIBILITIES FOR TUTORS

Child Care 200A

(Revised)

Pre-Course Responsibilities:

1. To have read thoroughly and be familiar with the curriculum of this course.

2. To submit in writing any questions, comments or concerns regarding the print package.

3. To attend a 1½ - 2 day workshop in August, 1983. Dates and location to be announced.

4. To become familiar with the course delivery strategies and research and evaluation framework.

5. To become familiar with University course policies and admission/registration procedures.

6. To advertise the course and recruit prospective students (8 - 10 students needed in area before tutor can be hired).

7. To assist students with course admission/registration procedures.

8. To introduce course to College requesting the use of facilities and equipment to support course offerings.

9. To distribute course textbooks and materials to registered students.

Course Responsibilities:

1. To ensure College facilities and equipment accessible and in place for by-weekly teleconference meetings.

2. To notify students of teleconference meeting and ensure and reward attendance.

3. Once a week (except for week of teleconference) each month, to call each student to discuss progress, problems, and/or assignments related to the course. Keep track of conversation highlights.

4. To be available for teleconference with other tutors and course instructor as deemed necessary (1 - 2 during course).

5. Organize and facilitate learning activities during teleconference meetings as directed by instructor. To facilitate "debriefing" of exercises and role plays.

Course Responsibilities - Continued

6. To grade assignments as delegated by instructor.

7. To complete responsibilities related to the research model and evaluation of these courses.

8. To audiotape group sessions with students for research purposes.

Post-Course Responsibilities

1. To complete evaluation and research responsibilities (of course and delivery strategies).

VB/dlb
May/83

Content Specialist
(may or may not be idea originator)

- Responsible for providing all the academic content of the course/program within the agreed upon contractual agreements with University Extension.
- Works on project proposal
- Works on instructional design with project team
- Responsible for identifying all outside content experts
- Helps develop delivery model with particular emphasis on monitoring tutoring/instruction during delivery.
- Supervises support staff (tutors) as required
- Helps develop evaluation model
- Works on production aspects of course/program as required
- Recommends acquisitions of project materials
- Other functions as assigned by Project Team.

Project Manager

- Determines whether proposed project idea meets established Faculty/Programs goals.
- Requests Distance Education consultant from the Distance Education Software Group.
- Manages all aspects of development and delivery process including:

  a). coordination of project proposal for development and delivery in conjunction with idea originator and Distance Education Consultant.

  b). delineation of project budget and development schedule in consultation with Distance Education Consultant.

  c). selection and appointment of content specialist, in consultation with appropriate bodies (credit with Department Chairman/Credit-free as required).

  d). project submission for approval of appropriate academic and Extension committees.

  e). overall responsibility for project evaluation

- Calls and chairs meetings of project team
- Supervises administrative support staff
- Joint responsibility with Distance Education Consultant on production non-academic content.(e.g., introduction to materials etc)
- Arranges all meetings related to project, e.g., with prospective outside consultants
- Responsible for negotiation with outside content consultants
- Develops and carries out promotional activities
- Recommends and acquires essential program materials, e.g., media to be acquired from outside sources.
- Responsible for direct liaison with client groups (students etc.,) during development and delivery.
- Responsible for purchasing all project-related supplies

Other functions as agreed by Project Team

Distance Education Consultant

- Provides instructional design direction during all aspects of project development and delivery including:
  - a). selection of appropriate media mix
  - b). advice on non-academic criteria for choice for "presenters"
  - c). material design (print, computer, audio, video, etc)
  - d). the development and delivery model
  - e). provides input on project budget and project schedule
- Directly supervises all aspects of the material production - in print, audiovisual, computer, or other media format.
- Joint responsibility with Project Manager for non-academic content .
- Recommends appropriate media to be acquired from outside sources
- Helps develop evaluation model
- Liaises with outside agencies regarding project e.g., Learning Centers, KNOW, B.C.I.T.
- Acquires copyright clearance as necessary.
- Responsible for formative evaluation of project components
- Establishes priorities with and monitors various production specialists.
- Other functions as assigned by project team

APPENDIX G

STUDENT PROFILE QUESTIONNAIRE

STUDENT PROFILE - (Please answer on sheet provided)

1. Which College region are you in?

___a) Malaspina ___d) Northern Lights ___g) Cariboo
___b) North Island ___e) Okanagan ___h) East Kootenays
___c) New Caledonia ___f) Fraser Valley ___i) Selkirk
___j) Northwest

2. Your age group is:

___a) 15 - 20 ___d) 31 - 35 ___g) 46 - 50 ___j) Over 60
___b) 21 - 25 ___e) 36 - 40 ___h) 51 - 55
___c) 26 - 30 ___f) 41 - 45 ___i) 56 - 60

3. Marital status:

___a) Single ___c) Separated
___b) Married/Common-law ___d) Divorced

4. Do you have a child or children living in your home?

___a) Yes ___b) No

If yes, please indicate how many children you have in each age category provided:

5. - between 0 and 5 years of age? ___a)1 ___b) 2 ___c) 3 ___d)4 ___e)5
6. - between 6 and 12 years of age? ___a)1 ___b) 2 ___c) 3 ___d)4 ___e)5
7. - between 13 & 18 years of age? ___a)1 ___b) 2 ___c) 3 ___d)4 ___e)5
8. - 19 years of age, or older? ___a)1 ___b) 2 ___c) 3 ___d)4 ___e)5

9. Did you finish high school?

___a) Yes ___b) No

10. If you attended a University, College or Technical School, please indicate the number of years that you completed:

___a) One year ___b) Two years ___c) Three years
___d) Four years ___e) Five years

11. How many years ago did you complete your highest level of education?

___a) 1 - 5 years ago ___b) 6 - 10 years ago ___c) Over 10 years ago

. . . /2

12. Have you taken courses in social services/humanities? (e.g. psychology, education, social work, child care, etc.)

___a) Yes ___b) No

13. If yes, they were: (choose one)

___a) credit courses at college
___b) university transfer courses at college
___c) credit courses at university
___d) non-credit professional training

14. Have you taken a distance education or correspondence course before?

___a) Yes ___b) No

15. Are you currently working in the human service/child care field?

___a) Yes ___b) No

IF YOU ARE WORKING AS A PAID EMPLOYEE OR VOLUNTEER IN THE HUMAN SERVICE/CHILD CARE FIELD, PLEASE ANSWER THE FOLLOWING SEVEN QUESTIONS. IF NOT, SKIP TO QUESTION #25.

16. You are currently: ___a) working full-time
___b) working part-time

17. You are: ___a) a paid employee
___b) a volunteer worker

18. How long have you worked in the area of human service/child care?

___a) 0 - 5 years ___b) 6 - 10 years ___c) over 10 years

19. What is your job title or classification?

___a) Child Care Worker/Counsellor
___b) Family Support Worker
___c) Foster Parent
___d) Receiving Home Parent
___e) Social Service Worker
___f) Homemaker
___g) Public Health Nurse
___h) Day Care Worker
___i) Therapeutic Parent
___j) Other

. . . /3

20. Is the organization you work for:
___a) Provincial Government
___b) Federal Government
___c) Private Society/Agency
___d) Private Practice
___e)

21. Do Class Meeting times overlap with your work schedule?
___a) Yes ___b) No

22. If yes, your employer has:
___a) given you time off without pay
___b) given you time off with pay
___c) allowed you to switch shifts
___d) other

23. Has your employer paid for your tuition?
___a) Yes ___b) No

24. Has your employer given you money for other expenses? (i.e. books)
___a) Yes ___b) No

25. Why are you taking this course?
___a) personal interest
___b) career development unrelated to degree
___c) credit towards a degree
___d) employer's request/suggestion
___e) other

26. How did you hear about this course?
___a) brochure
___b) B.C.C.C.S.A. Conference, Naramata
___c) from a friend or colleague
___d) at work
___e) from UVic School of Child Care
___f) newspaper advertisement
___g) Regional Leader
___h) Community College
___i) Other

27. Do you have a telephone?
___a) Yes ___b) No

28. How many kilometres do you live from the Class Meeting location?

___a) 0 - 20 km. ___c) 41 - 60 km.

___b) 21 - 40 km. ___d) over 60 km.

29. What would you usually do on a Saturday if you were not attending the Class Meeting (choose one activity)

___a) spend time with the family

___b) work at job

___c) housework/chores

___d) recreation/sports

___e) sleep-in and relax

___f) other

30. How many hours each week, outside of the Class Meeting, are you planning to devote to this course?

___a) 1 - 2

___b) 3 - 4

___c) 5 - 6

___d) 7 - 8

___e) over 8

31. In terms of your satisfaction, at the end of this course, you expect to be:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
very unsatisfied					very satisfied

32. You would estimate your motivation regarding the course as:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
very unmotivated					highly motivated

Janaury 28th, 1984

QUESTIONNAIRE

1. How many hours each week, outside of the Class Meeting, are you planning to devote to this course?

____a) 1 - 2

____b) 3 - 4

____c) 5 - 6

____d) 7 - 8

____e) over 8

2. In terms of your satisfaction, at the end of this course, you expect to be:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
VERY UNSATISFIED					VERY SATISFIED

3. You would estimate your motivation regarding the course as:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
VERY UNMOTIVATED					HIGHLY MOTIVATED

APPENDIX H

STUDENT FEEDBACK QUESTIONNAIRE

STUDENT FEEDBACK - (Please answer on sheet provided)

1. Your satisfaction with the function and performance of the regional leader was:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(G)
very low					very high

2. Your satisfaction with the class meeting was:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
very low					very high

3. Your satisfaction with the function and performance of the content specialist in Victoria was:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
very low					very high

4. Your satisfaction with teleconferencing was:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
very low					very high

The study guide, (not the texts) was:

		not at all					very
5.	- attractive/pleasant	1 (A)	2 (B)	3 (C)	4 (D)	5 (E)	6 (F)
6.	- easy to read/understand	1 (A)	2 (B)	3 (C)	4 (D)	5 (E)	6 (F)
7.	- interesting	1 (A)	2 (B)	3 (C)	4 (D)	5 (E)	6 (F)
8.	- informative	1 (A)	2 (B)	3 (C)	4 (D)	5 (E)	6 (F)
9.	- helpful in making sense of the text	1 (A)	2 (B)	3 (C)	4 (D)	5 (E)	6 (F)

10. After this course is over, you will:

___a) not use the study guide as a reference

___b) use the study guide as a personal reference

___c) use the study guide as a work reference

___d) encourage others/agency to purchase the study guide to use as a reference.

. . . /2

11. Your satisfaction with the study guide was:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
very low					very high

12. Your satisfaction with the course content was:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
very low					very high

13. Would you take this, or a similar course again?

___a) Yes ___b) No

14. Would you recommend this course to a professional colleague?

___a) Yes ___b) No

15. Considering all aspects of this course, in general, you are:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
very unsatisfied					very satisfied

16. Have you used what you have learned in this course?

___a)Yes ___b) No

17. If Yes, you have used it: (choose one)

____a) at work
____b) with family
____c) with friends

18. Did you participate in an informal study group for the purpose of studying the course material?

___a) Yes ___b) No

19. If yes, how often did you meet in a one-month time span?

___a) Once a week ___b) Once every two weeks ___c) Once a month

20. The personal contact and support that you received at the study group was:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
unimportant					very important

. . . /3

21. The help you received in mastering course content in the study group was:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
unimportant					very important

22. If you were to be in a similar course in the future, you would: form a study group:

___a) for the personal contact and support,

___b) for the help in mastering course content,

___c) for both the personal support and the help with course content,

___d) I would not participate in a study group.

23. Did you get help from other people not involved in this course?

___a) Yes ___b) No

24. If yes, did you get help mostly from:

___a) work colleagues

___b) family

___c) friends

25. If yes, how often did you get help from this person/these people in a one-month time span?

___a) Once a week ___b) Twice a week ___c) Once a month

26. The personal contact and support that you received from this person/these people was:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
unimportant					very important

27. The help you received in mastering the course content from this person/these people was:

1	2	3	4	5	6
(A)	(B)	(C)	(D)	(E)	(F)
unimportant					very important

PLEASE TURN TO NEXT PAGE ...

IDENTIFICATION NUMBER A B C D E F G H I J

_ _ _ _ _ _ _ _ _ _

What did you like the most about this course?

What did you like least about this course?

Please comment on any aspect of this course you wish?

THANK YOU FOR YOUR HELP!

COMPARISON QUESTIONNAIRE

March 24th, 1984

I.D. Number _____

1) Which part of the course did you prefer? (Please circle the appropriate response).

Child Care 200A (Sept - Dec. '83)	Child Care 200B (Jan. - April '84)	No Preference

2) Why?

Thank-you.

APPENDIX I

"WHO-DID-WHAT" CHECKLIST

THE "WHO DID WHAT" CHECKLIST
(Staff Functions)

During the course which you have now almost completed, you were in contact with, a Regional Leader, a Content Specialist (via teleconferencing) and co-students; you may have been in contact with other course staff in Victoria as well.

On the computer answer sheet please mark, for each question:
A) if the Content Specialist (Victoria) performed this activity,
B) if the activity was performed by co-students,
C) if the activity was performed by other staff in Victoria,
D) if the Regional Leader performed this activity.

If no one performed the activity, please leave the question blank. You may mark more than one category (A, B, C, D) for each question, if required.

	Content Specialist	Co-Students	Other Staff in Victoria	Regional Leader	
1.	A	B	C	D	- gave verbal feedback on your involvement in the seminars
2.	A	B	C	D	- organized and led class discussions
3.	A	B	C	D	- assisted you with course admission/registration procedures
4.	A	B	C	D	- "debriefed" with the students following class discussions or role plays
5.	A	B	C	D	- was present at all of the seminars
6.	A	B	C	D	- adjusted activities, direction of discussion, etc. to reflect the needs of the students
7.	A	B	C	D	- took an interest in you and your particular background experiences
8.	A	B	C	D	- was open to discussing concerns that you had regarding the course
9.	A	B	C	D	- gave directions ie: suggested areas of investigation, essay topics, etc.
10.	A	B	C	D	- helped solve course related problems, re: scheduling, attendance, registration
11.	A	B	C	D	- clarified aspects of the course material
12.	A	B	C	D	- gave notice of when and where seminars would be held
13.	A	B	C	D	- helped students develop good study techniques
14.	A	B	C	D	- related the course material to your own life/work experiences
15.	A	B	C	D	- was available, responsive and open to helping with personal problems
16.	A	B	C	D	- provided course textbooks and materials

CHECKLIST - Continued

	Content Specialist	Co-students	Other Staff in Victoria	Regional Leader	
17.	A	B	C	D	- made an effort to establish friendly contact with students
18.	A	B	C	D	- was available at times other than the seminar for contact
19.	A	B	C	D	- provided relevant examples to complement course content
20.	A	B	C	D	- gave helpful explanations of the course material
21.	A	B	C	D	- had the room and equipment ready to go on time
22.	A	B	C	D	- gave written feedback regarding your assignments and exams
23.	A	B	C	D	- contacted students to see how you were getting along with the course
24.	A	B	C	D	- answered questions regarding course content
25.	A	B	C	D	- assisted in helping you improve your writing style
26.	A	B	C	D	- gave letters, or statements of encouragement
27.	A	B	C	D	- graded exams
28.	A	B	C	D	- organized debates and acted as time-keeper, etc.
29.	A	B	C	D	- graded assignments

PLEASE WRITE IN (on this sheet) ANY OTHER ACTIVITIES WHICH HAVE BEEN PERFORMED BY STAFF OR CO-STUDENTS WHICH WERE NOT INCLUDED ON THIS SHEET:

- Thank you -

APPENDIX J

POST-COURSE UNIT STUDENT FEEDBACK QUESTIONNAIRE

POST-COURSE UNIT STUDENT FEEDBACK

1. Date: a) Oct. 8 b) Oct. 22 c) Nov. 5 d) Nov. 19

2. In the past two weeks, how many hours/week did you spend on your course work, outside of the class meeting?

a) 1 - 2 hrs./week
b) 2 - 4 hrs./week
c) 5 - 6 hrs./week
d) 7 - 8 hrs./week
e) more than 8 hrs./week

3. Please pick the category which best describes how many of the pre-class meeting written activities (in the guide) you completed for this unit.

a) all b) 3/4 of them c) ½ of them d) ¼ of them e) none

4. How motivated were you during the past two weeks regarding this course?

1	2	3	4	5	6
(a)	(b)	(c)	(d)	(e)	(f)
absolutely no motivation					highly motivated

5. Please indicate which of the below accounts the most for your degree of motivation:

a) course content
b) course format
c) home life
d) work
e) personal reasons
f) other

6. How satisfied with this course have you been during the past two weeks?

1	2	3	4	5	6
(a)	(b)	(c)	(d)	(e)	(f)
very unsatisfied					very satisfied

7. Please indicate which of the below accounts the most for your degree of satisfaction:

a) course content
b) course format
c) home life
d) work
e) personal reasons
f) other

APPENDIX K

FEEDBACK ON STUDENT WITHDRAWL FROM THE COURSE

FEEDBACK ON STUDENT WITHDRAWL FROM THE COURSE

Date:

Identification Number: A B C D E F G H I J

_ _ _ _ _ _ _ _ _ _

Name:

1 Please indicate at which point you stopped working on this course?

A) ___ I registered but I did not do any of the course work.

B) ___ I started the course but stopped working on it before Sept. 30th.

C) ___ I stopped working on the course between Oct. 1st and Oct. 31st.

D) ___ I stopped working on the course between Nov. 1st and Nov. 30th.

E) ___ I stopped working on the course in December .

2 Please indicate which of the below is responsible for you stopping work on the course:

A) ___course content

B) ___ course format

C) ___ home life

D) ___ work

E) ___ personal reasons

F) ___ other

3 Please explain:

4 Any other comments?

APPENDIX L

STUDENT GRADES

College Region: _____

Group #:_____

STUDENT GRADES

Child Care 200-A

Name	Telephone	Adlerian 25%	Beh. Mod. 25%	Final 50%	points	%

APPENDIX H

STUDENT ATTENDANCE

ATTENDANCE SHEET

College Region (_ _)
Group #: (_)
Regional Leader: _____

STUDENT NAME	TELEPHONE NO.	Class Meeting #1 September 24th	Class Meeting #2 October 8th	Class Meeting #3 October 22nd	Class Meeting #4 November 5th	Class Meeting #5 November 19th	Class Meeting #6 December 3rd	A = ABSENT ✓ = PRESENT

APPENDIX N

LIBRARY USE RECORD SHEET

LIBRARY USE RECORD SHEET

Child Care 200-A

Learning Centre	# of books borrowed	

Child Care 200-B

Learning Centre	# of books borrowed	

APPENDIX O

TELEPHONE LOG

TELEPHONE LOG - ONE WEEK SAMPLE - NOVEMBER 11th to NOVEMBER 18th

Name of Regional Leader: _____ Telephone No. _____

Region Code: (_ _) Group Number (_)

ADMIN = registration, UVic information, red tape, attendance, etc.
INSTRUCT = clarification, explanation, discussion of course content, etc.
SUPPORT = encouragement, family problems, personal concerns, establishing rapport, relationships, etc.

Date	Initiated by self	Initiated by student	Name of Student	Length of call	The time spent on the call was distributed as follows: ADMIN	INSTRUCT	SUPPORT	Comments
				Minutes	%	%	%	

APPENDIX P

TELECONFERENCE TRANSMISSION QUALITY QUESTIONNAIRE

Name: _____ Group # _____ Date: _____

As you are aware, the quality of the teleconference transmissions has been uneven. To help us examine the impact of this please answer the following five questions:

1. For the January 28th teleconference, please rate the transmission quality:

1	2	3	4	5	6
very poor	poor	fair	good	very good	excellent

2. For the February 11th teleconference, please rate the transmission quality:

1	2	3	4	5	6
very poor	poor	fair	good	very good	excellent

3. For the February 25th teleconference, please rate the transmission quality:

1	2	3	4	5	6
very poor	poor	fair	good	very good	excellent

(no teleconference on March 10th)

4. For the March 24th teleconference, please rate the transmission quality:

1	2	3	4	5	6
very poor	poor	fair	good	very good	excellent

5. Please indicate the rating which is, in your opinion, the minimum acceptable level of teleconference quality. (Teleconference transmission at this level would still have a positive influence on the class meeting experience while levels below this point would have a negative influence.)

1	2	3	4	5	6
very poor	poor	fair	good	very good	excellent

COMMENTS: OVER

APPENDIX Q

EVALUATION SCHEDULE

EVALUATION SCHEDULE

CHILD CARE 200: PART I

AT HOME

Contact Log: Every time that you are in contact with a student - by phone, in writing, or in-person (including unscheduled meetings, ie: at the store) record the interaction on the CONTACT LOG noting which type of contact occured: telephone, correspondence, or in-person. The CONTACT LOG will be used from September 17, to December 10,1983.

Telephone Log: For a one week period (November 11th - November 18th) you are asked to record more detailed information about the telephone contact that you have with students. For this one week,. use the TELEPHONE LOG instead of the Contact Log.

The CONTACT LOG is to be mailed to Victoria on December 3rd. along with the ATTENDANCE SHEET.

The TELEPHONE LOG is to be mailed to Victoria with the evaluation questionnaires and tapes November 19th.

IN THE CLASS MEETING

SATURDAY, SEPTEMBER 24th - CLASS MEETING I

THINGS THAT YOU NEED TO HAVE WITH YOU:

computer answer sheets + pencils
the ATTENDANCE SHEET
the STUDENT PROFILE QUESTIONNAIRE
Cassette recorder + 3 hours of tapes
the return mailer to put questionnaires, answer sheets, and cassette tapes into for mailing to Victoria.

THINGS TO DO AT THE FIRST MEETING:

- ☐ take attendance on ATTENDANCE SHEET
- ☐ inform students of procedures which will insure confidentiality in the evaluation (see attached sheet).
- ☐ administer the STUDENT PROFILE QUESTIONNAIRE
- ☐ tape record the session (all 3 hours)
- ☐ seal the questionnaire, answer sheets, and cassette tapes in the mailer and post.

SATURDAY, OCTOBER 6th - CLASS MEETING II

THINGS THAT YOU NEED TO HAVE WITH YOU:

computer answer sheet + pencils
ATTENDANCE SHEET
POST-COURSE UNIT QUESTIONNAIRES
3 hours of cassette tapes (+ recorder)
the return mailer.

THINGS TO DO AT THE SECOND MEETING:

- ☐ take attendance on the ATTENDANCE SHEET
- ☐ administer the POST-COURSE UNIT QUESTIONNAIRE
- ☐ tape record the session (all 3 hours)
- ☐ seal the questionnaires, answer sheets and cassette tapes into the mailer and post

SATURDAY, OCTOBER 22nd - CLASS MEETING III

THINGS THAT YOU NEED TO HAVE WITH YOU:

computer answer sheets + pencils
ATTENDANCE SHEET
POST-COURSE UNIT QUESTIONNAIRES
3 hours of cassette tapes (+ recorder)
the return mailer

THINGS TO DO AT THE THIRD MEETING

- ☐ take attendance on the ATTENDANCE SHEET
- ☐ remind students of confidentiality (see attached sheet)
- ☐ administer POST-COURSE UNIT QUESTIONNAIRE
- ☐ tape record the session (all 3 hours)
- ☐ seal the questionnaires, answer sheets and the cassette tapes into the mailer and post.

SATURDAY, NOVEMBER 5th - CLASS MEETING IV

THINGS THAT YOU NEED TO HAVE WITH YOU:

computer answer sheets + pencils
ATTENDANCE SHEET
POST-COURSE UNIT QUESTIONNAIRES
three hours of cassette tapes (+ recorder)
the return mailer

THINGS TO DO AT THE FOURTH MEETING:

- ☐ take attendance on ATTENDANCE SHEET
- ☐ administer the POST-COURSE UNIT QUESTIONNAIRE
- ☐ tape record the session (all three hours)
- ☐ seal the questionnaire, answer sheets, and tapes into the mailer and post.

SATURDAY, NOVEMBER 19th - CLASS MEETING V

THINGS THAT YOU NEED TO HAVE WITH YOU:

computer answer sheets + pencils
ATTENDANCE SHEET
POST-COURSE UNIT QUESTIONNAIRE
3 hours of cassette tapes (+ recorder)
STUDENT FEEDBACK QUESTIONNAIRE
the WHO DID WHAT CHECKLIST
the return mailer

THINGS TO DO AT THE FIFTH MEETING:

- ☐ take attendance on the ATTENDANCE SHEET
- ☐ administer the POST-COURSE UNIT QUESTIONNAIRE
- ☐ tape record the session (all 3 hours)
- ☐ at the end of the class, administer the STUDENT FEEDBACK QUESTIONNAIRE AND the WHO DID WHAT CHECKLIST.
- ☐ seal the questionnaires, answer sheets, and cassette tapes into the mailer and post
- ☐ THANK THE STUDENTS for their participation in the evaluation.

THANK YOU FOR YOUR PARTICIPATION

EVALUATION SCHEDULE

CHILD CARE 200: PART II

The following schedule is designed to help you in the gathering of information. Each class meeting is given with the materials that you need to take with you and what you need to do when you get there.

The envelopes provided, contain the materials required for the corresponding meetings; ie. envelope #1 contains materials for Class Meeting #1; envelope #2 = Class Meeting #2; etc.

IN THE CLASS MEETING

SATURDAY, JANUARY 28th - CLASS MEETING I

THINGS THAT YOU NEED TO HAVE WITH YOU:

computer answer sheets and pencils

the ATTENDANCE SHEET

the one-page Questionnaire

Cassette recorder and three hours of tapes

the return mailer to put questionnaires, answer sheets, and cassette tapes into for mailing to Victoria.

THINGS TO DO AT THE FIRST MEETING:

- ☐ take attendance on ATTENDANCE SHEET
- ☐ inform students of procedures which will insure confidentiality in the evaluation (see attached sheet)
- ☐ administer the QUESTIONNAIRE
- ☐ tape record the session (all 3 hours)
- ☐ seal the questionnaire, answer sheets, and cassette tapes in the mailer and post.

SATURDAY, FEBRUARY 11 - CLASS MEETING II

THINGS THAT YOU NEED TO HAVE WITH YOU:

computer answer sheet and pencils
ATTENDANCE SHEET
POST-COURSE UNIT QUESTIONNAIRES
three hours of cassette tapes (and recorder)
the return mailer.

THINGS TO DO AT THE SECOND MEETING:

- ☐ take attendance on the ATTENDANCE SHEET
- ☐ administer the POST-COURSE UNIT QUESTIONNAIRE
- ☐ tape record the session (all 3 hours)
- ☐ seal the answer sheets and cassette tapes into the mailer and post.

Note - keep the Post-Course Unit Questionnaire with you for future use.

SATURDAY, FEBRUARY 25 - CLASS MEETING III

THINGS THAT YOU NEED TO HAVE WITH YOU:

computer answer sheets and pencils
ATTENDANCE SHEET
POST-COURSE UNIT QUESTIONNAIRES
three hours of cassette tapes (and recorder)
the return mailer.

THINGS TO DO AT THE THIRD MEETING:

- ☐ take attendance on the ATTENDANCE SHEET
- ☐ remind students of confidentiality (see attached sheet)
- ☐ administer POST-COURSE UNIT QUESTIONNAIRE
- ☐ tape record the session (all 3 hours)
- ☐ seal the answer sheets and the cassette tapes into the mailer and post.

Note - keep the Post-Course Unit Questionnaire with you for future use.

SATURDAY, MARCH 10 - CLASS MEETING IV

THINGS THAT YOU NEED TO HAVE WITH YOU:

computer answer sheets and pencils
ATTENDANCE SHEET
POST-COURSE UNIT QUESTIONNAIRES
three hours of cassette tapes (and recorder)
the return mailer

THINGS TO DO AT THE FOURTH MEETING:

- ☐ take attendance on the ATTENDANCE SHEET
- ☐ administer the POST-COURSE UNIT QUESTIONNAIRE
- ☐ tape record the session (all three hours)
- ☐ seal the answer sheets, and tapes into the mailer and post.

Note - keep the post-course unit questionnaire with you for future use.

SATURDAY, MARCH 24 - CLASS MEETING V

THINGS THAT YOU NEED TO HAVE WITH YOU:

computer answer sheets and pencils
ATTENDANCE SHEET
POST-COURSE UNIT QUESTIONNAIRE
three hours of cassette tapes (and recorder)
STUDENT FEEDBACK QUESTIONNAIRE
the WHO DID WHAT CHECKLIST
the return mailer

THINGS TO DO AT THE FIFTH MEETING:

- ☐ take attendance on the ATTENDANCE SHEET
- ☐ administer the POST-COURSE UNIT QUESTIONNAIRE, followed by the STUDENT FEEDBACK QUESTIONNAIRE and the WHO DID WHAT CHECKLIST.
- ☐ tape record the session (all three hours)
- ☐ seal all the questionnaires, answer sheets, and cassette tapes into the mailer and post
- ☐ THANK THE STUDENTS for their participation in the evaluation.

THANK YOU FOR YOUR PARTICIPATION

APPENDIX R

RELATIONSHIP OF MEASUREMENTS TO QUESTIONS

Table 1: Relationship of measurements to questions.

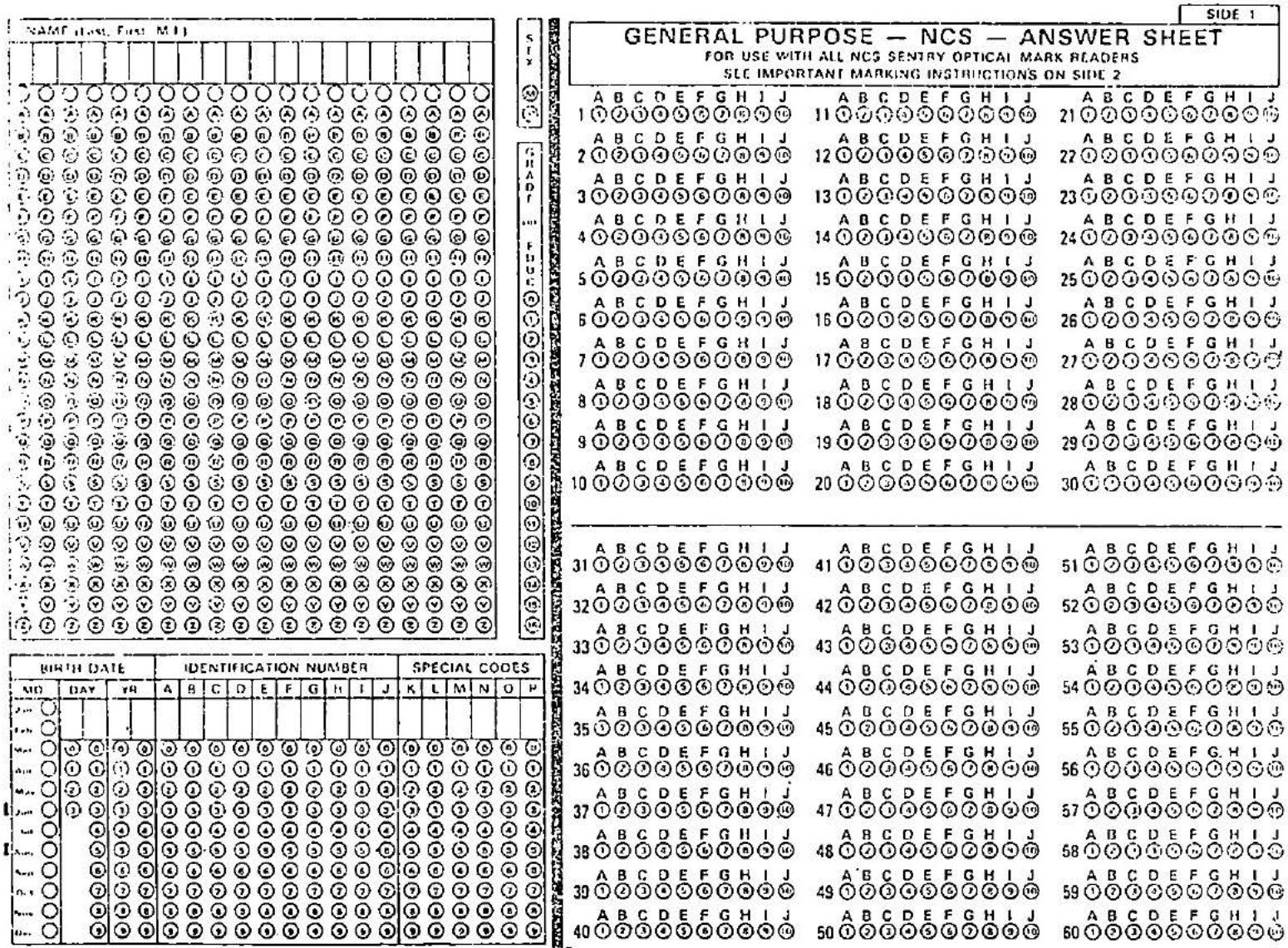
QUESTION ASKED	MEASUREMENT USED	APPENDIX	ITEMS
Are groups homogenious?	Student Profile	E	2,9,10,11, 12,14,28,30, 31,32.
Who took the course?	Student Profile	E	All
When did people drop out of this course, and why?	Telephone Interview	I	
Which functions were performed by which staff roles?	Who-Did-What Questionnaire	G	All
	Telephone Log	M	
What is the effect of not having a Regional Leader on the remaining course roles?	Who-Did-What Questionnaire	G	All
	Student Feedback Questionnaire	F	18,20,21,22, 23,24,26,27
What was the effect of not having a Regional Leader on student performance re: -satisfaction?	Student Feedback Questionnaire	F	2,3,4,11, 12,13,14,15, pgs 4-5
	Post Course Unit Questionnaire	H	6
	Student Profile	E	31

Table 1: Measurements (cont'd)

-motivation?	Post Course Unit Questionnaire	H	2,3,4.
	Student Profile	E	32
	Attendance Sheet	K	All
	Library Use Record Sheet	L	All
-content mastery?	Course Grades Sheet	J	All
-utilization?	Student Feedback Questionnaire	F	5,6,7,8,9, 10,16,17.
To what extent did the quality of teleconference transmission affect the learning experience	Teleconference Transmission Quality Questionnaire	N	All

APPENDIX S

COMPUTER ANSWER SHEET


SIDE 1
GENERAL PURPOSE — NCS — ANSWER SHEET
FOR USE WITH ALL NCS SENTRY OPTICAL MARK READERS
SEE IMPORTANT MARKING INSTRUCTIONS ON SIDE 2
NAME (Last, First, M.I.)
SEX
BIRTH DATE
MO
DAY
YR
IDENTIFICATION NUMBER
SPECIAL CODES

APPENDIX T

DATA FOR THE COMPARISON OF OFF-CAMPUS STUDENTS WITH ON-CAMPUS STUDENTS, CHILD CARE 200.

TABLE 1: PERCENTAGE OF RESPONDENTS WITH REGARD TO AGE, MARITAL STATUS, AND CHILDREN

	Off-Campus (N=77)	On-Campus (N=48)
Students under 25 years of age	23.4	83.3
Married Students	70.1	10.4
Students with children at home	56.4	12.2

TABLE 2: PERCENTAGE OF RESPONDENTS WITH REGARD TO EDUCATIONAL EXPERIENCE

	Off-Campus (N=77)	On-Campus (N=48)
Finished High School	85.9	93.8
Received higher ed.	61.5	100.0
Received this higher ed. within the last 5 years	61.0	93.8
Took humanities courses	77.9	97.9
These courses were:		
- credit courses at college	21.7	19.1
- university transfer courses	20.0	31.9
- credit courses at university	43.3	68.1
- non-credit professional dev.	23.4	2.1
Taken a Dist. Ed. course before	23.4	12.8

TABLE 3: PERCENTAGE OF RESPONDENTS WITH REGARD TO EMPLOYMENT STATUS

	Off-Campus (N=77)	On-Campus (N=48)
Currently in human serv.	80.5	15.6
Of those working:		
- working full time	54.8	12.5
- being paid	80.6	62.5
Working for +5 years	33.3	0.0

TABLE 4: PERCENTAGE OF RESPONDENTS WITH REGARD TO EMPLOYMENT SCHEDULING AND EMPLOYER SUPPORT

	Off-Campus (N=77)	On-Campus (N=48)
Of those working, Class-Meeting time conflicts with work schedule	19.0	40.0
Of those experiencing conflict, the emloyer has:		
- given time off without pay	7.1	0.0
- given time off with pay	35.7	0.0
- allowed you to switch shifts	7.1	66.7
- other	50.0	33.3
Employer paid tuition	23.7	0.0
Employer paid other costs	13.8	0.0

TABLE 5: PERCENTAGE OF RESPONDENTS REPORTING THEIR ORGANIZATION TYPE AND JOB DESCRIPTION

	Off-Campus (N=77)	On-Campus (N=48)
Of those working, working for:		
- Provincial Gov't.	18.3	57.1
- Federal Gov't.	0.0	0.0
- private society	73.3	28.6
- private practice	1.7	0.0
- other	6.7	14.3
Of those working, job title:		
- Child Care Counsellor/Wkr.	42.4	11.1
- Family Support Worker	1.7	0.0
- Foster Parent	3.4	0.0
- Receiving Home Parent	0.0	11.1
- Social Service Worker	5.1	0.0
- Homemaker	3.4	0.0
- Public Health Nurse	0.0	0.0
- Day Care Worker	11.9	0.0
- Therapeutic Parent	0.0	22.2
- Other	32.2	55.6

TABLE 6: PERCENTAGE OF RESPONDENTS REPORTING SPECIFIC REASONS FOR TAKING THIS COURSE

	Off-Campus (N=77)	On-Campus (N=48)
Personal interest	35.9	21.3
Career development	32.1	8.5
Credit towards degree	53.8	87.2
Employer's request/suggestion	9.0	0.0
Other	1.3	0.0

TABLE 7: PERCENTAGE OF RESPONDENTS WITH REGARD TO OWNERSHIP OF A TELEPHONE AND DISTANCE BETWEEN THEIR HOME AND THE CLASS MEETING

	Off-Campus (N=77)	On-Campus (N=48)
Have a telephone	97.4	95.8
Distance from class meeting:		
0 - 20km	61.9	93.5
21 - 40km	20.6	6.5
41 - 60km	12.7	0.0
over 60km	4.8	0.0

TABLE 8: PERCENTAGES OF STUDENT POPULATION AND PROVINCIAL POPULATIONS CONTAINED WITHIN B.C. COLLEGE REGIONS

COLLEGE REGION	% COURSE POPULATION	%PROVINCE POPULATION
Malaspina	20.5	5.5
Okanagan	19.2	8.5
Selkirk	14.1	2.7
Northern Lights	10.3	2.1
Camosun	9.1	9.0
Cariboo	5.1	5.2
East Kootenays	5.1	2.6
New Caledonia	3.8	4.9
North Island	3.8	4.3
Fraser Valley	3.8	5.1
Northwest	2.6	2.9
Capilano	2.6	6.0
Kwantlin	0.0	14.6
Douglas	0.0	11.6
Vancouver	0.0	15.0
	100.0%	100.0%

TABLE 9: EXPECTED SATISFACTION, MOTIVATION, AND TIME DEVOTED TO THE COURSE

	Off-Campus (N=77)	On-Campus (N=48)
Expected satisfaction (likert)	3.92	3.75
Expected motivation (likert)	4.00	3.66
Time devoted to this course:		
1 - 2 hrs/wk	1.3	10.4
3 - 4 hrs/wk	31.2	60.4
5 - 6 hrs/wk	37.7	20.8
7 - 8 hrs/wk	13.0	4.2
over 8 hrs/wk	16.9	4.2

APPENDIX U

WHAT DID YOU LIKE MOST (AND LEAST) ABOUT THIS COURSE?

RESPONSES TO THE QUESTION: WHAT DID YOU LIKE MOST ABOUT CHILD CARE 200A?

CATEGORY	#	%	BREAKDOWN
Content	43	45.7%	10 content in general 8 relevant/useful/new 6 availability and opportunity 5 relates to work 5 Adlerian material 3 relates to family 3 Behavior Modification material 2 breadth of information 1 Systems material
Print	19	20.2%	9 Study Guide 7 Changing Childrens' Behavior 2 print in general 1 extra readings
Class Meetings	11	11.7%	6 contact with other students 3 class meetings in general 2 discussions in class meetings
Regional Leader	8	8.5%	2 Regional Leader in general 2 information from Regional Leader 1 organizational skills 1 motivator 1 administration 1 understanding/personal
Format	4	4.3%	4 format in general
Pacing	3	3.2%	2 class meeting schedule 1 work at own pace
Study Groups	3	3.2%	3 study groups in general
Personal	3	3.2%	3 gaining more personal confidence 1 broadened outlook on life
TOTAL	94	100.0%	

RESPONSES TO THE QUESTION: WHAT DID YOU LIKE LEAST ABOUT CHILD CARE 200A?

CATEGORY	#	%	BREAKDOWN
Teleconf.	30	34.1%	11 time consumed 8 quality of transmissions 6 medium inappropiate to content 4 teleconferencing in general 1 students talking, not listening
Texts	17	19.3%	14 Troubled Children Troubled Systems, by Apter (text) 3 texts in general
Pacing	15	17.0%	10 content to time ratio: too much, too fast 4 class meeting schedule 1 one week between last class and final exam
Format	11	12.5%	4 no contact with others (Independant Learners) 3 no instructor or instruction time (2 from Regional Leader group) 2 wrong style of teaching 1 lack of course expectations 1 disorganization
Feedback	5	5.7%	4 lack of feedback 1 legibility of comments
Exams	5	5.7%	2 ambiguous questions 2 weighting 1 exams in general
Content	3	3.4%	2 Eco-systems material 1 study of record keeping
Class Meetings	2	2.3%	1 prefer lecture 1 poor use of time
TOTAL	88	100.0%	

RESPONSES TO THE QUESTION: WHAT DID YOU LIKE MOST ABOUT CHILD CARE 200B?

CATEGORY	#	%	BREAKDOWN
Content	26	44.8%	6 content in general 6 crisis intervention/ play therapy 4 breadth of information/ new perspectives 2 relates to work 2 relevant and useful information 2 debate 2 child care as a profession, discussion 2 research/interview
Class Meetings	11	19.0%	6 contact with others 2 class meetings in general 2 discussions 1 informality
Print	9	15.5%	5 texts 3 Children in Crisis 1 Study Guide
Regional Leaders	3	5.2%	3 Regional Leaders
Pacing	2	3.5%	1 meeting schedules 1 working at own pace
Study Groups	2	3.5%	1 informality 1 support
Personal	2	3.5%	1 more confidence 1 broadened outlook on life
Teleconf.	1	1.7%	1 teleconference in general
Content Specialist	1	1.7%	1 access to Content Specialist
TOTAL	58	100.0%	

RESPONSES TO THE QUESTION: WHAT DID YOU LIKE LEAST ABOUT CHILD CARE 200B?

CATEGORY	#	%	BREAKDOWN
Format	17	32.7%	3 no instructor or instruction time 3 lack of expectations and direction 3 missing a teleconference 3 wrong style of teaching 2 no teacher/just Reg. Leader 1 need more contact with Content Specialist 1 format in general 1 no contact with others (Independant Learners)
Pacing	8	15.4%	7 content to time ratio/ too much, too fast 1 class meeting schedule
Content	8	15.4%	3 assignment #2, debate 2 politics and history 1 content in general 1 first section 1 lack of relevance of content
Teleconf.	6	11.5%	4 quality of transmissions 2 time consumed
Exams	6	11.5%	6 grading
Evaluation	4	7.7%	4 questionnaires and "stats"
Class Meeting	3	5.8%	2 poor use of time 1 prefer lecture
TOTAL	52	100.0%	

CHAPTER IV

SUMMARY OF THE EVALUATION PROJECT

In 1980 a Joint Committee of evaluation organizations generated a set of standards "to be used to guide the conduct of evaluation of educational programs, projects, and materials and also to judge the soundness of such evaluations" (p. 395, Stufflebeam and Madaus, 1983). These standards addressed four main issues: utility, propriety, feasibility, and accuracy, and had as an overall objective the generation of better quality evaluations. In terms of my experience with the present evaluation I would agree with Patton, 1978, and others (Weiss, 1972; Rothman, 1980) who state that regardless of evaluation model or paradigmic foundation, the underlying indicator of quality or success in evaluation is utilization.

Whereas historically some researchers have assumed that the presence of information itself would affect policy decisions, this assumption, in the words of Cohen (1977) "...now seems over simplified and probably inaccurate." Current perspectives on evaluation challenges evaluators to be aware of the utilization issue and methods of enhancing utilization.

The literature describes several factors inhibiting evaluation utilization including such basic issues as the

decision-makers view of evaluation and research, (Cohen, 1977; Leviton & Hughes, 1981; Posavac & Carey, 1980; Davis, 1973) the evaluator's role in the organization, (Cohen, 1977), their personal integrity, (Guba, 1975), and their abilities as reflected in the final product. (Weiss, 1972; Cox, 1977; Weeks, 1978).

Methods have been suggested for the prevention of non-utilization. Patton (1978) suggests that evaluators identify information users and work closely with them to increase utilization through improved communication and increased decision-maker ownership of the evaluation. This approach is supported by Shera (1982) who suggests that one of the fundamental pre-requisites of effective evaluation consultation is to be consultee focused.

In Chapter I, the five reasons given by Griffiths (1979) for educators' skepticism and non-utilization of evaluation research were presented. Contained within these five reasons and echoed by the authors mentioned above are three basic issues which affect utilization:

1) Ownership of the Evaluation: who is asking the questions, who owns the information, for what purposes and to whose benefit, (or detriment)?

2) Involvement in the Evaluation Process: are the information users involved in identifying information needs, developing design and methods,

and creating the data collection instruments, as well as maintaining involvement during the process of data collection?

3) The Quality of the Evaluation: were the right questions asked, were the methods appropriate, and was the final product of good quality? In other words, did the evaluation produce what was needed and what it said it would produce?

Chapter IV examines these three key issues within the context of what the author learned by doing the present evaluation. Further the chapter provides a fourth section, a brief description of how and to what extent the evaluation was utilized.

Ownership of the Evaluation

Insuring that the ownership of the evaluation rests with the information users is the most basic action to enhance utilization. In the present evaluation the issue of ownership had been effectively resolved. The reasons for the evaluation, and the ownership of the evaluation by the information users had been established by the Course Team leader and evaluation consultants with the evaluation being conceptualized as concurrent and in tandem with the Child Care 200 course. Although impetus to evaluate originated

with the Division of University Extension much latitude was afforded the Course Team. The Team was prompted by the evaluation consultants to conceptualize the evaluation within the framework of their information needs with regard to program management and issues concerning course improvement.

The Course Team's ownership of the evaluation operations was exemplified by the relationship between the evaluator and the Course Team. The Course Team comprised the Team Leader, the Course Consultant, the Content Specialist, the Distance Education Consultant, and, the evaluators. The Team leader was the team manager and largely responsible for the embedding of the evaluation function in the Course Team structure. This six member Team performed four course related functions: development, delivery, evaluation, and management. Although each team member had responsiblity in their area of expertise, all critical issues were addressed by the team as a whole including the design and implementation of the evaluation. This ongoing structured contact served to maintain Team Members' view that the evaluation function was a valid and integral part of the project thus furthering their ownership of the evaluation process.

While enthusiasm for the evaluation varied between members, close involvement and support of the Team resulted in the embedding of the evaluation in the course itself.

This inclusion of the evaluation function as experienced by the student was exemplified by three actions:

1) the allocating of time at the two day workshop held in Vancouver for the training of Regional Leaders in the evaluation purpose and procedures.
2) the inclusion in the study guides of the evaluator's photograph along with the other members of the Course Team; and,
3) the presentation of evaluation activities in the guide as being course related.

From the beginning, these three actions created in the minds of the students the impression that the evaluation was an important and credible part of the course.

Involvement in the Evaluation Process

It is accepted that for utilization to be maximized information users must be familiar and comfortable with the methods used (Patton, 1978). If this occurs, the possibility of blockages or resistance appearing during the evaluation (in the event that some aspect of the data collection was inconvenient or even offensive) is reduced insuring continued ownership. Although involved in the course development the evaluator could have been considered an "outside" evaluator (not being primarily concerned with

the course development) giving rise to the opportunity for the evaluation process to be defined as the responsibility of the evaluator. If this had occurred the Course Team's involvement would have been minimal, probably restricted to receiving the final report. However, this was not the desire of either the evaluator or the Course Team as the project had been conceptualized as having the course and the evaluation intertwined. To this end the Course Team was continually involved in development, evolution, and, implementation of the evaluation process, including; i) identifying information needs, ii) developing the design and methods, iii) creating the data collection instruments, iv) monitoring data collection, v) interpreting the data, and, vi) minimally involved in creating the final report.

Identifying Information Needs

The process by which the Course Team identified their information needs and by which these were expanded into the final set of evaluation questions was cyclical and somewhat time consuming. The Team discussed informally what they wanted to know; the evaluator then formulated the evaluation questions and returned them to the Course Team. Further discussions would yield further clarity and revised questions. This continued until the questions contained the right balance between what they wanted to know, and what could be answered within monetary, time, and ethical constraints. Identifying information needs did not end with

the establishing of the evaluation questions. It continued throughout the process as the Course Team continued defining and describing what they wanted to know in response to unexpected situations such as reduced enrollment and poor teleconference transmission quality.

Developing the Design and Methods

To satisfy the Course Team's information needs, the proposed design required that some students be denied access to what was commonly considered a beneficial technology (the tutor or Regional Leader). This was not unanimously accepted, and although the Course Team leader supported the design, two members of the team felt that for ethical reasons all students should receive all technologies. Because of this split more information was requested concerning the role of the tutor. As a result of the evaluator reviewing the literature it became apparent that the tutor could not be described as integral or necessary to the students' learning. In view of this and the fact that no student would be deprived the Regional Leader for the whole course (as the design reversed treatment conditions at the midpoint of the course) the design was subsequently unanimously agreed upon. Once the design was established, developing the methods (subject selection, procedures, etc.) was a relatively straight forward task.

Creating the Data Collection Instruments

Instruments, as in the case of the evaluation questions, were reviewed by the Course Team, insuring that the information gathered would be taken as evidence for the particular evaluation questions. As an example: would the number of hours spent on homework provide evidence to the Course Team of the degree of motivation possessed by the students?

While checking the items for relevance, wording was examined for clarity and absence of ambiguity. Once the items had been approved, the next step was to group them in a logical sequence and structure the questionnaire in a format compatible with the fact that they would be self-administered under the supervision of a group leader.

Monitoring Data Collection

Although the monitoring of data was primarily the responsibility of the evaluator, the Course Team was of assistance. When in contact with Regional Leaders or students, Team members would remind them of the evaluation's importance and the necessity of returning completed data promptly.

When data was not returned, the Team Leader was helpful in contacting the particular Regional Leader to see if there were any problems. The fact that Course Team members were involved in data collection aided in the process and promoted a better response rate.

Interpreting the Data

The Course Team's involvement in data interpretation included informal discussions on what they wanted to know and what they were able to know from the incoming data. These discussions helped in contextualizing the data within the original evaluation questions consequently having an impact on the fit between their information needs and the information produced.

Creating the Final Report

The Team's interpretation of the data led to the structuring of the final report through their identification of aspects and issues contained in the data that they wished discussed. The Team also reviewed the interim report and offered suggestions regarding content and readability.

The involvement of the Course Team from the planning stage through the evaluation process and into the final stages of data analysis had a positive effect on the quality of the evaluation. Their backgrounds, education, and personal investment in the course and consequently the evaluation, contributed to a cooperative/integrated process yielding information that while usable in management terms also spoke to the larger issues identified in the literature.

The Quality of the Evaluation

When examining the quality of the evaluation, one needs to consider three questions: 1) Were the right evaluation questions asked? 2) Were the methods, including design, subject selection, data collection instruments, and procedures appropriate? and, 3) Was the final project report of good quality?

Did the Evaluation ask the Right Questions?

Chapter III examined and reported on student demographics, dropouts, the role and effect of tutors, and teleconferencing. The six evaluation questions used were, as described earlier, the product of a process involving the whole of the Course Team and formed the operationalized basis of the evaluation. They were "right" in that the team created them and could live with them and the methods designed to answer them. However at this point its legitimate to examine whether answering these questions 1) satisfied the Evaluation Objectives, and, 2) how they related to the Program Goals.

Evaluation Objectives. The evaluation questions were designed to achieve two underlying evaluation objectives:

1) to provide management information on methods of reducing costs, increasing course availability, and, improving course content, technologies, and delivery

strategies;

2) the generation of knowledge for a wider audience.

Providing Management Information.

Costs. Course delivery costs were of great interest to the Team. They believed that there was a need and demand for this course, not only within British Columbia but outside the province as well. The Course Team wanted to meet this demand knowing that to do so costs would need to be kept low.

The cost issue did not appear as a monitored evaluation project question because the team had previously calculated and compared the relative costs of using Regional Leaders against those costs of not using Regional Leaders. The calculation indicated that it was cheaper to teach this course without Regional Leaders. As no reduction in the quality of educational experience would be acceptable and no trade-offs of cost and quality considered, a detailed analysis was not deemed necessary, not requested, nor were the necessary accounting mechanisms set in place. All the team needed to know was whether the quality of the non-Regional Leader course was equal to the Regional Leader course. As a result, they directed the evaluation towards indicators that would monitor course quality. These indicators were embodied in the evaluation questions addressing the effect of the tutor, specifically: the

dropout rate, student satisfaction, motivation, content utilization, and, content mastery. The Course Team decided that if the Regional Leader and non-Regional Leader groups achieved comparable performance levels on these indicators this would mean that the course could successfully be offered without Regional Leaders. This would save money and increase availability via reduced reliance on Regional Leaders who were not always where you wanted them when you needed them.

As it was, a benefit cost analysis might have been useful as a situation occurred where some trade-offs did become relevant, ie: how much is it worth to have high completion rates and more satisfied students? A benefit cost analysis would also have been useful in supplying information for future budgetary considerations. Such an analysis would be financially oriented calculating and comparing net benefits as well as producing budget sheets. This would be done by contrasting the costs of offering the course with a Regional Leader against revenues received via tuition and print package purchases. This would yield a dollar value of the net benefit. (Operating costs would be considered, while development costs would not. The reason for this is that the development costs incurred in year one of the course produces a course with a shelf life of five years with only minor alterations in each subsequent year. Further, the development costs of on-campus courses are not

calculated consequently offering no direct comparison).

This net benefit would be compared to that achieved following an identical formula for the non-Regional Leader course model. However, it would be crucial to consider the higher noncompletion rate of the non-Regional Leader course and the impact that this might have on reduced revenues via non-payment of fees or requests for refunds upon dropping out.

It is interesting to note that if all other factors were held constant, this reduced revenue (assuming that this occurred) could infer a dollar cost of the impact of not having a Regional Leader. The critical question would then be, does the lost revenue outweigh the reduced cost of offering the course?

A more extensive benefit cost analysis might include shadow pricing of time spent on the course, the dollar benefit to the student as a result of greater employment opportunities and earning power, as well as the cost of dropping out in terms of lost confidence (shadow pricing), and reduced earnings etc.

A critical issue which must be considered in any cost benefit analysis or the creation of a projected budget concerns the number of students one expects to enroll in future courses. The current number of students is not necessarily predictive of future enrollment. It can be argued, that as this course reached areas and people who had

no prior access to this type of course, more people would sign up for this course offering than to subsequent course offerings. As the issue of economies to scale may arise if course enrollment drops, a sensitivity analysis offering a range of expected enrollments and the attending budgets could be produced.

Availability. The issue of lower cost is not simply one of dollars saved by the university as dollars saved translate into reduced entry costs to students and consequently increased course availability. Further, as pointed out earlier, reduced reliance on the Regional Leader (whose absence is the source of the dollars saved) would allow the course to be offered to groups otherwise too small to financially support the use of a Regional Leader and in areas where qualified tutors may not be readily available.

Improving the course. This was a key concern of the Course Team reflected by their asking student's opinion on content, teleconferencing, the print package, the Content Specialist, Regional Leaders, and, how the course was offered. As will be discussed in the third section of this chapter this objective was met; information was received which served as a basis for decisions on course modification. While happy with course content students expressed dissatisfaction with one textbook and of course teleconferencing. These technologies (the print package and

teleconferencing) were altered, manifested by a change in texts and the abandonment of the teleconference medium in the 1985 offering of Child Care 200A (Jan.-Apr.). The Regional Leader and Content Specialist roles were combined into three tutor positions in Victoria who contacted individual students by phone every two weeks. Students met twice each semester with other students in their area and a Regional Facilitator responsible for running the meeting only.

Generating Knowledge

Generating knowledge for a wider audience challenged the evaluator to enhance the utility of this study by defining variables clearly and describing procedures in a manner allowing replication. This was done in response to comments by Coldeway (1982) on the lack of such action in current distance education research. Within the general need for the development of a body of research knowledge in the area of distance education specific areas have been identified as needing examination. These areas were included in the evaluation, primarily tutors, teleconferencing, demographics, and dropouts. Although information needs as identified by the literature were addressed, one must remember that the generation of knowledge was a secondary objective following the production of information required for the management process.

The issue of Regional Leaders versus non-Regional

Leaders had implications in the continuing debate over tutors. Appendix E reports on tutors indicating that it was widely believed that they were a necessary part of the learning experience. However, it was also noted that this view was not universally held and that no clear data supported either side. It was the intention of the present study to call into question the necessity of the tutor by virtue of the examination of Regional Leaders. It has been demonstrated that regardless of the presence or absence of the Regional Leader course content was mastered at comparable levels, as well, comparable levels of motivation and course material utilization were reported. Although non-Regional Leader groups had higher noncompletion rates and the students were on average less satisfied, it is suggested that this might be improved upon by helping students increase their skills in group meeting facilitation, problem solving, and, use of local and university resources.

Although not offering conclusive proof, the present evaluation study offers enough evidence to warrant further questioning and examination of the role of the tutor. Specifically, what characteristic of the tutor affects satisfaction and dropout rates, and, could this effect be duplicated or compensated for by other students or staff?

Also needed is inquiry into the possibility that while some course materials are suited to being taught with no

tutor, other course materials are not. This would free some educators from the belief that tutors are always necessary while cautioning others against totally abandoning their use.

The present study demonstrated comparable content mastery across a wide variety of treatment conditions ranging from students in groups with Regional Leaders to Individual Learners. This suggests that the print package, common to all treatment conditions, formed the basis of content delivery. This supports previous findings (reviewed in Appendix C of the project report) which indicated that print is the basis of virtually all distance education activities (Keegan, 1983; Subramanian, 1971; Misanchuck, 1982). This re-affirmation of the primacy of print should cause distance educators to challenge their commitment to technologies such as tutors, telecommunications, and other non-print enhancements of course delivery.

Student demographics and student dropouts are two other areas where what we found concurred with what was expected. There was in fact a high dropout rate, and students did drop out for the reasons expected (family obligations etc.). Our students looked very much like others' students in terms of age, education, family, employment, etc.

The surprise of the study was of course teleconferencing. The literature did not suggest that it could so easily become an interference in the learning

experience.

Problems occurred in two areas. The first concerned the bridge, the piece of equipment which connected the calls. The bridge used at the outset of the course was a Rockwell International Wes-Hub 15, a prototype which offered ten telephone lines and automatic operation. This meant that students could call in and be automatically connected to the teleconference without operator assistance. However learning centres had difficulty in getting on the bridge and staying on, often finding themselves disconnected; also, audibility was hampered by "clipping". Clipping occurred when the equipment, which was voice activated, clipped the end of words by switching off too quickly. This switching action was required to keep the lines open and ready for whoever wished to speak next. The effect was similar to a two-way radio with one speaker finishing before the next can start. (Some students sarcastically started saying "over" after they had finished speaking).

To duplicate continued contact similar to that of a regular telephone call, where sound is transmitted in both directions simultaneously, four wire lines are required using designated receiving speakerphones. While improved quality is afforded, accessability to temporary and rural sites is reduced. Consequently both the Rockwell bridge and the Western Broadcasting bridge (used later in the course) attempt to duplicate the four wire technology using the

readily available two wire lines.

The clipping problem originated with the sensitivity of the switching device which switched off if the voice dropped below a certain volume. While still intelligible the effect was very distracting. These problems were solved later as adjustments were made to the bridge. However, by this time, the course had switched to using the Western Broadcasting bridge in Vancouver. This change of equipment was partially due to the clipping but also due to the second problem, that being poor telephone line quality experienced between Victoria and Vancouver.

The British Columbia Telephone Company lines, specifically on and off Vancouver Island offered problems in quality of voice transmission. This problem was solved by switching to the Vancouver bridge which while basically the same as the Victoria bridge required only one line across the water to connect the Content Specialist whereas the Victoria bridge required seven to connect the learning centres throughout B.C. If the Content Specialist was connected on a bad line across the Strait of Georgia he would be disconnected and reconnected on a better line. The shift from the Victoria equipment to the Vancouver equipment did improve the teleconference transmission quality. However by this time much damage had been done in terms of student opinion and satisfaction with the medium.

Although the reasons for our problems lay in the

technical end, while the literature appears more concerned with the non-technical dimension, one would have expected a discussion of the technical problems associated with teleconferencing. These types of difficulties clearly and severly impeded student use of the medium, and that this effect could be generalized to the rest of the course by way of reduced satisfaction. The present study offers a caution to others in their delivery of courses to distant learners to insure good quality transmission prior to course commencement, and to develop contingency plans if the system fails during use. Nothing in the present study suggests that the teleconferencing medium be taken for granted.

Program Goals. The six evaluation questions were designed to meet the evaluation objectives. They were not designed nor directed to address the issue of whether the underlying program goals had been achieved. The distance education Child Care 200 project had two goals:

- to deliver Child Care 200 off-campus at a level of quality equal to, or surpassing the previous off-campus offering (using Regional Leaders instead of sending out University personnel); and the concurrent on-campus version;
- to deliver this course at a lower cost than previous offerings.

The team consciously avoided addressing the first goal

since there was no doubt in their minds that this course would be better than previous off-campus offerings of Child Care 200 and to compare it to the on-campus course in other than course performance was not useful as they knew they were dealing with a different student population. They did not need evaluation data to know whether or not they had produced a quality course comparable to the previous off-campus or current on-campus versions. Their experience with this and other courses gave them a standard by which they were able to judge. Confidence was added by the knowledge that the technologies used were accepted in the literature and in practice as being effective and efficient in the instruction of adults at a distance. As corroborating evidence, student enrollment, grades, and comments reflecting satisfaction with the course confirmed that the first program goal had been achieved.

The second goal, which concerned the issue of cost, was addressed in the design of the Course. Fiscal restraints were making the previous model of sending university personnel to rural communities less and less tenable. Quick calculation makes it obvious that the cost of reaching seven learning centres under the old model with hotel accommodation, air transportation, and the time of the professor (cost and opportunity lost) would be far greater than the cost of the distance education course. Consequently Child Care 200 was reformated into the distance

education mode using a print base, teleconferencing, Content Specialist, and Regional Leaders. (Although the reformatting proved to be costly, involving the production of two study guides, the course had a shelf life of five years making it cost effective in the long term). As a result of knowing the cost differences in advance it was deemed unnecessary to examine this issue in detail.

The question of whether the Course Team could truly "know" something without these program goals being included in the evaluation must be considered understanding that meeting both goals was virtually guaranteed by virtue of prior knowledge and planning. The Course Team embarked on this project having carefully considered how best to achieve these goals. As they were confident of the goals being achieved they directed the evaluation resources to issues that required more formal methods and whose outcomes were less predictable. In fact, as indication of their confidence, the Course Team never did review, in a formal manner, whether or not the program goals were achieved.

Were the Design and Methods Appropriate?

From the Team's point of view the methods were appropriate being ones they helped develop and could live with professionally and ethically. However, there are other criteria to determine appropriateness of methods: i) the degree of rigor presented by the methods and the impact that this has on generalizability and confidence in the results,

and, ii) the degree of flexibility demonstrated by the evaluation to continue to pursue the answers to the questions in a changing environment.

The Rigor of Methods Used

The challenge in evaluation is to produce the most valid and reliable information possible under existing conditions in order that management can make informed decisions (remembering that they will make decisions whether or not they are informed). With this in mind it is helpful to challenge the methodology of this evaluation by considering the possibility of threats to the validity of the conclusions. In examining this question it is necessary to consider issues of internal and external validity, asking, can we be sure that the treatments were responsible for the effects noted?

Campbell and Stanley (1966) described eight threats to internal validity. Due to the nature of this evaluation, however, some of the factors described are of negligible importance. In this study concerns regarding maturation, testing, statistical regression, and selection-maturation interaction could have little effect on results. A discussion of the remaining factors follows.

History. It is unlikely (although possible) that an occurance during the study would be of sufficient magnitude to impact on the testing results. If it did happen it would

most likely involve only a few people (illness) or perhaps one Learning Centre (unusually bad winter driving weather). It is extremely unlikely that an occurance would have an impact on the majority of students in one treatment condition (two or three learning centres) but not to the other two. If an event occurred province wide (or course wide) the use of the control group would accommodate it, allowing it's effect to be partitioned out of the results.

Instrumentation. Although there were no changes made in the questionnaires or method of administration during the evaluation it is difficult to rule out concerns in this area. As the questionnaires were self-administered some variation could have occurred as a result of shifts in student attitude towards the data collection instruments. These shifts could have been in response to differing or irregular modes of administration. In this manner, although the measurement has not changed, the environment of the administration has. This appears to be a problem in any evaluation where data is collected at a distance, outside the control of the evaluator. Guidelines and checks can be established (ie: scheduling, training, and monitoring data return) but ultimately there are no guarantees.

Related to the problem of irregular administration of data collection instruments is the problem of the number of instruments and amount of time devoted to them. As described earlier, the evaluation function was embedded in

the organization and presentation of the course. Therefore concern with the impact of the evaluation on the organization was less than on the learning experience of the students; particularly the time taken from learning activities to complete the questionnaires.

When the instruments were designed it was felt that because of the nature of the evaluation and the activity being evaluated, it would be advisable to use multiple measures. In this manner, confidence in the final results would be enhanced through concurring evidence. The obvious drawback was the increase in data collection instruments and the impact this could have on the students. Over the two semester course, students were asked to complete: one student profile (4 pages); a satisfaction and motivation questionnaire (1 page) eight times: a Who-Did-What checklist (2 pages) twice; feedback questionnaire (4 pages) twice; and a comparative questionnaire (1 page) at the end of the course.

The time to be devoted to questionnaire completion in each class meeting was of prime concern to the Regional Leaders. Unfortunately an inaccurate estimation was given as a group of people require far more time to complete a questionnaire than does one person, (particularly if that person designed the questionnaire). Consequently where 5-10 minutes were estimated, 10-20 minutes were required. Two Regional Leaders reported that at the last meeting of

each semester their learning centres devoted approximately 40 minutes to the completion of questionnaires.

If this were perceived as an imposition, one wonders why things went so well with dissenting comments being few and far between (approximately 5). This low number was probably the result of the great care that the Regional Leaders took to present the evaluation as a valuable and useful aspect of the course. If careful attention had not been taken to gain their support data collection would have been more difficult with poor quality data the result.

Three aspects of data collection were targeted as critical to the success of the evaluation and data collection:

- the ease of questionnaire completion,
- the training of the Regional Leaders in questionnaire administration, and,
- the packaging of evaluation materials for the use of the Regional Leaders.

As stated earlier the questionnaires were developed in cooperation with the Course Team with the focus of the activity the removal or revision of ambiguous instructions or questionnaire items. Although the process did not catch them all, most of the items retained were simple, unambiguous, and to the point. At the time of questionnaire development it was not known that they would be used by Independant Learners in not only a self-administered format

but without any supervision. Had the questionnaires not been clear and self-explanatory, this group of students could not have participated.

As described in Chapter II, the Regional Leaders attended a training workshop at which time the evaluation was discussed. Beyond the training aspect, the workshop gave opportunity to discuss the Regional Leaders' concerns, ie: the purpose of the evaluation, what would we get, what would they get and/or have to give up, and why would some students have no Regional Leaders, etc. Answering their questions and allaying their concerns was perhaps the most important function of the workshop. It was through this activity that they took ownership, at the front line, of the evaluation virtually guaranteeing success with data collection.

Data collection was also made easy by the packaging of instruments in logical sequence with instructions and access to the evaluator if confusion occurred. Not only was this approach successful in terms of a good rate of data return, but Regional Leaders commented several times on the ease of use, keeping to a minimum the annoyance or interference of the evaluation.

Selection. Students self-selected into the study by virtue of their enrollment in the course and into the particular learning centres as a result of their geographical location. Learning centres could not be fully

randomly assigned due to the difficulty in recruiting Regional Leaders. Without this randomness there was no guarantee that the treatment groups were comparable. In an attempt to remedy this situation groups were tested for homogeneity using what was believed to be critical variables. However, it can be argued that while homogeneity was partially established, the exercise of testing for homogeneity actually tested the evaluator's ability to select variables for the test rather than homogeneity itself. Although there is no easy solution to this problem, if pretesting is to be done, the variables selected should be those directly related to outcome variables. As age, distance from the learning centre, and education levels were not outcome variables in the present study, they served little benefit as indicators of homogeneity. The issue is not whether the subjects were a look-a-like group of people of the same age, education level, etc. but rather were they homogeneous on dimension where outcome differences may occur as a result of treatment manipulation and/or were they homogeneous on dimensions which would affect outcomes.

To confirm that the three non-homogeneous variables, age, distance from the learning centre, and education level, had no impact on the outcome variables they were recently examined to determine whether or not there was a relationship between them and outcome satisfaction, motivation, content mastery, utilization, and dropouts. The

data used came from students who completed Child Care 200A in Regional Leader groups (to exclude confounding effects such as not having a Regional Leader, or the switching of treatment conditions at midpoint) and subjected to correlation and T-test analysis using 2-tailed tests with .05 as the cut off point for determining significance.

When age was correlated with the outcome variables, no significant relationships were noted (see Table 1).

TABLE 1: THE RELATIONSHIP BETWEEN AGE AND FIVE OUTCOME VARIABLES

	r	n	p
Age/Satisfaction	-.243	37	.148
Age/Motivation	-.047	39	.777
Age/Content Mastery	-.178	35	.306
	T	**df**	**p**
Age/Utilization	.48	35	.635
Age/Dropout	.09	40	.932

In comparing students on the dimension of the distance they lived from the learning centre no significance was found on any of the outcome variables except content mastery. A weak correlation was found indicating that students' mastery of content improved the further they lived

from the learning centre (see Table 2). This finding, which is contrary to what one might expect, may in fact be an artifact of the small number of subjects involved. An alternate hypothesis is that a similar phenomenon may be in operation here as was suggested explaining why the NRL/RL group dropped in content mastery after receiving a Regional Leader. That being the increased reliance on others for the learning process with reduced mastery of content the outcome. This correlation might suggest that students closer to the learning centre relied on others more and consequently mastered the material less well than their more distant but self-reliant colleagues.

TABLE 2: THE RELATIONSHIP BETWEEN DISTANCE AND FIVE OUTCOME VARIABLES

	r	n	p
Distance/Satisfaction	-.108	37	.526
Distance/Motivation	-.001	38	.993
Distance/Content Mast.	.380	34	.026
	T	**df**	**p**
Distance/Utilization	.91	34	.372
Distance/Dropout	.39	39	.698

An examination of the relationship between the students' experience with higher education and the five outcome variables again indicated there was no significant relationship except between education and content mastery (see Table 3). There is a positive correlation indicating that the more experience with higher education that the student had, the greater the student's mastery of the course content.

TABLE 3: THE RELATIONSHIP BETWEEN EXPERIENCE IN HIGHER EDUCATION AND FIVE OUTCOME VARIABLES

	r	n	p
Education/Satisfaction	-.049	20	.836
Education/Motivation	-.151	21	.515
Education/Content Mast.	.550	20	.011
	T	df	p
Education/Utilization	(no available data)		
Education/Dropout	-1.38	22	.183

In terms of testing the non-homogeneous variables of age, distance from the learning centre, and education, it is demonstrated that on all outcome variables, except content mastery, no relationship and consequently no effect exists. As no differences occured between treatment groups on the

dimension of content mastery, the correlations found here between content mastery and distance from the learning centre and education, although interesting, have no impact on the evaluation study's findings. In view of previous arguments and this analysis it can be stated with confidence that any differences found between treatment groups on outcome variables must be attributed to variables other than the three non-homogeneous variables of age, distance from class meeting, and education.

Mortality. During the nine month duration of the evaluation mortality was high, both from students dropping out, and from students not registering for the second half of the course (Child Care 200B). Referring to the discussion on dropouts and nonreregistered students contained in the project report, just over one half of those polled cited non-course related reasons for quiting. As it is expected that all groups are equally subjected to "non-course" influences, the mortality rate (and the effect thereof) would be similar across treatment groups.

Fifteen students, however, left the course for course-related reasons, and evidence suggests that the majority of these reasons related to the treatment condition where there was no Regional Leader. As mortality would therefore be higher in one group than the other, a bias could occur. As a modifying argument it should be noted that the rate for dropouts and nonreregistered students

citing non-course related reasons (these students would be expected to drop out regardless of treatment condition) is below the 30-60% cited by Shale (1982). One wonders if many of those citing course related reasons did so out of convenience. If this was the case, the mortality of a type which would cause biases is somewhat reduced.

However, the fact remains that groups without Regional Leaders had higher noncompletion rates and consequently were open to biases resulting from differing mortality rates. The question remains: did the higher mortality rates for some groups translate into biases in the subsequent outcomes? Certainly the group left behind after the dissatisfied students were gone could be expected to produce a higher mean in terms of satisfaction, but the magnitude of this increase, as well as the impact that this may have had on other variables remains unknown.

We are left therefore with the obligation of having to be cautious about the results. As stated in the project report, we must base our confidence on the magnitude of the results (unexplainable through the effect of mortality), concurrence with expectations, and, corroborative evidence found elsewhere in the evaluation.

Generalizability. Campbell and Stanley (1966) also describe four factors which present threats to the ability to generalize the result of a study to populations beyond those involved. The key issue concerns the degree of

representativeness of the study's subjects of the larger population. If they are not representative (through the existance of one or more of these factors) then generalization of a study's results to other populations will be hazardous. The four factors are:

1) Reactive or interactive effect of testing; the effect of retesting of subjects thus making them nonrepresentative due to the fact of rehearsal or desensitization. This has little if any relevance to the present study due to the fact that the questionnaires were not of a nature where familiarity would have an effect on instrument completion.

2) Interaction of selection biases and experimental variables. As discussed earlier the selection process did not permit random selection or assignment, consequently, even through no critical differences between groups appear evident it is impossible to entirely rule out the possibility that certain groups may have been nonrepresentative of the larger population. Common sense however suggests that the manner in which these students came to be in the course and evaluation, is representative of how future populations would become involved. Future students will self-select, probably in unequal numbers and form groups based on geographical distribution. While it should be expected that there will again be some differences between learning centres, it is probable that the total

student body of the future would be quite similar to the total group in the current course. Consequently generalization of the present study's findings to future students of Child Care 200 in British Columbia is relatively safe.

However, it has been considered by the Course Team to distribute this course to other populations in North America. While a few demographic differences may be expected, the focus of the course (the instruction of Child Care 200 at the university level) ensures some similarity between the populations. Further, other groups of students taking this course by distance education would most likely be similar to students in this study, in age, family obligations, educational levels, and other demographic dimensions again making generalizations relatively safe.

Beyond the control of the Course Team and beyond the limits of the course itself is generalizing this study's results to situations dissimilar to that examined in the present study. One must remember that the primary intention of the evaluation was to determine whether Regional Leaders were necessary as used in the present evaluation as evidenced by satisfaction, motivation, completion rates, course material utilization, and content mastery. It was the intention that the broader issue of the tutor role simply be called into question rather than conclusively determined.

3) Reactive effects of the experiment. Were the students who did not receive the Regional Leader, or who lost their Regional Leader in 200B sufficiently dissatisfied on the basis of not getting what "they thought they needed (or wanted)" thereby having a measureable impact on the results? In responding to this question it is important to consider what that effect might look like and mean to the present study had it occured.

One could speculate that if a group of students had a Regional Leader removed or simply knew that other groups had them and they didn't, their dissatisfaction might be greater than would be expected from the actual effect of not having a Regional Leader by itself. Their reported ratings on a broad spectrum of items would be depressed; lower satisfaction, lower motivation, lower levels of content mastery, etc. Evidence exists that non-Regional Leader groups did report lower scores on some, but not all, variables. If this lowering of scores was even partially due to a reactive effect, this would suggest that the real effect of not having a Regional Leader was less than reported. This would act as further support of the no-difference hypothesis.

4) Multiple treatment interferences. The educational experience of subsequent student groups is expected to be substantively the same as the evaluation group. Therefore treatment interferences with the results is not relevant.

Flexibility

The nature of the evaluation activity requires flexibility on the part of the evaluator, information user, and the evaluation design and methods. In the present evaluation this occurred: i) in responding to a change in the evaluation environment, and, ii) in dealing with errors and omissions that had been made during the planning stages.

A Changing Evaluation Environment. The ability to respond to a changing evaluation environment is exemplified in the present study by the modification of the evaluation design in response to the reduced number of students enrolled, and, the inclusion of an examination of teleconferencing.

The design used differed from the proposed evaluation design primarily because students did not enroll in the numbers or groupings that were expected. It is clear now, that interest as expressed in advance of the course by potential students, and even the official University registration lists, were poor predictors of distribution or actual enrollment. Unpredictable student enrollment did not pose a serious threat to the course itself (extra material could be sent out or returned as required) but it did create problems for the evaluation since it was necessary to design the evaluation and to hire and train the Regional Leaders well before the final number and distribution of students was known.

As a result, two learning centres which had been slated

to operate without a Regional Leader had to be dropped due to lack of students. It was possible to replace only one with the net loss acting, in conjunction with uneven student distribution between groups, to produce an imbalanced design. Responding to this imbalance it was decided to consider individual students as subjects instead of the learning centres as had been proposed. This action improved the balance slightly but more importantly by doing this variability between subjects had less impact on results. While this was less than ideal from a research perspective, it made sense in view of the mandate of the evaluation to produce usable information.

As teleconferencing was described in the literature as an effective teaching tool, and the University of Victoria's equipment was state of the art, it was decided that there was no justification for making teleconferencing a major area of inquiry. Support existed for this decision given that Extension was committed philosophically and financially to teleconferencing and was not asking for further information.

Consequently it was planned that teleconferencing would be addressed by only one questionnaire item. This changed in early October when it became obvious that teleconferencing was not working as planned becoming a major concern to the Course Team. The Team agreed to the sixth evaluation question and the Teleconference Transmission

Quality Questionnaire was developed and sent out.

Flexibility Regarding Errors and Omissions. Two data collection instruments, the Contact Sheet and the audiotaping of class meetings, proved to be inappropriate through errors in their design and lack of clarity as to how these instruments would be administered and subsequently analyzed.

The Contact Sheet which was intended to describe the interaction between the Regional Leader and student outside of the class meeting, was not used in the analysis due to improper and incomplete reporting. The problem rests with the length of time that the Contact Sheets had to be used requiring the Regional Leader to record each Regional Leader/student contact occurring over the duration of the course. Whereas one-shot measurements (as in the case of student questionnaires) and the one week Telephone Log (completed by the Regional Leaders) were completed well, the Contact Sheet was not. Apparently even the most diligent and conscientious of these paid Regional Leaders, over time, had lapses of memory - calls went unrecorded, gaps appeared. If the sheets had been submitted weekly or monthly, this situation might have been remedied. Alternately it would have been better to run the measurement for a one or two week period, similar to that of the Telephone Log.

The original purpose of the audiotape was to analyze the interaction between the Regional Leaders and students in

the class meeting along dimensions of administration, instruction, and support. Of particular interest was the effect of student pressure on the student leaders' performance (in non-Regional Leader groups), ie: do students cause student leaders to act like Regional Leaders even though this would be outside of the student leaders' role?

During preliminary analysis it became apparent that for several reasons the tapes did not yield usable data which would address this question. The most important reason was the inability to form a baseline of Regional Leader behavior due to the variance between the Regional Leaders themselves. As a function of personality and beliefs regarding their role in the education of students, there was no typical Regional Leader against which the student leaders could be compared.

Other problems occurred as well. While audiotaping offered a way of being transported to the class meeting facilitating a better understanding of what went on, (in the complete absence of funds for travel), it was not of a quality easily analyzed. The key problem was the incomplete recording of meetings. Class meetings, while varying somewhat between centres tended to share a common profile, that being socialization followed by a discussion of administrative issues, followed by instruction and again by administration, and finally interpersonal support. This of course was impacted on by varying academic requirements, and

the performance of the teleconference.

This profile had implications in the analysis of administration, instruction, and, support functions, in that there was a need for consistent and complete taping. However, often gaps occurred as a result of starting the tape late, forgetting to turn it over, or running out of tape. These gaps made the collection of a representative sample impossible.

There were also some difficulties with audibility - hearing the words over coffee percolators, cuckoo clocks, and/or tapping of pencils, coffee cups, and private conversations. Often sections of the tape were completely inaudible. It was also difficult to determine which speaker was in fact the Regional or student leader: without knowing this, analysis was impossible. Some solutions to this problem can be found in the field of distance education and the problems of teaching without the visual channel. They are:

- the use of photos of those talking,
- the pairing of voices to faces either by tape, or,
- having a meeting where all participants meet and become acquainted with each other, or have the evaluator travel to each site of data collection to meet the participants.

When it became obvious that tape analysis would not yield the desired information the Course Team leader was consulted

and a decision made to discontinue tape analysis.

Another error during the planning process occurred with the decision not to pretest the measurements. The items on each questionnaire had been reviewed by the Course Team, usually twice, and by the evaluator many times. The items appeared to draw information that was accurate and precise. Because of confidence in the items and the process of their creation and the limited time available between their readiness and a training workshop for Regional Leaders at which time the questionnaires were distributed, the decision not to pretest was made.

The notable instance where not pretesting was regrettable was when students were asked to "rate your satisfaction with the function and performance of the Regional Leader." Analysis indicated that two questions had been asked. Fortunately this question could be reported in a more general way retaining its usefulness.

An instance of when pretesting would not have affected the quality of the data, but rather the amount of work required in its analysis concerned the use of the optical scan computer and answer sheets. It was during the final data analysis that it was discovered that the optical scan equipment at the University was incapable of recording more than one response per question. Unfortunately this was contrary to information received during the designing of the questionnaire and consequently there were several questions

where more than one answer was expected.

Much time was required adjusting columns in the CMS file and entering data by hand reflecting changes in questions from, Which of the following do you choose? A, B, C, D. to four individual questions:

Do you choose A? yes/no

Do you choose B? yes/no

Do you choose C? yes/no

Do you choose D? yes/no.

Was the Final Project Report of Good Quality?

The project report is of critical importance in that it acts as a summary and synthesis for the information for the Course Team. For people less involved with the course ie: University Extension, other staff in the School of Child Care, and those interested in distance education, it is their only contact with the project and information produced. If the report does not present the information in an accessible manner, information gathered will be of very little utility. The value of the final report, while founded upon good planning and evaluation process, depends upon good quality data management, analysis, writing, and presentation format.

Data management. With only a few exceptions, the data packages arrived in Victoria promptly and contained the

correct completed questionnaires. When errors were made they usually involved student identification numbers. Consequently the first task upon receipt was to insure proper identification and to record the receipt of the particular data. By recording incoming data, late data were quickly spotted and contact with the Regional Leader was made to see if there were any problems. This contact was made only on a few occasions and served to stress the importance of returning the data promptly.

If the data were on computer answer sheets they were held until all learning centres had returned the data, the sheets then were organized into groups and fed into the computer. If the questionnaire was not on the computer sheet they were transferred by hand onto the computer answer sheets and then entered. All originals were kept until the end of the research project. The data were stored in CMS files and subjected to analysis using the Statistical Package for the Social Sciences (SPSSx).

Data Analysis. As a result of the inability of meeting many of the constraints necessary for the use of sophisticated statistical procedures, and the desire to keep the report understandable to the broadest audience possible, the data were analyzed and presented in the form of frequencies, percentages, means, and, standard deviations.

Writing the Report. Putting the data and what the data meant into a form accessible by the reader is as important

to utilization as are design and methodology. The project report as presented here (Chapter III), is the product of four complete or partial rewrites, which saw the report shrink in size from 150 pages to the present 50.

In doing these revisions a useful question to consider was what should the reader know and understand after reading the report? The object was then to tell the reader what the data meant within the context of the evaluation objectives and questions while giving sufficient data to allow the conclusions to be challenged. The first step was for the author to understand what the data were saying. The first draft, did not demonstrate this understanding; instead the data were reported in figures, tables, and, text, with no examination of the inherent implications. The result was a wordy, repetitive report that so well hid the meaning of the data that the chances of it being utilized was remote. Once the data were examined in terms of the evaluation's questions and what it was that the author wanted the reader to know, the challenge arose to put the data into an accessible form.

Presentation. Having produced a readable report containing useful information, the format for the report was then established. It was decided to use a comparable format to that of the course study guides: 8.5 by 11 in., bound using the same patterned grey cardboard covers. The presentation format reinforced the fact that the evaluation

was a part of the total course project.

Evidence of Utilization

As evidence of the success of the evaluation this section examines instances where the evaluation information fed directly into the management decision-making process manifesting in a changed Child Care 200 course and course delivery package.

The evaluation report was submitted to Extension and the Course Team in August of 1984. Comments regarding the report from members of the Course Team, University Extension, and the School of Child Care, were favourable with the report being partially responsible for the rebuilding of the subsequent offering of Child Care 200. Specifically, the evaluation was used to change areas of course content, delivery technologies, and course roles.

Content. The body of content information was again transmitted through the use of print with the study guides, core readings, and, texts forming the basis of the course. Minor changes were made to the package stemming from the new Course Team's own experiences and views of the material, and from student's comments. The format of the study guide changed somewhat being split into two separate books: one guide containing the course content which is used both on and off campus with the second containing information

specific to the use of the material off-campus ie: resource utilization, tutor roles etc.

Delivery Technologies. As a result of the evaluation the use of teleconferencing in the delivery of Child Care 200 was discontinued. The new Team believed that not enough benefit was gained from its use to warrant taking the chance of alienating the students. The teleconference was replaced with one-to-one phone calls from the tutor (now in Victoria) to the student at two week intervals. These calls were of a 10 to 20 minute duration with the Tutor asking a prearranged set of questions, and responding to student concerns.

University Extension is re-examining its position on the teleconferencing medium now having experienced, for the first time, using their equipment in conjunction with British Columbia Telephone Company's lines to rural communities.

Course Roles. The shifting of roles was based on learning that content mastery was not dependant on the presence of Regional Leaders, and that the Content Specialist role was underutilized and unnecessary. The original course had one Content Specialist in Victoria in contact with the students bi-weekly via telecoferencing, and Regional Leaders in their home ccmmunities running the bi-weekly class meeting. The subsequent course altered this mix. Instead of Regional Leaders in each community, Regional Facilitators ran the two class meetings. The

Content Specialist was replaced by three tutors, each responsible for contacting students every two weeks, and for marking their assignments and examinations. This model, while reducing costs kept the University at the centre of the course by having the tutor role positioned in Victoria. According to the new Course Team Leader, this model, with the increased contact between student and Victoria tutor, reduced number of class meetings, and reliance on the print package for content delivery, seems successful.

A final use of the evaluation, one which was not anticipated, is that of forming a bridge between two different Course Team Leaders associated with the two course offerings (the evaluated course, and the subsequent course offered January to April 1985). While supplying the Leader with newly acquired evaluation information, it also provided background information on distance education, course delivery strategies, and issues that the previous Team Leader felt were critical.

Through this utilization it is demonstrated that the evaluation met its objective of providing management information on methods of reducing costs, increasing course availability, and improving course content, technologies, and delivery strategies.

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THE EVALUATION OF DISTANCE EDUCATION TECHNOLOGIES

USED IN THE DELIVERY OF AN

INTRODUCTORY UNIVERSITY CREDIT COURSE IN CHILD CARE

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