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The Effects of a Social Support Intervention on Distance Learner Behaviour

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**Dissertation submitted to the School of Graduate Studies,
University of Ottawa in partial fulfilment
of the requirements for the Ph.D. degree
in Clinical Psychology**

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Abstract

The major purpose of this study was to evaluate the effect of an early intervention on distance learning outcomes, specifically learner behaviour associated with persistence and academic achievement, learner satisfaction, and intention to re-enrol. Social support theory was used as a conceptual framework to guide the development of an early intervention designed to enhance social integration by linking the distance learner into existing institutional support systems at a dual mode university. The social integration model proposes that students who are sufficiently integrated into the academic and social life of an institution through various kinds of interaction are more likely to experience goal satisfaction, develop institutional commitment, and, consequently, to persist in their studies.

The project involved random assignment of paired study participants (all new to distance education) to either an experimental (n = 93) or a comparison (n = 93) group (the latter referred to herein as the control group). Both groups received a baseline service consisting of a printed orientation package called The Starter Kit that was designed specifically for this study. The experimental group, in addition to these materials, received an intervention consisting of two telephone calls and two follow-up letters from a member of the university staff. These interactions consisted of welcoming the learner, calling the learner's attention to the orientation materials, addressing issues common to distance learners, identifying any problems or needs, providing encouragement and positive emotional support, and strongly reinforcing the notion that help for distance learners is readily available from the institution.

The first hypothesis was that the social support intervention provided to the experimental (intervention) group would be positively related to desired learning outcomes, both learner

behaviour and learner satisfaction. The second hypothesis was that to the extent that a relationship was revealed between the treatment and the outcomes, it would be mediated by perceived social support. The results of t-tests and chi-square analyses revealed that there was no significant effect (at the $p < .05$ level) of the intervention on learner behaviour or satisfaction. It therefore seems appropriate to regard the two orientation efforts (i.e. print materials plus intervention by telephone and mail, versus print materials alone), as about equally (rather than differentially) effective in enhancing distance learner behaviour and satisfaction. Lack of adherence to design, a ceiling effect, and the absence of a no-treatment control group were identified as factors which may have contributed to not finding a direct relationship between the intervention and outcomes.

Although no main effects were found for the intervention, a series of post-hoc regression analyses revealed a strong positive relationship between social support and learner satisfaction, including intention to re-enrol. This outcome supports and extends findings from other studies of learner support in distance education by confirming the relationship between perceived institutional support and learner satisfaction, and by providing a theory-based explanation of how interaction enhances the distance learner's experience. The results are consistent with the social support literature in that it was the individual's subjective appraisal of support availability which was associated with satisfaction. Future research should address what kinds of university processes might contribute significantly to perceived social support in a distance learning setting, and if outcomes other than satisfaction can be improved by enhancing perceived social support. Follow-up research will be enhanced by the development in this study of reliable multi-faceted measures of learner satisfaction and perceived social support.

Introduction

Background

Investment in distance learning systems is becoming significant at the post-secondary level as governments, institutions, and other stakeholders respond to issues of accessibility, individual learner needs and preferences, changing societal and economic contexts, competition for enrolments, and the need to make the most effective use of educational resources. However, given the complexities of learning and teaching at a distance and the changing student population, it is essential to continually seek sound information upon which to base decisions about resource allocation. It is within this context, that Laurentian University embarked in 1996, on a three-part study of its distance learners. This project represents the third part of that study, the purpose of which was to evaluate the effect of an early intervention on distance learning outcomes, specifically learner behaviour associated with persistence and academic achievement, learner satisfaction, and intention to re-enrol.

The first two phases of the study (Brindley 1998a; 1998b) consisted of an extensive survey of students new to distance study regarding their characteristics, expectations, and needs, and a follow-up survey of these same students which addressed the nature and quality of their experiences in their courses. The results of these two studies were consistent with the literature in distance education in pointing to the value which students place on interaction with faculty and other university personnel as well as peers. Hence, the current thesis project evolved from the recognition of a need for more and better contact between the institution and its distance learners.

The thesis begins with this introductory section which provides a summary of the rationale for the research project. The literature review then provides an overview of the relevant

research in distance education, in particular, a brief history of distance education, the factors which affect distance learner behaviour, learner characteristics, and the apparent importance of interaction. Social support theory and its use in practice, is addressed in the literature review, from a general perspective and more particularly, looking at its application to the academic context. The review also addresses the challenges inherent in attempting to create new forms of social support such as the one developed for this study.

Following the literature review, the study objectives and research hypotheses are outlined, and then the section on method covers in detail, the research setting, the procedures followed in the study, the variables and measures used, and the data analysis. The results section describes the outcomes of the data analyses including those done for the post-hoc research questions. This is followed by the discussion and closing comments which place the results in context, address the implications for practice, and make recommendations for future research.

Challenge of Learning at a Distance

In Canada, and worldwide, distance education is becoming an increasingly common way for students to take all or part of a university degree (Keegan, 1996). For a number of years, geographically isolated adults have found that university distance study offers them an opportunity to continue their education in their own communities. Now, regardless of place of residence, many Canadians are choosing distance learning for its flexibility, which allows them greater choice in time and place of study (Wallace, 1996). Canadian universities have responded to the demand for more flexible learning options by developing and offering a variety of ways to take courses, including packaged print-based courses, audioconferenced and videoconferenced courses, and networked or other kinds of computer based learning (see, for example, Roberts and

Keough, 1995).

While distance education offers advantages over classroom study in terms of flexibility and choice, most students, including those who are highly motivated, discover that it is a very challenging way to take a course or earn a credential. Research has shown that most learners new to distance study are surprised by the amount of time, organization, and self-directedness demanded by distance learning, and most find that during the course of studies, the absence of peers, the instructor, and others forms of institutional support can be very isolating (Hardy and Boaz, 1997; Jegede and Kirkwood, 1994). It is now well known that distance learners who drop out are most likely to do so early on in their first course (Coldeway and Spencer, 1980a; Holmberg, 1989; Rekkedal, 1982; Shale, 1982), sometimes without talking to any university personnel or attempting the first assignment, underlining the challenge of providing early, sufficient, and appropriate social support to facilitate persistence and positive learning outcomes.

Although persistence rates in university distance education have improved considerably during the past 20 years, and in many cases, are very similar to those for campus-based students, retention continues to be an issue within the field of distance education (Peters, 1992). However, rather than merely being concerned with whether students complete single courses, institutions are now addressing retention within the broader context of improving the teaching and learning process, increasing learner satisfaction with distance study experience, and attempting to retain students for multiple course enrolments and degree completion. Hence, the current literature is concerned with the quality of the distance learning environment for students and how to provide sufficient and appropriate interaction in order to help learners develop the skills and knowledge they need in order to become effective in their studies over the long term (Paul, 1990a).

Importance of Interaction and Social Support to Study

While it has been well established that academic persistence and achievement in distance education are contingent upon the complex interplay of a wide-ranging set of variables (see, for example, Woodley and Parlett, 1983), there is considerable evidence that some factors play a more important role than others in influencing learner behaviour, both as a direct effect and through effects on other variables. Perceived support from university personnel, particularly from faculty, appears to be one of these.

Models of learner behaviour derived from studies of dropping out from higher education identify social integration as a key factor in learner persistence and achievement (Tinto, 1975). According to these models, which were originally developed in traditional campus-based settings but have now been applied in distance education settings (Sweet, 1986), social integration refers to the extent and quality of the learner's interaction with the institutional social system (peers and faculty) as measured by variables such as the student's participation in extracurricular activities, informal contact with instructors, and satisfaction with relationships formed, all of which contribute to the connectedness between learner and institution (Tinto, 1975). Institutions interested in improving retention have actively worked on increasing and improving contact with students, which encourages their involvement in the social fabric of their schools.

Although most distance learners report that they value interaction with university personnel, and have needs for affiliation, support, and connectedness related to their study, they clearly do not have the same kinds of opportunities for informal contact with peers and faculty as campus-based students (Keegan, 1996). Further, for many, the same reasons which determined their choice of distance study often preclude participation in campus-based social activities even

if the opportunity is present. Recent studies have also revealed that despite their stated desire for contact with university personnel, most students are not willing to give up the flexibility inherent in distance learning in order to make gains in other types of interaction (Brindley, 1998a; Levine and Cureton, 1998). This poses a challenge in terms of how to define and improve social integration of distance learners. However, to the extent that learning outcomes and the quality of the distance learning experience can be improved, facilitating social integration of learners appears to be a goal worthy of further exploration.

It was proposed in this study that social integration in a distance education setting, that is, the learner's sense of connectedness to the institution, could be facilitated by providing a structured intervention designed (both in content and process) to strengthen the learner's belief that university personnel are empathetic, helpful, and readily available to provide assistance. Social support interventions which seek to link individuals with supportive networks have been applied to a wide variety of situations where individuals might benefit from increased social support, real and/or perceived (Lakey and Lutz, 1996). Social support theory, a concept which has been applied to a broad range of social networks, functions, and settings (see Veiel and Baumann, 1992 for a discussion of use of the term), makes a link between well-being and social relationships. For the purposes of this study, it was decided to focus on perceived social support (as opposed to social networks or enacted support) because this is the measurable construct within the social support literature which has been consistently linked to well-being (Turner, 1992). A commonly used operational definition of social support (Cohen and Wills, 1985) was chosen for the study for its clarity and appropriateness for translation to an intervention as well as ease with which a subjective appraisal could be made of its presence by study participants.

According to Cohen and Wills (1985) social support works in two important ways to improve intended outcomes. One is structural in nature, increasing the individual's sense of affiliation and therefore contributing to a generalized sense of emotional well-being. The other is functional, increasing the individual's ability to deal effectively with difficulties inherent in a particular situation by boosting the person's resources through provision of appropriate information, instrumental help, and emotional support and reassurance. Hence, social support theory appears to provide a suitable conceptual framework to develop an intervention that would be an effective and appropriate response to address both the general problem of isolation and the specific challenges presented by the distance learning situation, such as time management and setting up study schedules.

Applied to the distance learning context, it was proposed that a social support intervention in the form of institutionally initiated structured contact with individual learners would facilitate social integration through building their sense of affiliation with the institution and enhancing their resources for coping with difficulties known to hinder distance learners. Although the interventions were structured and scripted in order that specific topics and potential difficulties would be consistently addressed with all learners, the interactions, which were carried out by telephone and followed up by letters, were also personalized to meet individual needs.

The intervention was tested with first-time distance learners who were enrolled in print-based packaged courses with telephone tutorial support, one of the most common forms of distance learning, and one where the challenge of social integration is arguably the greatest. Based on the findings that early activity in a course (e.g., submission of the first assignment) is a positive indicator for success (Gibson, 1990), the intervention was designed to be made at the

beginning of the course and focused on helping learners acquire the skills and knowledge needed to make the best use of all of the learning resources available to them, both those connected to the institution, such as instructors and other university personnel as well as orientation and course materials, and those in their environment, such as family and friends.

This study draws on the existing psychology and distance education literature in theory, design, and choice of intervention, but extends current work in a number of ways. The study employed an experimental design with random assignment of matched pairs of participants to experimental and control groups, an approach which takes into account the multivariate nature of models of learner behaviour. Reliable theory based measures of learner satisfaction and social support were developed which will be useful to future studies. Studies of this kind are still the exception in the distance education and social support intervention literature.

Purpose of Thesis Research

The present thesis involved designing and evaluating the efficacy of a social support intervention made by a non-discipline based student advisor (as opposed to the professor for the course) to affect distance learner behaviour and satisfaction. The thesis proposed that the effect of such an intervention would be to increase the likelihood of specific behaviours such as getting started in the course quickly, using the learning resources provided and initiating contact with the institution when necessary, all of which have been linked to persistence, academic achievement, learner satisfaction, and intent to re-enrol. The orientation materials which were developed as a baseline service as part of the project and the intervention which was designed and evaluated were intended to be practical and feasible for application in educational settings such as the one where the research was conducted, Laurentian University in Sudbury, Ontario.

Literature Review

Growth of Distance Education and History of Learner Support

Distance education is defined as a study situation where the learner is separated from his or her peers and the teacher but which is guided and planned by an organization (see, for example, Barker, Frisbie, and Patrick, 1993 for definition and a taxonomy of distance education based on varying use of technology). The most common delivery method for distance education has been and continues to be packaged course materials (written and/or recorded) supported by written and/or telephone tutorial assistance. More recently, as the demand for education which is not limited to a particular time and place has grown, alternative learning and teaching methods have expanded to include the use of new technologies such as audioconferencing, audiographics, compressed video-conferencing and networked and other forms of computer-based learning. Each of these technologies offers various levels of flexibility in time and place of study and opportunities for interaction.

Distance education has a history of approximately 150 years (Keegan, 1996), its inception coinciding with the industrial revolution which provided the transportation and communication technology required to package and send courses to students. During the past 20 years, in Canada and in countries around the world, university distance education has grown phenomenally as it has come to be seen as a legitimate form of post-secondary education provision and an answer to issues of accessibility (see, for example, Rogers, K., 1993). Keegan estimates that there are approximately 30 million people, mainly adults, studying at a distance worldwide.

Distance education has not only grown in terms of the number of courses and programs being offered by universities, it has also changed dramatically. Developed to address issues of

access and availability of learning opportunities, early forms of distance teaching were typified by the mass production of courses which could be disseminated to large numbers of students.

Learners relied on written packaged materials and had little or no direct contact with the teacher.

High enrolments and high rates of attrition tended to be typical (Keegan, 1983).

Peters (1983), a German scholar who is generally recognized as being one of the most influential writers in distance education, was the first to draw parallels between distance education and other forms of mass production. His analysis describes an industrialized model of teaching and learning with mass-produced teaching materials, specialized roles for those involved in production, quality controls, and distribution systems which opened opportunities to thousands of people to obtain the product. Within this context, behaviourist models of instructional design were particularly popular because they offered standardized methods of presenting subject matter with clear learning objectives and measurable outcomes. Such approaches fit well with the industrialized conceptualization of teaching as a process of successfully transmitting a particular body of knowledge and/or skills.

As distance education became a more common way for people to gain access to post-secondary educational opportunities, concern about academic credibility grew, and more attention was given to ways to promote persistence, including the development of support services for learners. At first, these services were mainly limited to contact with a tutor or faculty member related to course content. However, other forms of support followed. O'Donnell and Daniel (1979) proposed one of the earliest models for student development in a distance education setting, arguing that it could not be assumed that adult students have all the skills necessary to "plan their lives, careers and education, set realistic goals and study effectively" (p. 1). It appears

that the vision they had was for a more much holistic system of student support than what transpired. During the late 1970's and early 1980's, a wide variety of student support services were developed at dedicated distance teaching institutions such as the Open Learning Agency in British Columbia and Athabasca University in Alberta. These included orientation and information, admissions and other registry services such as transcript evaluation, advising and counselling, instructional support, and student advocacy (McKinnis-Rankin and Brindley, 1986). Unfortunately, in retrospect, it appears that these services were developed somewhat piecemeal and were seen as an add-on to an already complete system of education.

In describing the services available to Canadian post-secondary distance education students in the mid-1980's, McKinnis-Rankin and Brindley (1986) noted that the main goal of providing support is to help learners cope with the special demands of distance learning and to respond to the lack of preparedness which holds many learners back in an institution with an open admissions policy. More recently, Brindley (1995b) pointed out that while these goals “are legitimate and necessary, they do not speak to the core values and beliefs that might drive an institution to interact with learners in a particular way” (p.104). Similarly, in speaking about the development of student support in distance education over the past 20 years, Tait (1995) noted that the rationale for such services has been “weakly conceived and (in a number of cases) weakly realised” (p. 232). Underlining this point, Paul (1988), and Brindley and Fage (1992) pointed out that during times of fiscal restraint, learner support services have usually been the first to experience cuts in most institutions.

In the past 10 years, there has been growing concern with the inadequacy and inappropriateness of the industrialized model of distance education (Evans and Nation, 1989;

Sewart, 1993; Sweet, 1993; Tait, 1988; Tait, 1994), both in terms of its inability to respond quickly to contextual changes and its incompatibility with more learner-centred approaches to the educational process. Moving from a conceptualization of education as transmission of prepackaged knowledge to that of a dynamic transformative process, practitioners and researchers in distance education have now turned to developmental and constructivist models of teaching and learning, and are much more focused on finding ways to engage the learner as an active and central participant in the learning process. Recent developments in student support reflect these trends.

Brindley (1995b) cited Sweet's (1993) comprehensive synthesis of the literature in discussing the centrality of student support services in making distance learning more responsive to changing environments, and the strong trend toward developmental and constructivist approaches in learning and teaching. She noted that Sweet's analysis

...thoughtfully considers the evidence for a changing view of the learner as more instrumental and active in the learning process, and makes a strong case for changes in the development and delivery of instruction and other learner services to accommodate a constructivist view of learning. (p. 104)

Brindley (1995b) also discussed the lack of a research base guiding the development of support services, noting that the epistemology underlying learner services in distance education has not often been well defined or systematically tested.

Although there is now a growing literature base that addresses the need to critically reflect on distance teaching practices (see for example Evans and Nation, 1989; 1992), most of it focuses on new roles for instructors, the use of new technologies, and instructional design. Similar theory

building and testing has not been systematically carried out for other types of interaction with learners, such as the provision of information, orientation, advising, counselling, provision of library and administrative services, and the role that these interactions might play in a developmental or constructivist model of learning.

Tobin (1995), in a review and evaluation of the current state of distance education research, found the literature slim in new work, not having changed much from Coldeway's (1982) review. She noted that she was not the first to point out (see Calvert, 1986; Coldeway, 1982; Rubin, 1992) that, in general, the literature has tended to be primarily descriptive with little systematic investigation. In the section on student support, she cited Tallman (1994) as providing some evidence of a link between learner support and success rates, and Morgan and Morris (1994) with documenting learner satisfaction with service. Other writers which she cited have written largely descriptive articles. While Tobin acknowledged that her literature review is not comprehensive, it is disappointing that after 20 years of writing there is not a stronger research base for practitioners to draw upon.

The largest gap in the literature appears to be a lack of consistent approaches, theory building, and replication. In a paper proposing a comprehensive approach to the development and evaluation of support services for distance learners, Tait (1995) reviewed what he considered to be the most important writing on the development of theory for student support. These include Holmberg's (1983) guided didactic conversation, Moore's transactional distance (1993a) and three types of interaction (1993b), and Daniel and Marquis' (1979) influential discussion of the difficult issues inherent in balancing the right type and amount of interaction with maintenance of independence for the learner. He also mentioned Sewart's (1983) contribution to the rationale for

tutors and counsellors as an integral part of the distance learning system. While he acknowledged the important contributions made by particular individuals, Tait concluded that there needs to be greater efforts toward synthesis of the existing literature on interaction with and support for learners in order to build a “coherent body of theory”.

At the same time that there is pressure for distance educators to be more learner-centred, more grounded in theory, and more focused on building a more consistent research base for their practice, the context within which distance learning institutions function has also radically changed. Distance education institutions and departments now find themselves with a much higher profile than was the case in the past, in a very competitive market. At the same time, they are experiencing great pressure to provide solutions for an overloaded on-campus system and make use of new technologies. This very dynamic environment presents both challenges and opportunities for research.

Factors Affecting Study Behaviour of Distance Learners

The forces working against those who choose to study at a distance have been well documented for a number of years. Jegede and Kirkwood (1994) pointed out that “...learning within the distance education context may be a daunting prospect for many students...” (p. 279), and Hardy and Boaz (1997) cited Gibson (1996) when noting that,

“...the distance student faces additional challenges (to those studying on-campus). It is almost a requirement that distance students be more focused, better time managers, and able to work both independently and as group members...” (p. 42).

Concerns over the difficulty of university distance learning are reflected in the literature in the high priority which has been given to the topic of persistence and attrition in the past 20 years

(Garrison, 1987). Hence, much of what is known about the factors affecting study behaviour of distance learners comes from studies of drop-outs. Powell, Conway, and Ross (1990) propose that the factors contributing to persistence and retention in distance education fall into three general categories consisting of learners' characteristics, their situation or life circumstances, and institutional variables. These are examined herein.

Learner Characteristics

In a review of distance education attrition research, Cookson (1990) noted that researchers have identified a wide variety of variables which can contribute to learner persistence or failure/withdrawal. However, as Gibson (1990) and others have pointed out, studies of attrition, particularly those which have focused on one factor or set of closely related factors such as learner demographics, have not always turned up consistent findings, and have often resulted in as many questions as answers (see Brindley, 1987, and Thompson, 1998, for other examples of contradictory findings).

Learner characteristics which have been considered in relation to persistence include demographics (Bartels, 1982; Coldeway and Spencer, 1980b; Rekkedal, 1983; Woodley and Parlett, 1983), previous academic experience, academic preparedness (Kennedy and Powell, 1976), study skills and habits (Coldeway, 1986; Laube, 1992, Powell, Conway, and Ross, 1990), reasons for study (von Prummer, 1990), academic self-concept/confidence (Gibson, 1996); motivation or strength of intent (Billings, 1988; Coldeway, 1991), learning style (Gibson and Graff, 1992; Thompson, 1984), and psychological factors such as locus of control (Pugliese, 1994; Stone, 1992) and anxiety (Jegede and Kirkwood, 1994; Pugliese, 1994).

Although findings have been contradictory in a number of cases, particularly for

demographics, it appears that factors which have been shown most consistently to predispose learners toward persistence are confidence in ability to succeed, motivation, academic preparedness in terms of study skills and habits, and previous successful distance education experience. Research on study habits and behaviours related to persistence have consistently identified greater number of hours spent on the course in a week and early or on-time completion of the first assignment as being very strong predictors of successful completion.

Life Circumstances or Situational Variables

Certain factors in the learner's situation have also turned up fairly consistently as being related to persistence. In particular, support from family, friends, and/or employer appears to be important (Brindley, 1987; Garland, 1993; Gibson, 1998; Powell, Conway, and Ross, 1990). Gibson (1998) described the multi-faceted nature of the distance learner's context, and the types of support, emotional, logistical, economical, and educational, which family, friends, and employers/colleagues can provide and which make a difference to persistence.

Changes in life circumstances such as a geographical move, job change, or serious illness of self or family member have often been cited in retrospective reports from drop-outs as reasons for leaving studies (Woodley and McIntosh, 1977; Pythian and Clements, 1982). However, others studies which examined histories of both completers and drop-outs found that completers experience just as many serious stressors during the course of studies as non-completers (Brindley, 1987; Kennedy and Powell, 1976; Woodley and Parlett, 1983). Powell, Conway and Ross (1990) included life changes in their model of distance learner behaviour, concluding that they are important but that the extent to which they negatively affect studies depends on other factors such as the time when these occur, learner coping skills, and support available from the

institution or family.

The way in which changes in life circumstances operate as a variable in the persistence equation illustrates the multivariate longitudinal nature of the process of learner behaviour. Certain learner related factors, such as life circumstances, may appear to have low explanatory strength in relation to learner behaviour, turning up inconsistent results as single variables in the persistence equation from study to study, but are not necessarily unimportant to learning outcomes in the interplay of total variables over time.

Institutional Variables

Just as individual learners bring certain predisposing characteristics and situational variables to their studies, educational institutions have their own set of influencing factors. Pantages and Creedon (1978), in one of the first comprehensive studies of drop-out, noted that institutional factors, although not considered in the drop-out equation prior to about 1960, are very important. They point out that institutions not only have characteristic ways of trying to influence students in a particular direction, they begin by attracting a particular kind of student. For example, distance education institutions, because of their emphasis on accessibility and flexibility, have traditionally attracted adult learners who are returning to school, usually after a period away, and who, for a variety of reasons, found attending campus-based classes difficult. Hence, studies of attrition and persistence in distance education have often focused on whether institutions were adequately meeting the needs of adult learners. However, the traditional profile of the distance learner appears to be changing rapidly as younger students (even those who are already on campus full-time) are beginning to see distance education as an attractive option. This issue will be addressed in a later section of the literature review.

Institutional factors which have been considered in terms of influencing persistence include course design (Woodley and Parlett, 1983), deadlines and schedules/pacing (Brindley, 1987; Coldeway, 1986, DiSilvestro and Markowitz, 1982), course content (Finkel, 1982), instructional support (Baynton, 1992; Brown, 1996; Coldeway, MacRury and Spencer, 1980; Laube, 1992; Kember, 1989a; Rekkedal, 1981; Sweet, 1986), and turnaround time on feedback in the form of marks and comments on assignments and examinations (Kember, 1989a; Rekkedal, 1983). The factors which appear to have the most consistent ability to affect learner behaviour are deadlines and schedules/pacing, with paced courses having better completion rates, instructional support, and turnaround time for feedback. Instructional support appears to be a potentially powerful factor that can have a strong hindering or facilitating effect depending upon the learner's perception of the instructor's helpfulness (see for example Brindley, 1987; Brown, 1996). This is discussed more fully later.

In his review, Cookson (1990) highlighted studies which identify factors over which institutions have control and which appear to have shown explanatory power in studies of persistence and/or attrition. He summarized his findings with a list of implications for institutional interventions. These included early intervention, services which help the learner to assess the match between themselves and the institution, active tutorial assistance, development of services and programs which enhance student satisfaction and commitment, improved turnaround times on feedback, and concentration of support resources with new students. Cookson (1990) described how institutional interventions can make "dramatic" differences in persistence, using examples from studies at the NKI school in Norway (see Rekkedal, 1983) as illustrations. NKI clearly demonstrated that increased contact between institution and learner and faster turnaround times

can have significant effects on completion rates.

Multivariate Models of Attrition and Persistence

Using research results from studies such as those described above, some distance education researchers have developed or adapted existing multivariate longitudinal models of attrition and persistence (Bajtelmsmit, 1988; Billings, 1988; Brindley 1987; 1988; Brown, 1996; Kember, 1989b; Powell, Conway, and Ross, 1990; Sweet, 1986). The term multivariate refers to multiple variable models, some of which have been tested using multivariate statistical methods. These models take into consideration the predisposing characteristics of the learner upon entry, the learner's situational variables, institutional characteristics and interventions, and the interaction of all of these factors over time. Such methods are useful for understanding learner behaviour and for testing theories.

The most influential model of attrition in higher education is that of Tinto (1975), who extended the work of Spady (1971). Tinto's framework, which is widely cited and is certainly the most empirically tested and supported model of attrition, was based on Durkheim's (1961) theory of suicide. Durkheim's theory proposed that suicide is produced by a lack of social integration of the individual, both in the sense of differing values from and insufficient interaction with the collectivity. Tinto proposed that learners' predisposing characteristics interact with institutional characteristics in a process of social and academic integration which, if unsuccessful, results in diminishing goal and institutional commitment and, finally, in a decision to drop out. Hence, the drop-out is a learner who has not been sufficiently integrated into the social and academic life of the institution.

Sweet (1986) was one of the first researchers to attempt to adapt and actually test Tinto's

model in a distance setting. He took issue with earlier research by Pascarella and Chapman (1983) which suggested that social integration was not as important a factor in persistence as academic integration for non-traditional adult students studying part-time. Sweet, believing that the telephone tutor had the potential to play an important role in persistence of distance learners through the process of social integration, challenged this notion, proposing that if "...telephone tutoring represents an effective form of social exchange between students and faculty, one should expect the patterns of influence among model variables to conform with those originally proposed by Tinto" (p.204). His results confirmed this proposition, demonstrating that both academic and social integration had direct effects on learner goal satisfaction and institutional commitment, which in turn had direct effects on persistence.

Bajtelsmit (1988) and Kember (1989b) have also attempted to adapt Tinto's (1975) model for the distance education context. In Tinto's model, social integration referred to the extent and quality of the learner's interaction with the institutional social system (peers and faculty), as measured by variables such as the student's participation in extracurricular activities, informal contact with instructors, and satisfaction with relationships formed, all of which contribute to the connectedness between learner and institution. Bajtelsmit and Kember, finding Sweet's (1986) interpretation of social integration too reliant on a single measure and the Tinto (1975) measures inappropriate to the distance education context, redefined social integration such that the learner's social support systems outside of the institution had a significant weighting. Both Kember and Bajtelsmit focused not only on the constraints on regularized contact imposed by the distance learning situation but also on the importance of considering the characteristics of the usual population served by distance education, (ie. adult learners who have many other social

influences outside of the institution).

In redefining social integration in a way that was not intended in Tinto's model (ie., as including a social support network outside of the institution), Kember (1989b) and Bajtelsmit (1988) appear to have unintentionally ruled out the possibility of institutional integration for the distance learner. While it is true that adult learners have many influences outside of the educational institution which should be considered in a model of attrition, it does not necessarily follow that little can be done to encourage a sense of affiliation or integration into the institutional social support system (e.g., instructional, counselling, library, and administrative support). Further, the stereotype of the "nontraditional" adult distance learner (see Bajtelsmit, 1988, p. 9, and Kember, 1989b, p. 285, for a description) which they used as an important part of their rationale for the redefinition may no longer hold true. Indications are that the distance learner population and expectations for interaction with the institution are changing (Wallace, 1996; Brindley, 1998a) in that younger full-time students are regularly choosing to take at least some of their university courses by distance methods even though they have ready access to a campus.

Brindley (1987; 1988) proposed an interactive multidimensional model of attrition that was adapted from one described by Bean and Metzner (1985) which was developed specifically for a nontraditional off-campus undergraduate population. Bean and Metzner proposed that there were four interactive categories of variables affecting dropout decisions for this population: learner characteristics, academic factors such as study habits and course availability, environmental factors such as finances, and psychological outcome factors such as satisfaction and stress. Using a critical incident technique, Brindley identified hindering and facilitating incidents for a group of distance learners which she then used to modify the Bean and Metzner model.

Consistent with other studies, a significant factor in the model was personalized support received from the institution. Recommendations stemming from this model included early intervention with information and support services which facilitate learner assessment of match between themselves and the institution.

Similarly, Billings (1988) proposed a path model of distance learner persistence based on one proposed by Bean (Bean, 1982, cited in Billings, 1988) showing relationships among variables that are “linear, additive, and causal” (p. 25). Although the Billings model was one of persistence and the one proposed by Brindley (1987; 1988) was one of attrition, similar processes are at work. The learner, environmental, academic, and institutional variables have compensatory interaction relationships. For example, Bean and Metzner proposed that for an off-campus part-time adult learner who is employed full-time, if environmental variables are not favourable (no study time, poor finances, no family support), positive academic variables (study habits, academic advising, course availability) will not compensate. Over time, this learner will have a poor academic outcome and will form an intention to leave. The Billings/Bean model included some additional variables which have been strongly linked with persistence. These are outcome/attitudinal variables such as practical value and satisfaction with course, and intervening variables such as intent to complete the course (see Ajzen and Fishbein, 1980 for theoretical foundation) and date of first lesson submission. Unfortunately, neither the model proposed by Brindley nor that suggested by Billings has been tested. In particular, the idea of compensatory effects is an interesting one in that it is important to know whether interventions made by the institution can compensate for shortcomings in other areas.

Powell, Conway, and Ross (1990) proposed a multivariate framework of a different type

for examining attrition and completion. They identified three sets of variables: predisposing characteristics of the learner upon entry (some of which may change over time), changing circumstances, and institutional factors. These variables interact over time to produce greater or lesser levels of persistence. The variables exert different strength of influence over the outcome.

Powell et al. tested the model by using discriminant analysis to identify predisposing characteristics significantly related to success. They concluded that those students who were more likely to persist and succeed in their courses included the following:

- those who rate themselves highly in terms of persistence with new projects
- those with a significant other
- those who rated the consequences of not passing as serious
- those who rate their chances for success highly
- those who had lesser needs for support or to discuss course work
- those with higher literacy skills
- those who generously estimated study time
- those who organized their time and place of study well
- those who intrinsically value learning.

Although the Powell, Conway, and Ross (1990) model appears to have had no further testing, the results from this one study are highly consistent with those from other studies of attrition.

Brown (1996) took a different approach to building an explanatory framework for attrition. From an extensive review of the literature, he identified twelve factors related to the decision to withdraw from a distance learning course, some external to the institution and some over which the institution has control. He used these factors to develop a survey which was then given to a random sample of 170 distance learners who dropped out of their courses. Participants rated each of the factors in terms of importance to their decision to leave. Using the results of the survey and building on the work of Tinto (1975) and others, Brown was able to construct an “integration index” from three questions which addressed factors related to overall sense of

affiliation and assistance received through use of the support systems of the university (support from tutors, ease of contacting tutors, and sense of isolation from the institution). He was then able to correlate levels of integration and other variables.

With the integration index, Brown was able to identify groups at risk of low integration as well as times during the study period when learners were most at risk from insufficient integration. At first glance, a few of the results appear to be counter-intuitive. For example, one of the groups who are at risk at low levels of integration are those who live in urban settings. However, Brown speculated that one reason for this result might be that those in more geographically isolated areas may have developed better coping mechanisms to deal with the stress or difficulties associated with isolation. He was also able to measure some of the compensatory effects discussed in the Billings/Bean (1988) model, finding, for example, that even for some students who cited significant life changes as affecting persistence, a low integration index was the factor which appeared to finally weight their decision in the direction of withdrawal. Overall, Brown found that factors related to integration into the social fabric of the institution, that is, insufficient support from tutors, difficulties in contacting tutors, and sense of isolation from the institution were the major contributory factors to discontinuance for a majority of the sample.

Multivariate models of persistence and attrition are very useful for understanding and predicting distance learner behaviour but research is obviously still very much in the early stages. More work is needed in terms of consistency in theory testing and building on existing research. It appears that the concept of integration introduced by the Tinto (1975) model and reinforced by its distance learning derivatives is still one of the most powerful ways of explaining learner behaviour and, as Sweet (1986) and Brown (1996) demonstrate, has the most potential for testing

the strength of institutional interventions designed to enhance persistence. This topic will be explored further in the section on social support and integration related to learner behaviour.

Changing Profile of University Distance Learners

There is evidence from two recent studies (Brindley, 1998a; Wallace, 1996) that the most rapidly increasing market for distance education may be younger full-time students who have access to a campus but who choose, for reasons of flexibility, to take at least some of their university courses through distance methods. At the same time, the older student population appears to be shrinking. It is important, therefore, in the context of the current study, to acknowledge that in the higher education literature, including that reviewed here, the term 'distance learner' has been considered to be almost synonymous with non-traditional adult learner.

Designed to address issues of access for those who were prevented from participating in campus-based education, post-secondary level distance education has tended to serve a heterogeneous population of adults, many of whom had been previously academically disadvantaged in one way or another. The distance education literature generally describes the distance learner as older, more likely to be female, geographically isolated or in some other way "distanced" from campus, returning to school after a period of some time, and possibly lacking in the requisite time management and study skills. There has also been the suggestion from a number of writers that traditional distance learners, being isolated from peers and lacking in educational experience, will not generally have high expectations of the educational institution and will blame themselves rather than the institution when difficulties arise which cause them to withdraw (see for example Fage and Mills, 1986; Paul, 1990b).

Although distance education is still serving the needs of those who cannot participate in

campus based studies, the studies by Brindley, (1998a) and Wallace (1996) reveal a strong trend toward distance education becoming an attractive alternative or adjunct to campus-based studies. Further, one need look no farther than the newspaper to witness the race by even the most traditional campus-based universities to enter the now highly competitive distance learning market. It would seem that distance education is no longer the school of last resort.

Wallace (1996) investigated the nature and magnitude of the change in the distance learner population at the University of Manitoba in a comprehensive study of enrolments over a period of 10 years between 1983 and 1995. She found that not only have enrolments in distance studies increased four times during this period, the population has also shifted toward “younger students, local residence, and full-time course loads that combine independent study with on-campus courses” (p.1). Wallace also found that fewer students are choosing distance education because of barriers preventing them from participating in classroom-based studies, and more are choosing it because of the flexibility it offers. In other words, learners are being attracted by distance learning, not ending up there because other choices are not available.

In a study of all learners entering distance learning courses at Laurentian University for the first time in the fall of 1996, Brindley (1998a) produced parallel findings to Wallace (1996). Demographics showed a shift toward younger learners, many locally based and taking a full-time courseload, mixing classroom-based and distance education courses by choice. There was also a noticeable shift toward greater representation from males than has been the case in the past. Among the younger age group (under 25), the split was approximately 50/50 between males and females. By far the most important reason for choice of distance education among these learners was flexibility in time and place of study.

Wallace (1996; 1998) and Brindley (1998a) noted that there are far reaching implications of the findings of these studies if they represent long term trends. Wallace (1996) pointed out that much of distance education practice is based on the assumption that the population being served is comprised of non-traditional adult learners and that these assumptions may need to be reconsidered. With the entry of younger, full-time students into distance education, it appears that there may be new needs, expectations, and concerns to consider in designing courses and support services. Brindley (1998a) reported that the younger distance learners are more educationally experienced than distance learners have been in the past, and appear to be more clear and decided about their goals. Unlike the adult learners described above by Fage and Mills (1986) and Paul (1990b), they appear to have high expectations for the quality of their learning experience but do not want to compromise on flexibility in order to make gains in interaction.

The heightened profile of distance education as a post-secondary alternative, the growth in numbers of students, and the demand for better quality distance learning experiences provides strong rationale for research of the kind proposed in the current study.

Social Integration: The Importance of Interaction and Affiliation in Distance Learning

The high value placed on interaction with university personnel by the learners in the needs assessment (Brindley, 1998a) preceding the current study is not inconsistent with other literature in distance education. A great deal of emphasis has been placed both by learners and practitioners on the value of interaction to student success and satisfaction (see for example Brindley, 1995b; Kember, 1990; Rekkedal, 1981; Sewart, 1993; Sweet, 1993; Tait, 1995; Tallman, 1994), particularly in the context of the learner-centred views of education which have become more popular recently. Not only has contact with an instructor been identified in the literature as being

an important variable (either positive or negative) in distance study persistence (see for example Morgan and Morris, 1994; Tallman, 1994), learners view interaction with faculty as being critical to success in their studies, and those who drop out often attribute their leaving to insufficient or unsatisfactory tutorial support (Garland, 1993; Brown, 1996).

The fact that much has been written about the importance of interaction for distance study is not surprising given that the most easily identifiable difference between distance and on-campus study is the separation between instructor and learner. Hence, many of the challenges of distance learning and teaching are attributed to the isolation of the learner, and interventions designed to increase learner persistence are often aimed at increasing or improving the interaction between the learner and the institution (Keinath, n.d.).

Keegan (1996), in his book, Foundations of Distance Education, devoted a chapter to the various theories and frameworks for interaction in distance education which have been developed. These included Holmberg's (1983) "guided didactic conversation", Baath's (1980 cited in Keegan, 1996) "two way communication", Daniel's (1979) balance of "interaction and independence", and Sewart's (1978 cited in Keegan, 1996) "continuity of concern" as well as what he called an "integrated mode" originating out of Australia. While each writer has a slightly different point of view, all would agree that distance learners benefit from structured positive support from university personnel.

What is less clear than the importance of early and positive interaction to success in distance learning is what types of contact are perceived by learners to be positive and supportive and what types of contact other than with faculty might have positive effects on learning outcomes. As Robinson (1995) pointed out, one of the broad findings from the literature is that

“...learner-institution contact, such as regular contact with support staff, appears to have a positive effect on learner performance and persistence rates...” (p. 222). However, she also noted that,

While many accounts express the conviction that learner support services make a difference to outcomes, demonstrations of the relationships are less easy to find. Learner support has so far received less research than other aspects of open and distance learning. (p. 221)

Similarly, Gibson (1990), in her review of the literature on persistence and factors within the learner’s educational environment, reported a number of studies with somewhat contradictory findings to support her notion that there must be more systematic research before specific questions about the effects of learner support can be answered satisfactorily. She recommended “replicated studies with sound theoretical frameworks and methodologies appropriate to the question under consideration” (pp. 132-133).

The lack of unifying theory and empirically based research to guide practice is apparent in that distance learning institutions seem to chronically struggle with providing appropriate and consistently effective support for students. A landmark article by Daniel and Marquis (1979) which addressed the many complex issues in providing distance learners with the right amount and type of interaction is still often referred to in the current literature. If the goal of providing support services is to create more effective links between institution and learner, how can this best be accomplished? How can the “social integration” which Tinto (1975) and others have discussed as critical to persistence and achievement be achieved in the distance learning setting?

Sweet (1993), in a comprehensive review of the literature on student support services in

distance education, made a compelling argument for a broad role for the instructor which would encompass counselling functions as well as discipline-based tutoring. His view of the instructor as facilitator is based on seeing education as a developmental process as opposed to simply the transmission of knowledge, and follows naturally and consistently from his study (1986) which considered the role a tutor might play in social integration of the learner.

Although Sweet (1993) put forward a strong case for an all-encompassing role for the instructor as the critical link to the institution, there are difficulties inherent in his proposition. There is no doubt that there is an essential role to be played by the distance education instructor in mediating between packaged materials and the learner, particularly in such areas as helping the learner understand and master the subject matter through feedback on progress. Further, if the instructor can provide a more broad range of support (and according to the literature, many do), it is most definitely to the learner's advantage. However, Sweet's view of the instructor as the main facilitator of social integration is probably not practical or feasible in many institutions, particularly universities.

As will be discussed further below, the instructor is not always experienced by the learner in a positive way. This is not unusual or particular to the distance education setting. There are many different teaching and interpersonal styles. It will probably always be the case that learners will experience some instructors as more encouraging and empathetic than others. However, the variation in interpersonal style of instructors can be problematic in the distance learning setting because individual learners cannot compare their experience with that of their peers and have only the contact of the instructor by which to evaluate the support from the institution. The instructor is obviously fundamental to the learning process and a focal point in the support

provided by an institution but is not necessarily the best place in many institutions to place all of the responsibility for social integration of the learner.

In this context, it is useful to consider what learners are looking for in terms of support from the institution. Recent studies have revealed some learner dissatisfaction with instructional and other types of support received (see for example Garland, 1993; Brown, 1996, Brindley, 1998b) and often services that are offered are underused (Robinson, 1995). This suggests that learners either do not know about their availability or for any number of reasons choose not to make use of them. In the needs assessment carried out at Laurentian University (Brindley, 1998a), learners indicated that they wanted contact with their instructors and a wide variety of support services. However, a follow-up study (Brindley, 1998b) of the same students' actual experience in their first course(s) revealed that they did not have a great deal of interaction, if any, with faculty or other university personnel. There is some evidence to suggest that the gap between their expectations and experience may not be atypical of distance learners in other institutions.

For the historical reasons cited in an earlier section, the focus of interaction for the student which has received the most attention both in research and in practice has been the tutor or instructor. Other types of support, such as advising and counselling, are recognized in the literature as being important in meeting identified learner needs but at the same time are generally seen as being supplementary to instructional support. The literature on tutor contact with students provides some insight as to the kind of interaction which students find supportive and whether it is feasible to look to the instructor to provide the main human link to the institution and the other learning resources which are offered there.

Sweet (1986) proposed that the telephone tutor in a distance learning setting has the potential to play an important role in the social integration of the learner. Using one question which took a student rating of helpfulness of their exchanges with a telephone tutor as a global measure of social integration, Sweet found that this factor was significantly related to institutional commitment. Although his results have been questioned based on the narrowness of his measure, the results of his study have been cited extensively because he is one of the few researchers to have tried to test the Tinto (1975) model in this way.

The report from Sweet's study also provides very useful information about the nature of contact between students and tutors. He reported that the content of these exchanges included a variety of matters from course, career, and personal concerns to informal socializing.

Unfortunately it is not clear from the study report how learners made their judgements about helpfulness. However, Sweet noted in his report that another study which he conducted in 1982 revealed that student ratings of tutors were "most favourable where tutors were strongly supportive and encouraging" (cited in Sweet, 1986, p. 203). Evidence from other studies which include direct reports from learners suggest that although they look to their instructors for assistance with course content as well as other types of advice and instrumental help, the factor which is most critical to persistence is whether the learner perceives the tutor as welcoming and encouraging (Brindley, 1997; Brown, 1996; Dillon, Gunawardena, and Parker, 1992; Garland, 1993). In other words, whether intended or not, an important component of tutorial assistance is experienced by the learner as generalized social support.

In a study using ethnography to elucidate barriers to completion in natural resource sciences courses, Garland (1993) noted that, "These students had no difficulty with the tutors'

subject matter competence, it was some of their affective characteristics that were problematic” (p. 187). Similarly, Brindley (1987), in a study of critical incidents in distance study completion, found that tutor contact was an important factor in persistence but was cited as hindering almost as often as facilitating completion. The hindering incidents resulted when learners perceived a negative or disinterested attitude on the part of the tutor. Dillon, Gunawardena, and Parker (1992) found the same results with their evaluation of learner support provided to students enrolled in the Oklahoma Televised Instruction System. Although many students reported that the instructors were helpful, a considerable number reported that “factors related to the instructor’s style” were “a hindrance to their performance...” (p. 40). The suggestions for improvement to learner support which students made in response to this study clearly indicate that they found it problematic when they perceived instructors as not being empathetic.

The reports from learners are echoed in any number of studies and are probably best summarized by Sweet (1993). In this recent review of the literature on learner support in distance education, he discussed the notion of the learner’s need for affiliation, noting that although this is a concept that has arisen from feminist perspectives on distance education (see, for example Kirkup and von Prummer, 1990), “The need for affiliation, as well as achievement, is characteristic of all learners,...” (p. 12). Affiliation, as described by Sweet and others sounds very much like Tinto’s (1975) concept of social integration, speaking to the learner’s need to engage in interaction and form relationships related to their learning which in turn, influences attitude toward studies, institutional commitment, goal commitment, and intent to complete.

It appears then, based on a review of the literature and the recent needs assessment of the distance learners at Laurentian, that social integration of learners into the support network of the

institution is a practical and worthy goal to strive for in the distance learning context, both in meeting expressed learner needs and improving learner satisfaction and learning outcomes such as persistence rates. Further, as a theoretical construct, social integration appears to be a valid and useful unifying theme on which to base research and practice. For the purposes of the present thesis, social support theory, which is discussed in the next section, was chosen as an appropriate framework on which to base the design of an intervention to facilitate social integration of the distance learner.

Social Support Theory and the Development of an Intervention Strategy

Social Support and Well-Being

Social support theory addresses the extent to which individuals benefit from both perceived and real support in their environment from significant others, particularly in the face of challenging and stressful situations. Of particular relevance to the current study is the way in which social support theory has been used as a framework to develop interventions which create or boost perceived and/or real social support from family, friends, or other members of an individual's social field to in order to enhance well-being and strengthen coping ability.

The link between social support experiences and psychological well-being has been well established, particularly in the epidemiological literature (see, for example, Cohen and Wills, 1985; House, Umberson, and Landis, 1988; Lakey and Lutz, 1996; Monroe and Johnson, 1992; Sarason and Sarason, 1985). House, Umberson, and Landis (1988), in their review of the literature on social support and health and its relation to research and theory in the areas of social networks and social integration, defined social support as the process "...which pertains to the emotionally or instrumentally sustaining quality of social relationships..." (p. 293). They pointed out that the

psychology and health literature on social support which dates back only to about the mid-1970's grew from the well established sociological concepts of social integration and isolation. Although the literature on social support is recent, it is plentiful and in their extensive review of the literature, House, Umberson, and Landis noted that few, if any studies, have failed to find positive effects, main and/or buffering, of social support on health and well-being.

House, Umberson, and Landis (1988) acknowledged arguments from some writers that the positive effects of social relationships on health are possibly due to an underlying factor such as social competence, or are methodological artifacts resulting from confounding of measures. However, their assessment was that the evidence for the positive effects of social support is too strong across a wide variety of cases to be explained in this way. They cited past reviews by House (1981, 1986, and 1987) as well as their own (1988) in reiterating a statement by House (1987):

Evidence that social support can reduce morbidity and mortality, lessen exposure to psychosocial stress and perhaps other health hazards, and buffer the impact of stress on health is now available from diverse types of studies: laboratory experimental studies of animals as well as human, cross-sectional and retrospective field studies of human populations, and growing numbers of longitudinal or prospective field studies as well. Although the results of individual studies are usually open to alternative interpretations, the pattern of results across the full range of studies strongly suggests that what are variously termed social relationships, social networks, and social support have important causal effects on health, exposure to stress, and the relationship between stress and health.

(p. 296)

The consistent finding that those individuals with low levels of perceived social support are more likely to experience psychological stress and depression, cope less successfully with difficulties, and have more health problems have led to numerous studies involving the design and implementation of social support interventions applied in a wide variety of contexts. However, findings have been inconsistent and somewhat disappointing (Lahey and Lutz, 1996). A large part of the difficulty with intervention research appears to be with the definition of social support. Recently, concerns have been raised that social support is no longer a useful research term because it has been used to cover such a broad range of concepts including social networks, support interactions, support functions, and social environments, that its meaning has become blurred.

Veiel and Baumann (1992) pointed out that the concept of social support originated with the study of basic human needs, (e.g., the need for beneficial aspects of social relationships), and as such, is largely an atheoretical concept. They noted that within the past 20 years, the study of social support has grown to include research on the nature of supportive interactions, subjective appraisals of support and its relationship to factors such as personality characteristics, the effect of support (enacted or perceived) on stressful situations and those involving threats to health, the relationship between structural aspects of support or enacted support and perceptions of support, and the effects of various types of social support interventions. Similarly, Vaux (1992) asserted that social support has evolved to describe a wide variety of unrelated elements which, taken together, do not present a viable theoretical construct which can be measured. Rather, he described social support as a complex dynamic process involving "...transactions between individuals and their social networks within a social ecology" (p. 194). However, he went on to

point out that within the general field social support, distinct and useful constructs have been identified and successfully measured. These include support networks, support incidents, support behaviours, and support appraisals. These constructs encompass the two main aspects of social support which are now generally identified in the literature, that is, the structural-behavioural aspects of support for an individual (existing networks and actual enacted support) and the individual's subjective cognitive appraisal of its availability (Gottlieb, 1992).

In their extensive review of social support intervention research, Lakey and Lutz (1996) referred to studies which measured perceived support (an individual's subjective appraisal that others would provide support if needed, as well as a general sense of being valued), enacted support (provision of supportive behaviours at times of stress), and actual social networks (structural aspects of relationships, e.g. numbers of persons and/or contacts and nature of the relationships). They pointed out that basic research has demonstrated that these three aspects of social support are not closely related and in fact, reflect different constructs. Further, Lakey and Lutz cited a wide body of literature which has demonstrated a low correlation between enacted and perceived support (see, for example, Bennett, Sarason, Shearin, Pierce, and Sarason, 1987; Dunkel-Schetter, 1990; McNally and Newman, 1999). Moreover, the same studies have revealed that only perceived support is related to psychological and physical health. For this reason, Turner (1992), citing similar literature, strongly argued that the term social support should be reserved for the perception or experience of being supported by others. While he acknowledged the legitimacy of the study and measurement of social transactions, and supportive resources and behaviours, he argued that these largely have an effect on well-being through their impact on perceived support.

From their review of intervention studies which attempted to improve some aspect of social support, Lakey and Lutz (1996) concluded that most either had serious methodological problems or produced disappointing results. According to them, the main reason for lack of success in such research is that the design of interventions has been based on the assumption that enacted support is the link between perceived support and well-being. They argued that this traditionally held view is undermined by the low correlation between enacted and perceived support. They concluded that more basic research is required to inform interventions, and that it should focus on the process by which social support is effective in producing positive outcomes. Lakey and Lutz (1996) outlined what they see as three of the major components of perceived social support: an aspect of the perceiver's personality, objective characteristics of the supporters, and the perceiver-supporter interaction, with the latter two being more amenable to influence through intervention.

Gottlieb (1992), who developed a typology of support interventions (Gottlieb, 1988), noted the versatile nature of such interventions, and hence, some ambiguity in definition. However, based on an extensive review of intervention studies, he provided the following useful description which underlines the appropriateness of the choice of a social support intervention as a method to increase a sense of social integration as a response to isolation and identified stressors, and hence is most applicable to the current study:

...support interventions aim to optimize the psychosocial resources that people exchange with members of their primary social field. They accomplish this by effecting changes in the social field or in the individual's behavior (or outlook toward it) to improve the quality or quantity of needed supportive provisions, and ultimately to improve psychosocial

functioning. Variations in the strategies of accomplishing this aim depend on a host of factors, including the particular coping challenges faced by the intended beneficiaries, ... (p. 293)

Social Support in an Academic Context

There are few studies which address social support and academic contexts, and possibly none where there has been a specific intervention made to create new sources of social support for learners. However, there have been a few studies which relate the effect of existing social support to adjustment to academic transition. Barone, Aguirre-Deandreis, and Trickett (1991) attempted to measure the impact of various sources of support, family, friend, and school personnel (teachers and counsellors), on outcomes related to making the transition to high school. Family and school personnel support, but not peer/friend support, proved to correlate with certain positive outcomes. The strongest of these was with greater satisfaction with school, less in-school anxiety, and less difficulty with post-transition tasks. In multivariate analyses, school personnel and family support also showed unique effects in predicting quality of school life, giving some support to the hypothesis that social support constructs uniquely predict outcomes and that there is utility in distinguishing among sources of support.

Liang and Bogat (1994) found that the availability social support from family and friends predicted maladjustment among Chinese college students but buffered stress among white college students in the United States. However, this study did not look specifically at stressors or adjustment directly related to the role of student, focusing instead on general health and ability to cope with stress.

Zea, Jarama, and Bianchi (1995) attempted to find a relationship among social support,

psychosocial competence, and adaptation to college with a focus on finding differences among ethno-cultural groups. They surveyed a group of 357 students and used analysis of covariance to examine the relationship between successful adaptation to college and satisfaction with social support, locus of control, and active coping across groups. They found that both active coping and the perception of a supportive social context (i.e., the sense that help is available if needed from members of one's primary social environment) played an important role in adaptation to college across all groups.

Zea et al. (1995) observed that feeling satisfied with the support one has and being predisposed to engaging in active coping may play complementary roles. Accordingly, one of their conclusions was that "...providing a supportive environment may enhance active coping and interventions which promote active coping may enhance students' abilities to seek help and social support from family and friends and contribute, both directly and indirectly, to a more positive college experience" (p. 528). Their study supports the development of programs aimed at helping students acquire the knowledge and skills which they need to be successful as well as providing a supportive environment.

Developing a Social Support Intervention

As noted above, one of the challenging tasks in developing a social support intervention is establishing clear definitions which can be operationalized (Sarason, Shearon, Pierce, and Saranson, 1987; Vaux, 1992; Veiel and Baumann, 1992). Gottlieb's (1988) typology is helpful in that it speaks to levels of interventions and provides examples of each category, as is his (1992) definition of social support interventions which addresses both purpose (improving "needed supportive provisions", p. 293) and process (by "effecting changes in the social field" and or "the

individual's behavior", p.293). Further clarification is provided by Barrera (1991) who pointed out, "... social support interventions could be divided into two categories: (a) those that modify or mobilize the existing social support network, and (b) those that create new support providers" (p. 134).

Researchers such as Vaux (1992) and Lakey and Lutz (1996) have greatly clarified the goal of intervention research by focusing attention on the individual's subjective appraisal or perception of social support as the most important target of any intervention. Further, Lakey and Lutz refined the concept of subjective appraisal of social support, and addressed the concern that subjective appraisal of social support might largely be an aspect of a personality trait, and therefore be stable over time as opposed to a variable that might be manipulated by an intervention. They cited three studies by Lakey, McCabe, Fisicaro, and Drew (in press at the time of their publication) which used generalizability theory to partition variance in perceived social support according to perceiver, supporter, and perceiver-supporter interaction. Variance due to characteristics of the perceiver consistently accounted for less than 10% of the variance in the three studies cited. They concluded that the largest variance was due to perceiver-supporter interaction, and secondly to characteristics of the supporters. These findings support the proposition that perceived support can be influenced and that targeting specific aspects of perceived support with an intervention, for example, ensuring that supporters are well matched to the identified needs of the perceivers may enhance effectiveness.

Barrera (1991) noted that there have been few attempts, such as the intervention assessed in this study, to create new forms of social support. Most of the social support literature is based on field research of naturally occurring social support or on interventions which mobilize or boost

existing social networks (see for example Maguire, 1991; Vaux, 1988). A study by Heller, Thompson, Trueba, Hogg, and Vlachos-Weber (1991) is an exception which is still cited regularly as an example of methodological rigour and careful planning and implementation. It has been called "...probably the most impressive intervention study in this literature" (Lahey and Lutz, 1996). Hence, it is reported on at length here because extensive published commentary on it as a case study. Heller et al. tested a preventive intervention involving the initiation of a series of telephone contacts by professionals and peer telephone dyads for elderly women with low perceived social support.

Although the Heller et al. (1991) study did not turn up significant differences between the control and experimental groups, it is worthy of detailed attention for the important lessons it offers on development of a social support intervention. The target group of the Heller et al. (1991) intervention was quite different than that of the intervention tested in the present thesis. However, the conclusions of the original researchers and the commentary of those who have studied this piece of research are highly relevant, providing valuable guidance for the current study.

In the Heller et al. (1991) study, careful screening and recruitment procedures were used to select a group of 265 women for participation in the intervention study. Following initial assessment, participants were randomly assigned to an assessment only group or a group which received a series of friendly telephone calls from a staff member. After a second assessment, participants receiving the telephone calls from a staff member were randomly assigned to continue that contact or were paired in dyads to continue telephone contact with one another. Multivariate analyses of variance were conducted to determine whether there were significant changes in

perceived support or mental health among members of the intervention groups compared to assessment-only controls. Although Heller et al. found significant univariate effects on some of the measures within groups across time indicating simultaneous changes in both intervention and control groups, there were no overall significant changes in social support or mental health for either of the interventions compared to the assessment-only controls.

Heller et al. (1991) speculated that the non-significant findings may be due to a weak intervention or not sufficiently sensitive measures but did not have enough evidence to support either hypothesis. They noted that the psychological well-being measures they used, chosen for the ability to discriminate between normal mood shifts and more extreme clinical conditions, may not have picked up the effects of the telephone calls. Further, they pointed out that although telephone contacts made sense in terms of lack of mobility of the elderly, this may not have been an appropriate intervention medium to form friendships, which was the main purpose of the intervention.

All groups in the Heller et al. study, including the assessment-only groups, showed overall increases in morale and psychological well-being, leading the authors to conclude that the three contacts provided by the in-process and follow-up assessments were sufficient to make a positive difference but not enough to meet the goals of the intervention. Their final conclusion, based on the finding that family support seemed to make the most positive difference to the participants in terms of well-being, was that perhaps they chose the wrong intervention for this group. They recommend a careful ethnographic study of the target population before an intervention is designed.

Nine social support researchers were chosen to comment in some depth about the Heller et

al. (1991) study. Most commented on the design of the study in a positive way, pointing out the careful recruitment, randomized design with substantial sample size (between 50 and 100) in each treatment group), and outcome measures well suited to the predicted effects of the intervention. However, the most frequent criticisms of the Heller et al. (1991) intervention was that it was not designed based on a client needs analysis, and hence the intervention chosen was inappropriate. For example, Wills (1991) strongly advised that an intervention should be planned specifically according to the needs and characteristics of the target population by asking, “what aspect of support” does this group lack? (p.79). Similarly, Gottlieb emphasized the importance of prior assessment of the target population’s needs and wants for support.

Another frequent comment about the Heller et al. (1991) study was that measures should be well matched to the intended outcomes of the intervention. Wills (1991) strongly advised using different types of effect measures (e.g. cognitive, emotional, intellectual) as well as overall measures, all matched to the desired outcomes. With regard to measures and outcomes, Gottlieb (1991) speculated that even when there might not appear to be significant overall effects, an intervention may still have important benefits for the individual. Gottlieb also pointed out the importance of differentiating between the need for a directed support intervention in which the “beneficiaries ...are provided with specialized supportive resources to improve their coping with particular acute events, ecological transitions, or desired changes in health behaviors” (p. 129) and diffuse support wherein there is an attempt to enhance the main effects of support (cf. Cohen and Wills’ [1985] concept of functional and structural support) and to both design the intervention and measure its outcomes accordingly.

Another important lesson from the Heller et al. (1991) study is to consider the normative

appropriateness of the relationship, that is, whether an established social norm exists to help maintain the supportive relationship. For example, Barrera (1991) focused on the challenges of translating the social support literature into the basis of an intervention, noting that it stretches the knowledge base “which is grounded in the natural social environment” (p.134) to create new sources of social support and attempt to measure the effect. Specifically, he questioned the feasibility of a stranger (either peer or professional) becoming a friend for an elderly person, as was the aim in the Heller et al. (1991) study. It is important to note that, in this sense, the Heller et al. study is different than social support interventions which use institutional staff to carry out interactions or initiate relationships which are more appropriate to their professional role (e.g. providing advice or information in a supportive manner).

Vaux (1991) advised being clear about what part of the social support process is being targeted. He provided the following examples of areas which can be addressed:

“...(a) improving utilization of existing network resources, (b) developing and maintaining network resources, (c) improving management of support incidents (i.e., improving skills involved in offering, eliciting, and accepting supportive behavior), and (d) facilitating positive subjective appraisals of support.” (p. 87).

Vaux (1991) pointed out that by making the focus of an intervention explicit, researchers are more likely to attend to the main points raised in the commentary on Heller et al. (1991), that is, close examination of certain aspects of the process, consideration of various alternatives, questioning the potency of the intervention, and selection of appropriate measures.

In summary, a careful assessment of the points raised by Heller et al. (1991) research and subsequent commentary lead to the following points being incorporated into the design and

evaluation of the intervention for the current study: attention to experimental design, including randomized assignment to and substantial sample size (between 50 and 100) in each treatment group, intervention carefully matched to needs and context of beneficiaries, measures matched to intended outcomes, norm-appropriateness in terms of initiating and making contact between the beneficiary and person chosen for the intervention, and consideration of sufficiency of potency of the intervention to produce desired outcomes.

Given the apparent complexity of the concept of social support and the lack of a well established literature with consistent results to guide the development of social support interventions, the advice provided by the analyses of the Heller et al. study (1991) was extremely helpful. In addition, the literature which addresses how social support works to produce positive effects was reviewed in order that an appropriate definition or model could be chosen to provide a consistent theoretical base for design of an intervention. As evidenced in the studies cited above, there now seems to be broad agreement that perception of social support is more important than the actual size of the social support network or enacted support in predicting positive outcomes; that to the extent that it can be measured, social support works through both main and buffering effects; that support is more likely to have a positive effect if the source and type of support are closely matched to the perceiver, the context and potential sources of stress; and that consideration should be given to appropriate timing of an intervention according to context. The process definition of social support provided by Cohen and Wills (1985) incorporates a number of these premises and provides a generic framework which can be adapted to specific contexts for the purposes of intervention design.

Cohen and Wills (1985) described perceived and received social support as working at

two levels, both enhancing the well-being of an individual and buffering them against stressful incidents. The first is a general structural level whereby the individual experiences a sense of well-being that comes from the perception of social integration and the sense of availability of a network of support that comes from that affiliation. The second level is specific and functional and operates by buffering the individual against possible stressors through the provision of three kinds of support: information, instrumental help, and emotional support. The more closely the support is linked to the potential sources of stress, the stronger the effects on the well-being of the person.

Using the Cohen and Wills (1985) process definition as a basis for design, and applied to the context of distance learning, it was proposed that a social support intervention might work in the following way to enhance learning outcomes. At the general structural level, the learner would benefit from the perception of availability of support from the university and feelings of affiliation and social integration with the institution. At this level, perceived social support would promote a generalized sense of well-being that comes from belonging, being cared about, and knowing that there is a safety net.

At a specific functional level, the social support intervention was designed to meet the new distance learner's identified needs for information, instrumental help in the form of advice and coping strategies, and emotional support in dealing with anticipated sources of stress inherent in this kind of study. It was proposed that this latter kind of social support would mediate learning outcomes by preparing learners so that they would be buffered against the possibilities of known stress factors such as heavier workload than anticipated, examination anxiety, lack of opportunities to compare perceptions with peers, lack of support from family, or a negative

interaction the professor. By building a supportive relationship with learners, offering appropriate information and instrumental help, and strengthening their overall perception of the institution as a place to which they belong and which offers assistance to them, it was believed that the intervention would promote their successful transition to a new challenging learning situation and provide anticipatory guidance designed to prepare them for the stressors which that situation entails.

Summary

In summary, it has been well established that interaction between institution and learner which is perceived as positive by the learner enhances persistence and achievement in distance education. However, the distance education literature on support and interaction is not well unified in terms of explanatory theory and empirical research. Social integration theory has been shown to be one of the most useful frameworks for understanding persistence in campus-based settings, and to some extent, in the distance education setting. For the purpose of the present thesis, social support theory was chosen as an appropriate conceptual framework to guide the design of an intervention to enhance the social integration of distance learners in order to test whether it might have a positive effect on specific learning outcomes.

Woodley and Parlett (1983) quite rightly point out that retention is a complex multi-faceted issue which cannot be addressed by a single component within the institutional system. On the other hand, it seems clear that certain types of interaction with learners have the potential to affect a maximum number of other variables in the equation, whether related to the learner, his or her situation, or the institution. The present thesis proposed that a structured social support intervention would have the maximum potential to have a positive effect on the individual

learner's characteristics such as confidence, motivation, and intent to complete, situational variables such as the learner's attempt to get family support, and institutional variables such as influencing the type of subsequent interaction with university personnel both in quantity and quality.

The goal of the intervention was to improve learning through providing both general structural and specific functional social support as specified by Cohen and Wills (1985) and according to challenges of distance learning as identified in the literature. Specifically, the intervention was intended to help students get an effective and early start in their course, contribute to their sense of affiliation so that they could benefit from the assistance available (both from knowledge of its availability and actually using it), and engage them in a process of anticipatory guidance which would buffer them against potential stressors.

Hypotheses

Hypothesis 1: Effect of the Intervention on Use and Perception of Orientation Materials

Compared with the participants in the control group, those in the experimental (intervention) group will be more likely to use the orientation materials forming the baseline service for new distance learners and perceive them as being useful.

The first objective was to investigate whether those participants who received the social support intervention were more likely to use the orientation materials (The Starter Kit) and to perceive them as being useful. One purpose of the intervention was to point out to students how The Starter Kit could help them in their distance studies and encourage them to make use of it. The use of The Starter Kit is seen as important because it can help students anticipate and effectively cope with stressors and challenges specific to distance learning, and because the tone and content of The Starter Kit is intended to engender a sense of affiliation with Laurentian University and strongly reinforce the notion that help is readily available if needed.

Hypothesis 2: Impact of Intervention on Learner Behaviour

The second objective was to investigate whether participants who received the social support intervention were more likely to work on their distance education courses with greater frequency and for more hours per week, initiate contact with faculty and other university personnel more frequently, and submit their first assignments early or on time. These factors have been identified as being positively related to successful course completion in distance education. Hence, the purpose here was to investigate whether participants who received the social support intervention were more likely to persist in their studies and complete courses successfully with higher grades. Hypothesis 2 was broken down into 5 sub-hypotheses according to the desired behaviours and outcomes.

Hypothesis 2a: Time spent on the course. Compared with participants in the control group, those in the experimental (intervention) group will spend more time working on their courses.

Hypothesis 2b: Learner initiated contact. Compared with participants in the control group, those in the experimental (intervention) group will initiate contact with faculty and other university personnel more frequently.

Hypothesis 2c: Submission of first assignment. Compared with participants in the control group, those in the experimental (intervention) group will submit their first assignments earlier.

Hypothesis 2d: Course completion. Compared with participants in the control group, those in the experimental (intervention) group will be more likely to successfully complete their courses.

Hypothesis 2e: Final grades. Compared with participants in the control group, those in the experimental (intervention) group will receive higher grades.

Hypothesis 3: Impact of Intervention on Learner Satisfaction

Compared with participants in the control group, those in the experimental (intervention) group will be more likely to be satisfied with their distance learning experience.

The third objective was to investigate whether participants who received the social support intervention were more likely to be satisfied with their distance learning experience. Learner satisfaction is an important outcome measure for institutions interested in student retention. The aspects of learner satisfaction which were considered included perceived benefits (i.e. intellectual development, career related gains), overall satisfaction related to prior expectations, intention to re-enrol, and likelihood of recommendation of Laurentian distance education to others.

Hypothesis 4: Social Support as a Mediating Variable between Treatment and Outcomes

If there is a relationship between the treatment (intervention) and outcomes, it will be mediated by social support.

The fourth objective was to investigate whether the hypothesized relationship between the social support intervention received by the experimental group and the outcomes was mediated by social support. The design of the intervention was based on social support theory, and was intended to address the issue of social integration discussed in the literature and the expressed needs of distance learners for institutional contact, thus having a positive effect on learner behaviour and learner satisfaction.

Method

Research Setting and Participants

Setting

Laurentian University is located in Sudbury in Northeastern Ontario. It is a bilingual institution with an enrolment of approximately 5200 full-time undergraduate and graduate students in Humanities, Social Sciences, Sciences, and a variety of Professional Schools programs. Laurentian also offers a wide range of credit and non-credit courses through its Centre for Continuing Education both on and off-campus. Envision, Laurentian's distance education program, is administered through the Centre for Continuing Education and has been in operation since 1972. The Envision program serves over 1000 students, most of whom are in Ontario, and offers a wide variety of courses and programs in both French and English.

Distance education courses at Laurentian University generally consist of textbooks and custom designed printed materials which guide students through the course with the equivalent of lecture materials and assignments (see Appendix XX - Sample Course Information). Print materials are sometimes supplemented by audio or videotapes. Distance education students are assigned a professor for each course to help them with content, and, if they wish, they can also consult with other university personnel for help with questions to do with administrative issues, academic advising, study skills, or special needs. Contact with the professor and other university personnel is generally made by telephone but, in some cases, professors and others are available by e-mail. In most cases, contact is voluntary and left up to the student.

At Laurentian, distance learners start courses at the same times as on-campus students, that is, in September and January, and in April for spring session. Courses are weighted exactly

the same as on-campus courses, being either a semester (approximately 14 weeks) or a year (approximately 28 weeks) in length. Generally, courses are not strictly paced but must be completed within the time frame of the regular academic schedule. Students register for their distance education courses in advance and may receive their course materials by mail or pick them up on campus. Any required texts must be purchased (by mail or in person) at the university bookstore. Late registrations are accepted until about one month after the beginning of the term, as are course changes (drop/add).

As with on-campus courses, the evaluation methods differ from course to course. Most have some combination of assignments and/or essays and all have invigilated final examinations. These are written at designated examination centres during the same exam period as those written by on-campus students. Students who wish to defer exams or who must write at a place other than a designated examination site must get advance written permission from the university to do so.

The Centre for Continuing Education is currently expanding its distance education offerings, both in terms of new programs and experimentation with new delivery modes such as networked learning. The current study is part of their ongoing research and evaluation efforts.

Research Sample

The research participants were recruited at the beginning of the Fall 1998 semester from the total intake of all students who entered the Laurentian University Envision program for the first time (N = 306). As noted above, Laurentian University is a bilingual (French/English) institution, and both language groups were represented in the study. All materials for the study were available in both French and English, and all contact with students was made in the language

of their choice. Translations were carried out by the Translation Office at Laurentian.

As Consent Forms were received, (as opposed to waiting until all Consent Forms were received), participants were matched according to three variables identified in the literature as important variables in predictive models of persistence in distance education: gender, age (≤ 25 , 26-39, 40-54, and ≥ 55), and previous educational experience (\leq high school graduation, partial or completed 1st post-secondary degree or diploma, and university graduate studies). Following the matching, each member of each pair was randomly assigned to either the experimental ($n = 93$) or control group ($n = 93$) using random number tables.

Attrition and disqualification of study participants reduced the original group of 186 by 30 (16%) to 156. Four participants could not be reached for the telephone intervention despite repeated attempts to do so. Similarly, four participants could not be reached for the follow-up telephone interview. Participants were called at various times during the day and evening, during the week and on weekends over a period of at least two weeks before being excluded from the study. In some cases, messages were left but were not returned. Nine students withdrew from their distance education courses very early in the semester, in all cases, within the first month, and therefore expressed a preference to withdraw from the study. All stated that their distance education experience was not extensive enough to respond to the follow-up interview. Only one participant withdrew from the study even though she stayed in the course. Work and travel requirements made it difficult for her to participate in the telephone interactions. One control group participant was disqualified from the study at the follow up interview stage because it was discovered that she had not been enrolled in a distance education course in the fall 1998 semester. She had been mistakenly included on the registration list.

The attrition described above (19 participants) resulted in 80 participants in the experimental and 87 participants in the control group who were in the study and who completed the follow-up interview. At this stage, the participants in the control and experimental groups were rematched in pairs according to gender, age, and previous educational level, with the same categories used as noted above. There were two exceptions made. In two cases, the previous education categories were relaxed to allow for pairing of participants (already matched on age and gender) who had baccalaureate experience with participants at the graduate studies level. This was not seen as a serious breach of the purpose of matching because previous post-secondary experience (as opposed to high school or less) was seen to be the level of the educational variable that could positively affect outcomes. Subsequently, as a result of the preliminary analysis, these two categories (baccalaureate and graduate studies) were collapsed for all participants. The rematching resulted in the disqualification of 11 participants (those who could not be satisfactorily matched according to the categories described above), leaving a final pool of 156 matched participants, 78 in the experimental group and 78 in the control group.

The final group of 156 participants was comprised of 120 (76.9%) women and 36 (23.1%) men and had a mean age of 27.37 (SD = 10.75; range = 18-68). There were 46 (29.5%) participants with high school or less, 106 (67.9%) participants with a completed or partial first degree or diploma at the post-secondary level and 4 (2.6%) participants at the graduate studies level. For the purposes of subsequent data analysis, the latter two categories (completed or partial first diploma/degree and graduate studies) were collapsed, as was mentioned, to form one category comprised of 110 participants (70.5%) with post-secondary experience, either college or university.

The final sample included 52 (33.3%) participants studying part-time and 104 (66.7%) participants studying full-time. Many campus-based students were enrolled in distance education courses as part of a full-time course load. Not surprisingly, the number of students who reported being on campus as well as taking distance education courses matched the number of full-time students ($n = 104$; 66.7%). One hundred and thirty (83.3%) participants were enrolled in only 1 distance education course (89 of whom were full-time students), with the remaining 26 (16.7%) participants taking anywhere from 2 to 6 courses (15 of whom were full-time students). Given the small number of students taking more than one distance education course, all 26 were collapsed into one category for the purpose of subsequent analyses.

English was the language of choice for 133 (85.3%) participants compared to French as first choice for the remaining 23 (14.7%) participants. Of the 152 participants who reported their employment status, 97 (63.8%) were employed either full-time or part-time, 10 (6.6%) were unemployed and looking for work, and 45 (29.6%) were not employed. Among the employed ($n = 97$), the average number of hours worked per week was 24.41 ($SD = 14.08$, range = 3-90).

The study participants parallel the population from which they were drawn in several important ways. Information from a previous study (Brindley, 1998a) which addressed the changing profile of university distance learners reveals that distance learners currently entering Laurentian University are mostly (65%) female and are relatively young (almost half being under the age of 30). Further, most (75%) have some post-secondary experience.

Two differences between the participants in the study and the population as described in the survey report (Brindley, 1998a) emerged. One difference was in the employment status profile. A greater percentage of the participants in the current study are employed (64%

compared to 46%). This may reflect, at least in part, an improved employment situation because there are fewer participants in the current study than in the earlier survey who identify themselves as unemployed and looking for work. Another difference is in the percentage of campus-based students. The previous study (Brindley, 1998a) revealed that the numbers of first-time distance education students at Laurentian who were in a full-time on-campus program were significant (approximately 40% of the September 1996 distance education intake) and appeared to be growing. Indeed, 67% of the students in the sample for the current study are taking campus based courses as well as distance education. However, it should be noted that the greater percentage of full-time students taking distance education courses who participated in 1996 survey compared to those who participated in the current study may not strictly reflect growth. Although there is evidence to suggest a trend in this direction (Wallace, 1996), it may well be that for a variety of reasons more full-time on-campus students self-selected to participate in the current study. In summary, overall, the participants for the current survey appear to resemble the population from which they were drawn quite closely on the variables identified here.

Procedure

Staffing

The study was carried out during a regular academic year at Laurentian with existing staff, and the design of the project had to be modified a number of times to accommodate the practicalities of working in a field setting. The researcher (located in Windsor, Ontario about 800 km. from Sudbury) made regular visits to Laurentian (once or twice per month for periods of 3 to 5 days) during the course of the study (April, 1998 - February, 1999) and was available to all Laurentian University staff involved in the project by telephone and e-mail at other times.

Laurentian University Centre for Continuing Education assigned a member of management to generally oversee the project, and designated two members of staff as Student Advisors for the purpose of the study. The two staff had extensive experience with advising students from their previous and current roles at the University. The Student Advisor's role was to place the recruitment telephone calls to new students as they registered for distance education courses, administer the social support intervention to those in the experimental group, and, in order to facilitate continuity of interaction, be available to these learners (experimental group) for the duration of the courses designated as part of the study (registration in fall of 1998). The Student Advisors received a one-day training session from the researcher which covered the purpose of the intervention and some basic communications skills review. (For more details about the content of the training, see Appendix V.) The Student Advisors were also provided with structured scripts for recruitment (see Appendix I) and for the telephone intervention (see Appendices VII and IX). These could be adapted to the particular style of communication of the Student Advisor but the instructions were for all basic points to be covered.

It was discovered two weeks after the recruitment was to have commenced and after the intervention calls were to have been started (during the third week in September) that the regular workloads of the staff designated as Student Advisors would prevent them from participating in the study to the extent that had been originally planned. When presented with the project during the summer, they had estimated that they would have time to do the recruitment and intervention according to the proposed schedule; however, they did not have release time from their other duties, which were considerable during August and September. By the time it was revealed that these two people had insufficient time for all of the duties related to project, it was already too

late to stay on the schedule which had been mapped out. However, the schedule was revised and additional staff and volunteers were recruited for the various phases of the project. Further details of the delays and how they were addressed are provided under each of the procedure headings in this section and the implications are discussed under 'Limitations of the Study'.

Recruitment of Participants

The research participants were to be recruited before and at the beginning of the Fall 1998 semester from the total intake of all students who entered the Laurentian University Envision program for the first time. As noted above, due to staffing problems, recruitment was delayed by two to three weeks. When it was discovered that the two Student Advisors could not make all the recruitment calls, 10 volunteers (both Laurentian University staff and community members) were trained and employed for the recruitment phase which was successfully completed by the first week in October, the week after the deadline for late registrations. Although the alternate staffing arrangements were made quickly, the delays in recruitment were critical because the subsequent interventions, which were designed to help the students get an early start in their courses, were also set back by two to three weeks.

For the fall semester (September - December), Laurentian University distance education students can register over a period of time from when the calendar is issued, usually late spring, until approximately the end of September. In order to facilitate recruitment for the study, lists of new distance education students were generated from Registry student records beginning near the end of August and continuing, as they became available, until approximately 210 students had been contacted, agreed to participate, and requested Consent Forms. By then, it was the first week in October, and it was decided that recruitment would be cut off at this point because it was

believed that enough participants would be obtained from this initial group, and that a point in time had been reached when prolonging the recruitment further would jeopardize the timing of the intervention.

A group of 12 staff members and volunteers recruited students for the program by telephone, using a standardized recruitment script (see Appendix I), which included informing them of the study's purpose and ethical approval (see Appendix III). All students who agreed to participate were sent a Consent Form approved by the Ethics Committee of Laurentian University (see Appendix II). Only those students who signed and returned their Consent Forms were eligible to participate in the study ($n = 186$). Those who agreed to participate in the study were offered the opportunity to have their name entered for a draw for a \$100 gift certificate from the Laurentian University Bookstore.

Experimental Group Procedure

Needs assessment. A preliminary study (Brindley 1998a) at Laurentian University which collected detailed information about the incoming distance learner population, their characteristics, expectations, needs, and preferences provided an important part of the rationale for the present thesis. Only a brief summary of the portion of the data which addresses the needs, expectations, and anticipated concerns of the population which is directly relevant to the thesis project is reported here.

An extensive survey questionnaire was mailed to all new Laurentian University distance education students ($N=217$) in the fall of 1996, shortly after enrolment. After adjustments were made for certain anomalies in registration patterns during that academic term (e.g., post R.N. students were removed from the sample), the response rate was over 60%, which is relatively high

for this type of survey. A data set was created from the responses to the questionnaires and was analyzed (descriptive statistics only) using SPSS software.

As reported in the Literature Review section, one of the major findings of the study was that the distance learner profile appears to be shifting. One of the apparent changes is that the respondents to the survey appeared, for the most part, to be more educationally experienced than has generally been the case for distance learners in the past. Most of them have completed at least secondary school or equivalent, and 75% have some post-secondary experience, including 18% who have completed university degrees. Fully 70% were within 4 years of their last educational experience.

Perhaps because many of these learners have previous post-secondary experience, they were relatively clear and certain about their educational goals. Most (89%) of the respondents indicated with a high degree of certainty that they planned to achieve at least a baccalaureate degree or go on to a graduate degree. And 94% stated that they were either somewhat certain or very certain about these plans.

Although it appears that for a little over half of these first-time distance learners, the classroom is still perceived to be preferable, it is important to note that a significant portion of the sample (almost one-third) indicated that studying in a classroom would not be preferable to distance education, and that they preferred to study independently rather than in a group. Further, extrapolating from the two most frequently chosen factors among the reasons for distance study, most learners appear to see distance education as a very positive choice. Sixty-seven percent said that they chose to study through this mode because they see themselves as having the self-discipline and time management skills to be successful in distance education and 62% indicated

that distance learning is attractive because they like working at their own pace and having flexibility in choice of study time.

By far, the factors which were cited most frequently as being either very important or important in the decision to continue with education were “for intellectual development” (92% of respondents) and for “personal growth” (87%). Still significant, but cited less frequently as being important was “to gain knowledge and/or skills for moving into a new job (72%). These are factors which were taken into consideration in measures of learner satisfaction in the post-hoc questionnaire employed in the present thesis.

As part of the needs analysis, learners were also asked about their expectations of their experience with university distance learning, rating these from the perspective of what is important to them and then predicting how well they thought each of their expectations would be met. In general, their responses to what is important to them support what they said about their reasons for continuing their education at this time. Almost all of the student (98%) stated that it was important for them to have the opportunity as part of their educational experience to develop intellectually and 92% believed that this expectation would be met. Similarly, a very high percentage of students (97%) stated that it was important that their courses be interesting, and 87% of students believed that this would be the case.

It is interesting and somewhat disturbing that in some cases, there were significant gaps between what these students stated was educationally important to them and what they actually expected to experience. Given that they are a fairly educationally experienced group, it might be assumed that not all of that experience has been positive. For example, most students indicated that it is important that their courses be intellectually challenging, that academic standards be

high, and that courses require a great deal of study time but only about two-thirds to three-quarters of the students expected that this would be the case. More relevant to the current project is the finding that the gap widened even further when students were asked about interactions which they might have with faculty and other university personnel. Ninety-four percent of students said that it is important that staff are helpful and courteous but only 70% believed that they could expect this to be the case. Perhaps of even greater concern is that 98% of student indicated that it is important that they be able to get help from the professor when they need it but only half of the students believed that this would be possible. Similarly, 83% of students thought it is important that their opinions be valued in discussion and/or assignments but only 43% of students believed that this would be their experience.

When asked about how important they thought it might be for them to have contact with university personnel about various aspects of their studies, many students indicated that they anticipated needing a variety of services in order to be successful in their studies. At least 26% and up to 64% of students (depending upon the service) indicated that these services would be important to them. Perhaps most interesting is that the highest anticipated demand for contact with university personnel was to discuss personal challenges or difficulties which might affect their studies (64%). This was slightly more than the 60% who indicated that they would need help with course content. Other services identified by a significant portion of students as important included academic advising, assistance with administrative matters, career planning, and special needs.

The desire of these distance learners to have support services available was reinforced by their responses to questions about what they anticipated might give them difficulty or interfere

with their studies. The issues with which they report being most concerned are related to their ability to manage their studies, getting the assistance they anticipate needing, and having sufficient finances.

A follow-up study (Brindley, 1998b) with this same group of learners at the end of their first distance learning course(s) indicated that there was a high overall level of satisfaction with taking distance education courses. However, when more specific questions were asked, it was apparent that the aspects of distance learning with which students were most satisfied are related to the flexibility in time and place of study and not necessarily with the quality of the learning experience. In particular, lower levels of satisfaction were indicated in terms of amount and quality of interaction and support received from the institution. Many students had no contact with the institution, and most had no more than three contacts during the term.

Conclusions and recommendations from the needs assessment and follow-up study had a strong focus on interaction with learners. Hence, the present thesis was intended to investigate cost-efficient and effective ways to meet learners' expressed needs and expectations for interaction and access to support services by integrating them into the existing support network at Laurentian. To this end, a new orientation package, The Starter Kit, and the social support intervention were developed.

Orientation materials (The Starter Kit). All students who entered one or more distance education courses for the first-time during the fall of 1998 received a print package of orientation materials called The Starter Kit (see Appendix IV) as well as their course materials. (The Starter Kit, designed for the current study as the baseline treatment for the control and experimental groups, has now been adopted for use with all new distance students at Laurentian University.)

The Starter Kit includes the following:

- a) a welcome letter explaining the purpose of the package
- b) a quick one-page reference giving instructions on how to get started in the course
- c) a self-assessment questionnaire for readiness for distance learning which addresses goal clarity, commitment and motivation, support networks, and academic preparedness
- d) a one page description of what distance learners say about their reasons for study, expectations and concerns (information about peers)
- e) a guide to services and contacts at the university
- f) a self-help section which addresses building a support network, time management, place of study, study skills, and maintenance of motivation
- g) an evaluation form for students to return to Laurentian University to collect learner feedback for input to revision of the package (not intended to collect data for the current study)

These orientation materials were designed to address the common concerns of a heterogeneous group of distance learners based on a needs assessment of Laurentian's distance education students described above (Brindley, 1998a) and more generally, on the literature regarding support needs of students new to distance study (see for example, Brindley and Jean-Louis, 1990; Brindley, 1995a; Delehanty, 1986). Although many Laurentian University distance learners have previous post-secondary experience, it does not necessarily prepare them for the special requirements of study outside of the classroom. It has been well established that distance learners benefit from having advance information about the time and skills required for distance study, a quick uncomplicated guide to getting started in their first course, information which

allows them to compare themselves with their peers, self-awareness of strengths and weaknesses in relation to distance learning requirements, knowledge of resources for acquiring requisite skills, and practical suggestions for coping, such as how to develop a support network.

The overall goal of the orientation package is the same as that of the intervention. As well as conveying information and instrumental help important to distance learners, it is intended to convey a strong message that there is help and support available from the university should it be required. As part of the strategy of social integration, the orientation package strongly encourages learners to make contact with the university if they require assistance. Toward that end, the language used in the package is friendly in tone, the content is learner oriented (as opposed to rule oriented), and ease of contact is stressed through repetition of a common contact point and a toll free number.

The Starter Kit had to be designed within the context and limitations of delivery at a distance and with the condition that it be practical and feasible to continue to provide the package to distance learners once the study was complete. Hence, the materials are all self-help in nature and print-based (although they could be adapted to a technology such as the WEB) for ease and cost-efficiency of updating and distribution.

It should be noted that there were problems in communication with changing over from the old orientation materials to The Starter Kit at the beginning of the fall 1998 term which resulted in the old orientation materials being sent out to many new distance learners before the error was discovered. The Starter Kit was to be sent out or handed out (in the case of over-the-counter registrations) with every course package to all new distance education students registering in the fall of 1998. Although The Starter Kit was available, staff responsible for

materials distribution were not aware of the change. They continued to send out the old orientation materials with the course packages for approximately three weeks. The mistake was discovered during the recruitment process when students were asked if they had received The Starter Kit. For a period of time, there was some confusion surrounding who had received new and old materials so, as soon as the mistake was reported, an errata letter (see Appendix VI) and The Starter Kit were mailed to everyone who had registered. However, this resulted in many students receiving two sets of new materials, both old and new. More importantly, some did not receive The Starter Kit until the end of September, long after they were intended to have it. Because the intervention and The Starter Kit were intended to work in tandem, one reinforcing the other, this first mistake may have had a significant impact on the outcome of the study which is not possible to measure. Records were not kept of the timing of distribution to each student and hence, it is not possible to track whether there were differences between experimental and control groups in this regard. Many students did mention the lateness of The Starter Kit during the post test interviews. Implications of the problems with distribution of The Starter Kit are discussed under 'Limitations of the Study'.

The social support intervention. As with all new distance education students, the experimental (intervention) group received The Starter Kit as a baseline service. In addition, they received an intervention based on social support theory and adapted to the distance learning context as described above. The intervention consisted of two telephone calls and two follow-up letters (see Appendix VIII and X) and was to be carried out by the two staff members designated as Student Advisors for the purpose of the study. However, given that underestimation of the time these two staff would have available, and the already delayed timing of the intervention

because of late recruitment, it was decided that additional staff were required. Hence, five more members of the Laurentian University staff were recruited and designated as Student Advisors, bringing the total number of staff making the interventions up to seven.

The five additional staff did not receive the same amount of training as the first two Advisors because of time restraints, but all were experienced helpers, already involved in some aspect of direct service to students (e.g. counselling, placement, advising, special needs). As much as possible, steps were taken to ensure consistency in the intervention. The researcher spent one hour with each of the additional staff, reviewed the purpose of the project and the intervention, the content of the training session (see Appendix V), procedures, and structured scripts (Appendices VII and IX). Further, the researcher was available to all seven Student Advisors by telephone and e-mail, as well as making regular site visits, during the course of the study. Despite these steps being taken, the likelihood of greater variance in application of the intervention and the amount of time which passed between making the intervention calls from when the participants were assigned were increased significantly with adding extra staff after the start of the project.

It should be noted that another adjustment which had to be made due to the delays and addition of staff to the project was that the random assignment of experimental participants to Student Advisors was abandoned in favour of expedience in assignments of cases. As well, workload issues affected the balance of assignments among Advisors. Other than the stipulation that any students with a French language preference be assigned to the francophone Student Advisor, participants in the experimental group were assigned to the seven Advisors according to no other principle than time available. Hence, two Advisors were assigned 20 participants each,

and the remaining 53 participants were divided unevenly among the remaining five Advisors as their workload permitted. If one Student Advisor finished his or her calls earlier than expected, he or she took on additional participants who had not yet been called. Although the original plan had called for random assignment of the experimental participants to one of two Student Advisors, the revised procedures were more practical in the light of having seven Advisors and allowed for participants to be assigned to an Advisor as Consent Forms were being received, helping to compensate for the delays which had set the interventions behind schedule.

The first telephone call was intended to be made shortly (within two weeks) of the student starting the course (mid-September to mid-October depending upon the time of registration), and the second one approximately 3 to 4 weeks later. Due to delays with participant recruitment and with sending out The Starter Kit (described above and discussed in 'Limitations of Study'), the calls were made somewhat later than planned. First intervention calls were made throughout October and second intervention calls were not completed until the end of November.

The telephone calls were made by the Student Advisors using semi-structured scripts (see Appendices VIII and X). Student Advisors were instructed as part of their training and by the scripts to engage the student in dialogue, demonstrate empathy, communicate caring and support, encourage further contact, provide information about the Laurentian support network, and make suggestions on how to approach learning tasks. More specific content of each of the sessions is described below.

The first telephone call of the intervention was intended to be made at approximately the same time as The Starter Kit and the course package were received by the student. As noted above, these calls were made two to four weeks later than planned. During this initial telephone

call, the Student Advisor welcomed the new learners, introduced the content of The Starter Kit and the course package, pointing out the one page primer on getting started, the course outline, major course requirements, deadlines, examination dates, and contact information for assistance. Content was modified according to the needs of the student and how far along they were in the course. If the student was still at the beginning stage, they were encouraged by the Advisor to start immediately by working through The Starter Kit, developing a study schedule, and reviewing the course materials. Learners were also encouraged to call for assistance if they had questions when reviewing the material or making up their schedule.

During the first intervention call, the Student Advisor also inquired about contact with the professor, and, if appropriate, pointed out the information about how to reach the professor, discussed how the professor could help, encouraged early contact, and if the student appeared to be shy or reticent, gave some advice for successful interaction. At the end of the call, the advisor set an appointment with the learner for the second call. (See Appendix VII for the script of the first telephone call.)

After the first telephone call, the Student Advisor sent the student an encouraging letter which included a reproduced photo of the Advisor (see Appendix VIII). The letter was intended to reinforce the content of the call, strengthen the student's sense of affiliation with the University, encourage the student to make contact if necessary, and confirm the time of the second telephone call.

During the second call, timed approximately 3 to 4 weeks after the first one, the Student Advisor checked on the learner's progress, assessed the need for assistance both with course content and generic issues such as time management, writing skills, personal difficulties, or

examination preparation and provided assistance or made referrals as necessary. During these calls, Advisors addressed a number of issues, such as helping with administrative questions, providing support and assistance with time management, and making suggestions or answering questions about how to effectively make contact and get assistance from the professor.

Intervention telephone calls between the Student Advisors and students were to be audiotaped so that a sample could be reviewed for consistency with the intent of the intervention. Consent for audiotaping was obtained from all participants at the time of recruitment and consent (see Appendix I - Recruitment Script and Appendix II - Consent Form). The need to recruit extra Student Advisors on very short notice, the unanticipated variety of office locations involved in the study, and the additional equipment required made taping all of the telephone calls impossible. When it became apparent that existing equipment was not adequate and that buying new equipment would be very expensive and delay the project further, a decision was taken to proceed with existing equipment and audiotape whenever possible. Overall, 56 of the possible 78 initial calls, and 28 of the 78 second calls were recorded for a total of 84 taped calls. The uneven spread of tapes among advisors makes comparisons of the impact of their individual application of the intervention difficult. Six of the seven Advisors taped at least some of the first intervention calls, but only three of the seven taped some of the second intervention calls. One advisor was responsible for 34 of the 84 taped calls. Two independent raters (graduate students in social sciences at the University of Windsor) checked the tapes against the written scripts for content fidelity. A simple rating scheme was used whereby the tapes were checked for the presence or absence of the 8 main topics of each intervention.

It should be noted that although the two raters were not asked to attend to any other issues

than content, both commented that the Advisors did not always adhere to the scripts. Further, they observed that language might have played at least some small role in the case where topics were missed during an intervention. They noted that at least two Advisors appeared to be a great deal more comfortable and more complete in covering topics in one language than in the other. (Interventions were carried out in both English or French according to wishes of the student.) Although the researcher did not rate tapes, she listened to a number of them and agreed with these observations. However, there is no quantifiable data to support the impression about the role that language might have played in either adhering or not adhering to the intervention script as intended.

The implications of the delays and changes made to the procedure for the intervention obviously affected all phases of the project. These are discussed in 'Limitations of the Study'.

Control Group Procedure

The control group, along with all new distance education students in the fall of 1998, received The Starter Kit but no social support intervention (telephone calls and letters initiated by the university). They had access to all of the same services as the experimental group but had to initiate contact themselves in order to take advantage of these. The difficulties in mailing of The Starter Kit which were described above affected all students, both those in the experimental group and those in the control group.

Experimental Design

This study employed a comparative design (Basham, 1986), that is, both groups in the study received the same baseline orientation service (The Starter Kit), and differed in only one element of treatment in that only the experimental group received the social support intervention.

Although the group not receiving the intervention is referred to as the control group in this study, it is not a control group in the formal sense (no-treatment), but rather a comparison treatment group. This design was chosen rather than a no-treatment control design for administrative and ethical reasons. It was not acceptable to exclude any new students from receiving some form of orientation, and it has been the usual practice at Laurentian University to provide every student with a guidebook to service. The advantages of using a comparative design over a no-treatment control design is that it allows for differential outcomes to be attributed to the specific treatment factors which differ between the two groups and it avoids problems with demand artifacts common to no-treatment groups (Basham, 1986).

Administration of the Post-test Questionnaire

The Post-test Questionnaire (see Variables and Measures, and Appendix XI) is comprised of six sections: demographic data, learner behaviour, learner satisfaction, social support, learning style (need and desire for interaction), and data from student records and was constructed specifically for the purpose of this study. The Questionnaire was administered by telephone to all participants in the study, control and experimental, within three weeks of the completion of the fall 1998 term. The calls were started after the last examination of the fall 1998 term (December 14th) and completed during the first week of January 1999. The Questionnaire was administered by eight individuals hired by Laurentian University specifically for this purpose. Training and supervision, as well as a structured script (see Appendix XII), were provided by the researcher.

Between January 14th - February 6th, 1999 (approximately 3 - 4 weeks later), the Post-test Questionnaire was re-administered to a sample of 40 participants from the group (20 experimental, 20 control) to obtain data for a test-retest reliability check. These calls were

carried out by one of the individuals who was involved in the administration of the Questionnaire the first time. She was provided with a structured script (see Appendix XIII) and the names of approximately 90 participants picked blindly in equal numbers from the experimental and control groups, and was instructed to start calling in no particular order and to take the first 20 from each group that she could contact.

Variables and Measures

Demographics and Other Participant Background Information

Basic demographic information (gender, date of birth, previous post-secondary experience) as well as information about the learner's desire and expectation for interaction with faculty and other university personnel were collected by means of the Post-test Questionnaire (see Appendix XI) constructed for the purpose of this research. Other demographic and enrolment data required for research questions were obtained from the Laurentian University student record system. Appropriate permission for data collection was obtained with the Consent Form (see Appendix II).

Perceived Social Support

The review of literature strongly supported measuring perceived as opposed to network or enacted support (see, for example, Dunkel-Schetter and Bennett, 1990; Lakey and Lutz, 1996; McNally, and Newman, 1999). According to Cohen and Wills (1985), perceived social support operates and can be measured at two levels, a global structural level which operates by affecting general well-being, and a more specific functional level which operates through buffering in times of stress. They conclude, based on their meta-analysis of studies using various measures of social support, that for tests of main effects, global structural (social integration) measures are

necessary, and for buffering effects a matching model where functional measures are matched to anticipated stressful events is required. Both types of social support were intended to be offered as part of the intervention in this study and were measured through the use of the Post-test Questionnaire constructed for the purpose of this research.

Following a review of available social support measures and critiques (see for example Barrera, Sandler, and Ramsay, 1981; Brown, 1992; Cohen and Wills, 1985; Depner, Wethington, and Ingersoll-Dayton, 1984; Kessler, 1992; Sandler and Barrera, 1984; Sarason, Levine, Basham, and Sarason, 1983; Sarason, Shearin, Pierce, and Sarason, 1987; Stokes and Wilson, 1984; Turner, 1992; Vaux, 1992; Veiel, 1992), it was concluded that the most frequently used global structural measures of social support are those which measure the perception of the size, extent, and/or potential availability for assistance of an individual's social network (e.g., family, friends, community, colleagues, religious affiliation). However, in the case of the intervention in this study which is limited in source to one organization, it is more appropriate to measure perceived social support as the extent of perceived integration into that particular system, or in other words, how much the individual feels part of that organization and the extent to which support from that organization is perceived to be available. Similarly, the scope of the social support intervention from a functional or buffering perspective was narrowly limited to providing support matched to anticipated stress associated with distance study (e.g., heavier workload than anticipated, examination anxiety, lack of opportunities to compare perceptions with peers, lack of support from family, or a negative interaction the professor) as opposed to a wide array of life stressors. The most frequently used and well tested measures of social support are much more broadly based, both structurally and functionally, being designed to measure more generic types of

support, most commonly from family and friends. This provided a challenge in constructing or adapting existing measures for the purpose of this study.

Based on the clear framework set out by Cohen and Wills (1985) and following the measurement criteria from the review of social support measurement literature, nine questions with a 0 to 10 scale were constructed for the Post-test Questionnaire to address the level of perceived social support experienced by participants. These were intended to measure the following:

a) Global structural support: the extent to which participants experience a feeling of affiliation, social integration, and regularized social contact with the university and have the perception that there is a social support network available to them through that affiliation,

b) Specific functional support: the extent to which they perceive and receive support from the university in the form of information, instrumental help, and emotional support.

There are four questions which are intended to measure global structural support. These are based on descriptions from the literature of concepts such as social integration and affiliation (e.g. to what extent do you feel part of Laurentian?) and perception of caring (e.g. to what extent did you feel welcomed and encouraged to make contact?) and perception of availability of a network (e.g. to what extent do you feel supported in your efforts as learner by Laurentian? how confident do you feel that your needs for interaction and assistance can be met by Laurentian?).

There are five questions on the Post-test Questionnaire which are intended to measure the receipt and perception of availability of specific kinds of functional support. These include one question about information received, one question about instrumental help, and three questions about emotional support. These latter three questions were drawn from measures employed by

Kessler, Kendler, Heath, Neale, and Eaves (1994) in a study about adjustment to stress which used custom-constructed instruments to measure perceived social support.

The Kessler et al. study (1994) included only three questions which assessed perceived support from specific sources by asking about "...the extent to which respondents believed members of their social networks would be willing to (a) listen to their problems (b) understand the way they feel about things, and (c) help if help was needed" (p. 319). Responses were coded on a five-point scale ranging from "not at all" to "a lot" for each of the six support sources (spouse, children, siblings, other relatives, friends, and parents). Using exploratory factor analysis corresponding to the presence or absence of these sources for each subsample, Kessler et al. found that three clear factors consistently emerged: perceived support from spouse (Cronbach's alpha = 0.87), perceived support from relatives (0.86), and perceived support from friends (0.81). The three questions used by Kessler et al. (1994) have been customized to the distance education context and the Laurentian University network (e.g. Did you feel that there was someone at Laurentian who would listen to you if you had a problem? Did you feel that there was someone at Laurentian who understands what it is like to be a distance learner? Did you feel that help was available from Laurentian if help was needed?). A principal components analysis (PCA) and a reliability analysis were performed on the 9 items intended to measure perceived social support. As a result, one item was dropped. However, strong support was found for combining the remaining 8 items and using them as a single measure for the purposes of the analyses. A reliability analysis was also performed on the 8-item perceived social support scale according to linguistic category of respondents (French/English). Test-retest reliability data and the factor loadings and internal consistency in this research sample are reported under the

heading of Preliminary Analysis in the 'Results' section.

Learner Behaviour

There are a number of dimensions by which intervention effectiveness can be measured. This study, based on advice from Heller et al. (1991) and others, used dependent variables which are directly linked to the intended outcomes of the intervention. These include measures of learners' study behaviour (participation and efficiency in activities related to the course), learner achievement (persistence and grades), and learners' satisfaction (how well expectations for study are met). These factors parallel Cookson's (1990) operational definition of distance learner success.

Learner study behaviours associated with persistence and intended to be encouraged by the intervention include time spent working on the course, the timing of the return of the first assignment, and learner initiated contact with faculty and other university personnel. In a review of research on distance learners and learning, Gibson (1990) cites a number of studies which identify early return of the first assignment as a positive indicator of persistence. In particular, she notes that Wong and Wong (1978-1979, cited in Gibson, 1990) explain that return of the first assignment is a demonstration of commitment to the course as well as an indication that the learner is aware of and prepared to invest the time and energy required for completion.

The following outcome variables were gathered by means of the Post-test Questionnaire (see Appendix XI):

- a) use of the orientation materials
- b) perceived utility of orientation materials
- c) number of hours spent working on a course each week

- d) average number of times spent working on a course each week
- e) the amount of learner initiated contact with the professor
- f) the amount of learner initiated contact with other university personnel

Test-retest reliability data for the test items related to the variables listed above are provided under the heading of Preliminary Analysis in the Results section. The following information was obtained from student records:

- a) timing of the return of the first assignment
- b) course completion
- c) grades

Learner Satisfaction

Five of the six items used to measure learner satisfaction are drawn from a study by Tallman (1994) of the relationship between student satisfaction with support services and course completion in distance learning. Tallman constructed the Student Satisfaction Questionnaire specifically for his study based on work Leverenz, (1979) and St.Pierre (1989) (cited in Tallman, 1994). He used five items to measure learner satisfaction: beneficial learning experience, contribution to academic development, intention to re-enrol, whether the institution would be recommended to others, and whether, overall, the student had a personally rewarding educational experience. Tallman reports that in relation to Cronbach's alpha, the five variables that were summed to represent the dependent variable, student satisfaction, were reliable at .85.

Tallman's (1994) five questions were customized slightly for this study based on the prior needs and expectations assessment of the target population in which Laurentian University distance learners identified intellectual development and learning gains related to career as very

important (Brindley, 1998a). The Tallman items used include beneficial learning experience, intention to re-enrol, and whether the institution would be recommended to others. The two items relating to specific benefits (academic development and personally rewarding) were changed to intellectual development and learning gains related to career. In addition, a question was added with regard to overall satisfaction in relation to prior expectations.

Measures of these outcome variables were gathered by means of the Post-test Questionnaire (see Appendix VIII):

- a) beneficial learning experience
- b) contribution to intellectual development
- c) learning gains: career related knowledge and skills
- d) overall satisfaction level related to expectations
- e) intention to re-enrol
- f) likelihood of recommending Laurentian to others

A principal components analysis (PCA) and a reliability analysis were performed on the 6 items intended to measure learner satisfaction. Strong support was found for combining the 6 items and using them as a single measure for the purposes of the analyses. A reliability analysis was also performed on the 6-item learner satisfaction scale according to linguistic category of respondents (French/English). Test-retest reliability data and the factor loadings and internal consistency in this research sample are reported under the heading of Preliminary Analysis in the 'Results' section.

Data Analysis

Preliminary analyses (i.e., comparability of the groups, attrition analyses, reliability of

measures, and fidelity check of the intervention) as well as the analyses required to investigate the main hypotheses and the research questions were conducted using SPSS Version 8.0 (SPSS Inc., 1998). The attrition analysis, which compared those participants in the study with those who had consented to participate in the study but for a variety of reasons did not end up in the final sample, was completed using a series of chi-square and *t*-tests to compare the experimental and control groups. The fidelity check on the content of the interventions was carried by calculating descriptive statistics for each advisor, for both interventions (first and second), and for each content area.

A *t*-test was used to assess the effects of the intervention on the perceived utility of the orientation materials (hypothesis 1). The effects of the intervention on learner behaviour (hypothesis 2) were investigated as follows: time spent on the course (*t*-test), learner initiated contact with the university (chi-square test), course completion (chi-square test), and grades (*t*-test). An additional measure of learner behaviour, timing of the return of the first assignment, was dropped as a dependent variable due to insufficient data. A *t*-test was used to assess the effects of the intervention on learner satisfaction (hypothesis 3).

The strength of social support as a mediating variable between treatment and outcomes (hypothesis 4) was not investigated because one of the assumptions of mediation according to the procedure as outlined by Baron and Kenny (1986) was not met, that is, that a relationship exists between the independent variable (intervention) and dependent variable (outcomes). A search for attribute variables which would interact with the intervention to moderate outcomes or act as predictors of outcomes in their own right, and for process variables which would predict outcomes was carried out using regression analysis, linear for continuous dependent variables,

and logistic for dichotomous dependent variables.

Reliability and principal component analyses were used to test the factor loading and internal consistency of the measures of learner satisfaction (6 items) and perceived social support (9 items) which were developed for the purposes of this study. Test-retest reliability of the Post-test Questionnaire was addressed by readministering the Questionnaire to a sample of 40 of the 156 participants approximately 3 to 4 weeks after the first administration. The individual items of the Questionnaire as well as the multiple-items measures of learner satisfaction and perceived social support from the first and second administration were compared using a series of Pearson correlations for continuous variables and by calculating kappa in the case of discrete variables.

Results

Preliminary Analyses

Comparability of Experimental and Control Groups

Matching of experimental and control groups on gender ensured an equal representation of males (18 or 23.1%) and females (60 or 76.9%) in each group. Matching was also successful for age and previous educational levels. A t -test for independent samples revealed no significant difference in average age between experimental ($M = 27.46$; $SD = 10.64$) and control groups ($M = 27.27$; $SD = 10.93$), $t(154) = .11$, $p = .90$. Similarly, a chi-square analysis revealed that there was no significant difference between experimental and control groups according to previous educational level, $\chi^2(2, N = 156) = 1.04$, $p = .595$. There were 46 (29.5%; 23 experimental, 23 control) participants with high school or less, 106 (67.9%; 54 experimental, 52 control) participants with a completed or partial first degree or diploma at the post-secondary level and 4 (2.6%; 1 experimental, 3 control) participants at the graduate studies level. For the purposes of subsequent data analysis, the latter two categories (completed or partial first diploma/degree and graduate studies) were collapsed into one comprised of 110 participants (70.5%; 55 experimental, 55 control) with post-secondary experience, either college or university.

Random assignment after matching produced experimental and control groups with equivalent profiles. The sample included 52 (33.3%; 28 experimental, 24 control) participants studying part-time, and 104 (66.7%; 50 experimental, 54 control) participants studying full-time. A chi-square test revealed no significant difference between enrolment status (part-time/full-time) between experimental and control groups, $\chi^2(1, N = 156) = .46$, $p = .497$. One hundred and thirty (83.3%, 69 experimental, 61 control) participants were enrolled in only 1 distance

education course, with the remaining 26 (16.7%; 9 experimental, 17 control) participants taking anywhere from 2 to 6 courses . Hence, this variable was dichotomized accordingly (participants enrolled in 1 course; participants enrolled in 2 to 6 courses). A subsequent chi-square analysis to determine if there was a difference on this variable between experimental and control groups revealed a probability approaching significance, $\chi^2(1, N = 156) = 2.95, p = .086$. However, small cell size was taken into account and a Fisher's exact test revealed that there was no significant difference between groups, Least Squares Difference (LSD) = .12.

Distance education students are often assumed to be located away from campus but that profile is changing, with many full-time on-campus students including at least one distance education course in their program for flexibility in time and place of study. In the sample in this study, 67% of the students were studying on-campus as well as taking at least one distance education course. A chi-square analysis revealed no significant difference with regard to the location of students between experimental and control groups, $\chi^2(1, N = 156) = .46, p = .497$.

A chi-square analysis was also performed to determine if there was any significant difference between the groups on choice of language of service from the University. The sample included 133 (85.3%; 69 experimental, 64 control) participants who requested services in English and 23 (14.7%; 9 experimental, 14 control) participants who requested services in French. The analysis revealed no significant difference, $\chi^2(1, N = 156) = 1.28, p = .259$. A Fisher's exact test yielded a similar result, LSD = .37.

Participants were categorized by employment status as follows: 97 (63.8%; 50 experimental, 47 control) employed either full-time or part-time, 10 (6.6%; 6 experimental, 4 control) unemployed but looking for work, and 45 (29.6%; 19 experimental, 26 control) not

employed. Four participants did not report their status. A chi-square analysis revealed no significant difference between groups on employment status, $\chi^2(2, N = 152) = 1.56, p = .459$. A further analysis employing a t-test for independent groups revealed that within the employed participants ($n = 97$; 50 experimental, 47 control), the mean number of hours worked per week by the experimental group ($M = 23.6$; $SD = 13.09$) was not significantly different from the mean for the control group ($M = 25.28$; $SD = 15.16$), $t(95) = -.58, p = .561$. In summary, matching and randomization between experimental and control groups appeared to be successful in that no significant differences were found between the groups on any of the variables examined.

Comparability of Language Groups

All contacts (including written materials) with students made during the study were made in the language of their choice (French/English). Participation in the study was equally open to students from both language groups, but the sample included only 23 (14.7%) Francophone participants. As noted above, randomization appeared to be successful in mixing the language groups across experimental and control as revealed by the chi-square analysis described above. However, in recognition of the possibility of differences in response to the intervention or measurement instrument according to language of participation, a comparison was made between Francophone and Anglophone students on the learner satisfaction and perceived social support ratings from the Post-test Questionnaire. The t-tests for independent samples employed for this purpose revealed no significant difference in learner satisfaction ratings between Francophone ($M = 7.49$; $SD = 2.07$) and Anglophone students ($M = 7.62$; $SD = 1.76$), $t(154) = -.30, p = .76$, and no significant difference between ratings of perceived social support between Francophone ($M = 7.63$; $SD = 1.64$) and Anglophone students ($M = 7.99$; $SD = 1.69$), $t(154) = -.96, p = .34$. The

results of the reliability analyses of the scales learner satisfaction and perceived social support are reported with the other results of analyses regarding those measures.

Attrition Analysis

As described in the section 'Research Sample', the original group of 186 participants (93 experimental, 93 control matched on age, gender, and previous educational level) was reduced through various types of attrition to 156 participants (78 experimental, 78 control matched on age, gender, and previous educational level) who were in the study and completed the Post-test Questionnaire.

A series of chi-square tests were conducted to determine if the attrition group ($n = 30$) differed from the study group ($n = 156$) on any of the following variables for the two groups: gender, language of choice, enrolment status (part-time/full-time), number of distance education courses enrolled in, and location (on or off campus). No significant differences were found (at the $p < .05$ level) between those in the attrition group and those in the study. A t -test was conducted to see if the two groups differed in age but again, no significant difference was found (at the $p < .05$ level). These results indicate that there were no significant differences on these factors between the attrition group and those in the study who completed the Post-test Questionnaire.

Reliability of Measures

Perceived social support. There were 9 items (q. 13 - 21) on the Post-test Questionnaire (see Appendix XI) which address the learner's level of perceived social support. However, due to concern over the amount of missing data (19 cases) on q.18, further analyses were carried out. An investigation revealed that the missing data may have been caused by some confusion about the meaning of the question, particularly with the French translation. A subsequent principal

component analysis (PCA) also revealed that q.18 had the lowest loading value on the component matrix. Hence, a decision was taken to remove q.18 from the social support subscale. Other missing data (23 cases spread over 8 test items) were replaced by taking an average score for a given participant from the other items addressing perceived social support, and a rounded figure closest to that average was used to replace the missing response.

A reliability analysis performed on the corrected data set for the 8 remaining items yielded a Cronbach's Alpha of .87. All the items were significantly correlated with one another, (range .31 - .67). The PCA yielded Eigenvalues for the first two components of 4.50 and .82 such that a scree plot dropped off dramatically after the first component. Thus, only one component was extracted, explaining 56% of the variance. Hence, the reliability analysis and the PCA strongly support combining the 8 items for use as a single measure of perceived social support. The component loadings from the PCA with the 8 items are displayed in Table 1.

Separate reliability analyses were performed on the 8-item perceived social support scale in order to make a comparison of the instrument between linguistic groups. These yielded a Cronbach's Alpha of .89 for the Angophone data, and a Cronbach's Alpha of .81 for the Francophone data.

Table 1 (Component Matrix)

Principal Component Analysis of Eight Items Measuring Perceived Social Support

Item	Component
confidence about help available from L.U.	.77
feeling part of L.U. (sense of belonging)	.59
sufficient information received from L.U.	.77
sufficient instructions and practical help received from L.U.	.79
belief that there was someone at L.U. to listen and help	.71
general feeling of being supported by L.U. as a distance learner	.85
feeling of being welcomed and encouraged to make contact	.62
confidence that needs can be met as they arise	.85
Eigenvalue	4.50
Percent of Variance	56%

Learner satisfaction. There are 6 items (q. 7 - 12) on the Post-test Questionnaire (see Appendix XI) which address learner satisfaction. On each of the 6 items, there were 6 cases with missing data. For each of these cases, an average score was taken from the other items addressing satisfaction, and a rounded figure closest to the average was used to replace the missing response.

A reliability analysis performed on the corrected data set for the 6 items yielded a Cronbach's Alpha of .82. All the items were significantly correlated with one another, (range .24 - .66). A principal components analysis (PCA) yielded Eigenvalues for the first two components of 3.42 and .93 such that a scree plot dropped off dramatically after the first component. Thus, only one component was extracted, explaining 57% of the variance. Hence, the reliability analysis and the PCA strongly support combining the 6 items for use as a single measure of learner satisfaction. A principal component analysis (PCA) was performed on the corrected data set to see if all 6 items loaded on the same factor. The component loadings are displayed in Table 2.

Separate reliability analyses were performed on the 6-item learner satisfaction scale in order to make a comparison of the instrument between linguistic groups. These yielded a Cronbach's Alpha of .81 for the Angophone data, and a Cronbach's Alpha of .86 for the Francophone data.

Table 2 (Component Matrix)

Principal Component Analysis of Six Items Measuring Learner Satisfaction

Item	Component
distance education course(s) as beneficial learning experience	.84
intellectual development	.75
career-related gain in knowledge and skills	.52
overall satisfaction related to expectations	.81
likelihood of re-enrolment in Laurentian U. dist. ed.	.74
likelihood of recommending Laurentian U. dist. ed.	.83
Eigenvalue	3.42
Percent of variance	57%

Test-retest reliability of post-test questionnaire. In order to check the reliability of the post-test questionnaire over time, it was readministered to 40 of the 156 participants over a period between 3 and 4 weeks after the initial administration. The test and retest data sets were compared, item by item and for multiple-item variables with the following results:

Question 1: Use of The Starter Kit: Of the 40 retest participants, only 33 answered consistently when asked about whether they read and used The Starter Kit. Of these, 32 consistently indicated that they had read and used The Starter Kit and 1 participant consistently indicated that s/he had not read The Starter Kit. Of the 7 participants who responded inconsistently, there were 4 who said they did read the materials who subsequently said they did not, and 3 who said they did not read the materials and subsequently said they did. The value of kappa is 0.13, indicating a poor level of agreement between test and re-test results on this outcome variable.

Question 2: Perceived utility of The Starter Kit: Out of the 40 retest participants, 32 responded both times to the question regarding the utility of The Starter Kit. (This matches the number of participants who consistently responded that they had read and used the orientation materials.) The correlation revealed a moderate level of test-retest reliability, $r(30) = .56$, $p = .001$.

Question 3 and 4: Time spent working on the course: Test-retest reliability for the average number of hours worked on the course per week was moderate, $r(38) = .45$, $p = .003$, but average frequency of working on the course per week yielded a higher degree of reliability, $r(38) = .70$, $p < .001$. Subsequently, the raw scores for these two variables at both test and retest were converted to z-scores. Using the z-scores, a reliability analysis for question 3 and 4 yielded a

Cronbach's Alpha of .61 for the test data, and .82 for the retest data, indicating that the two items had sufficient internal consistency to be combined to form a single variable for each data set.

Test-retest reliability on the combined variable was moderately high, $r(38) = .61$, $p = .000$, supporting use of the combined variable for purpose of further analyses.

Questions 5 and 6: Learner initiated contact with professors and others: A moderate level of test-retest reliability was found for contact with professors, $r(38) = .49$, $p = .001$, and contact with other university personnel, $r(38) = .49$, $p = .001$. A frequency count for each of these variables showed that almost half of the students in the sample of 40 had not made any contact with either professors or other university personnel. Hence, both variables were dichotomized into some contact and no contact. The value of kappa for the new dichotomized variable of contact with faculty was .51, indicating fair to good agreement. However, the value of kappa for the new dichotomized variable of contact with others was .31, indicating a poor level of agreement.

A reliability analysis for questions 5 and 6 yielded a Cronbach's Alpha of .75 for the test data, and .66 for the retest data, indicating that the two items had sufficient internal consistency to be combined to form a single variable for each data set. However, the value of kappa on the combined variable was .32 which is not sufficient to support use of the combined variable for purpose of further analyses. Hence, the measure of learner initiated contact with the institution which was chosen for purposes of further analysis was contact with professor (dichotomized).

Questions 7 through 12: Learner satisfaction: The test-retest data for these 6 items were treated as they were in the main data set, that is, as a multiple-item variable. Similarly, missing data were replaced using the previously employed procedure, that is, replacing a missing item with

the whole figure closest to the mean of the other learner satisfaction items for a given individual. The multiple-item variable of learner satisfaction yielded a moderately high test-retest reliability, $r(38) = .75, p < .001$. The 6 individual items were also checked for test-retest reliability using a series of Pearson correlations and these yielded moderate to high reliability in all cases, ranging from .45 to .83, ($ps < .005$). The highest test-retest correlation was on the factor 'likelihood of re-enrolment, $r(38) = .83, p < .001$, lending support to using this item as a single measure for the purposes of post hoc research.

Questions 13 through 21: Perceived social support: The test-retest data for these items were treated as they were in the main data set, that is, question 18 was discarded and the remaining 8 items were used as a multiple-item variable. Other missing data were replaced using the previously employed procedure, that is, replacing a missing item with the whole figure closest to the mean of the other social support items for a given individual. The multiple-item variable of social support yielded a high test-retest reliability, $r(38) = .84, p < .001$. The 8 individual items were also checked for test-retest reliability using a series of Pearson correlations and these yielded moderately high to high reliability in all cases, ranging from .52 - .84, ($p < .001$).

Questions 22 and 23: Learner expectations and desire for contact with the institution: Test-retest reliability was found to be moderately low on these two items, in the case of the first factor, expectations for contact with faculty and others, $r(37) = .42, p = .009$, and for the second factor, desire for contact with the university, $r(38) = .40, p = .013$.

Overall, the test-retest reliability of the Post-test Questionnaire supports use of most of the test items for the purposes of exploring the hypotheses and for post-hoc research. Using a cut-off point of $r = .50$ as an acceptable level of reliability, exceptions are as follows: use of The Starter

Kit (q. 1), learner initiated contact with university personnel other than faculty (q. 6), expectations for contact from the university (q. 22), and desire for contact with the university (q.23). None of these items are included in subsequent analyses. Only two single item measures, “learner-initiated contact” and “perceived utility of The Starter Kit, yielded a marginal level of test-retest reliability (between .50 and .60). The remaining single and multiple-item variables yielded moderate to high test-retest reliability. In particular, the measures of learner satisfaction and perceived social support which were developed for the project appear to have very good stability over time, supporting their use in this study as well as future research.

It should be noted that the cut-off point of .50 is admittedly marginal and one would prefer a higher level. However, its adoption did ensure that at least 50% of the observed variance of all of the variables used was true-score as opposed to error variance. Further, given that the square-root of the reliability coefficient of a variable represents its maximum possible correlation with a (perfectly reliable) criterion variable (Thorndike, 1982), a variable with test-retest reliability of .50 can still achieve a respectable level of validity with external variables, (i.e., $\sqrt{.50} \approx .71$).

There does not appear to exist any clear consensus in the literature that .50 would represent an unacceptable level of reliability for all purposes (although obviously, the higher the level of reliability, the better). The opinions of several authorities can be cited in support of the adoption here of .50 as minimally acceptable, albeit marginal. In discussing standards of reliability, Nunnally and Durham (1975, p. 345), for example, state that at an early stage of research on particular predictor tests or construct measures, relatively modest reliability (in the .50 to .60 range) may suffice, whereas in applied settings involving important decisions about individuals, reliability of at least .90 would be required. Cohen and Cohen (1975, p.64) observe

that reliabilities of .60 are by no means uncommon in the behavioural sciences and that in some instances (e.g., psychiatric assessment or opinion surveys), such levels might be seen as reasonably good. Thorndike (1982, p. 196) notes that the reliability of supervisors' ratings of their subordinates (often used in personnel research and practice) is estimated to be no more than .50. In sum, although admittedly minimally acceptable and far from ideal, a cut-off point of .50 was judged to be a defensible choice in the present research.

Manipulation Check of Social Support Intervention

The purpose of a manipulation check is to find out whether a treatment actually succeeded in manipulating the variable of interest, in this case, social support (see, for example, Eden and Aviram, 1993). To determine whether the intervention affected social support as intended, a t -test was employed to investigate whether there was a difference between the experimental (intervention) and control groups with regard to the level of social support which they perceived was available to them from the university. There was a statistically non-significant trend for those in the intervention group to be more likely to perceive a greater level of social support than those in the control group, $t(154) = 1.76$, $p = .08$. Expressed as a correlation, the relationship between group membership and perceived social support was weak and statistically non-significant, point-biserial $r(154) = -.14$, $p = .08$.

Fidelity Check of Social Support Intervention

Treatment fidelity, according to Moncher and Prinz (1991), addresses two issues. The first is how closely a treatment condition is implemented as intended (treatment integrity), and the second is whether comparative treatment conditions differed as intended. In the case of this study, the latter issue is not in question because one group clearly received a treatment that the

other group did not. However, treatment integrity required investigation. The intervention in this study was designed to have a positive impact on learning outcomes both directly and through the mechanism of social support. To this end, the intervention scripts (see Appendices VII and IX) were developed based on social support theory and were designed to address student needs identified in the distance education literature as well as an extensive needs assessment of the target population (Brindley, 1998a). Both content and timing of the intervention was planned for maximum impact. A fidelity check was carried out to see how closely each of these elements of the actual interventions resembled that which was intended.

Content of intervention. The intervention procedure called for tapes to be made of each telephone call so that the content could be checked for fidelity to the design. However, as noted earlier, there were equipment restraints which resulted in this procedure not being strictly followed. Overall, 56 of the possible 78 initial calls, and 28 of the 78 second calls were recorded for a total of 84 taped calls. Six of the seven Advisors taped at least some of the first intervention calls, but only three of the seven taped some of the second intervention calls. One advisor was responsible for 34 of the 84 taped calls.

Two independent raters checked the tapes for the presence or absence of 8 specific content areas which were covered by each of the intervention scripts. They were provided with rating forms (see Appendix XVIII), and both verbal and written instructions (see Appendix XIX) to guide them in rating the tapes. The topics to be covered in the first intervention included role of the Student Advisor, services for distance learners, content of the course package, using The Starter Kit, setting up a study schedule, contacting the professor, support from family and friends, and a check for anticipated difficulties or need for assistance. The topics to be covered in the

second intervention included a reminder of the purpose of the call, a progress check, a question about amount of time being spent on the course each week, contact with the professor, use of The Starter Kit, coping with study schedule and workload, motivation level, and a reiteration of the invitation to call for assistance if required.

A frequency count by topic for each of the interventions revealed that some topics were more consistently missed than others. In the first intervention, topics which were missed 30% or more of the time were role of the Student Advisor, services for distance learners, and support from family and friends. The other five topics were mentioned 80% or more of the time. In the second intervention, topics which were missed 30% or more of the time were purpose of the call, the amount of time spent on the course per week (missed 71% of the time), coping with study schedule and workload, motivation level (missed 64% of the time), and the final invitation to call for assistance if required. The other topics for the second intervention were covered 90% or more of the time. Use of The Starter Kit and contacting the professor were mentioned most consistently (96 - 100%) in both the first and second intervention calls.

Overall, the average number of topics covered out of the total possible 8 was 6.5 for the first intervention (six advisors), and 5.5 for the second intervention (three advisors). The uneven spread of taped calls made comparisons among the advisors difficult but from the data collected, it can be seen that there were differences in performance among those who did present tapes. The number of topics covered in individual interventions ranged from 3 to 8 out of the total possible 8. The results of the fidelity check for content of the interventions are presented in Tables 3 and 4.

Table 3

Summary of Fidelity Check for Content of Intervention One ^a

Advisor	# of Taped Calls	# of Topics Covered (out of possible 8)	
		<u>M</u>	<u>SD</u>
1	18	7.6	.7
2	4	8.0	0
3	0	N/A	N/A
4	15	5.7	1.3
5	8	7.1	1.0
6	7	4.4	1.4
7	4	6.3	1.0
Total	56	6.5	1.5

^a Intervention One is the first telephone call to students (see Appendix VII for script content)

Table 4

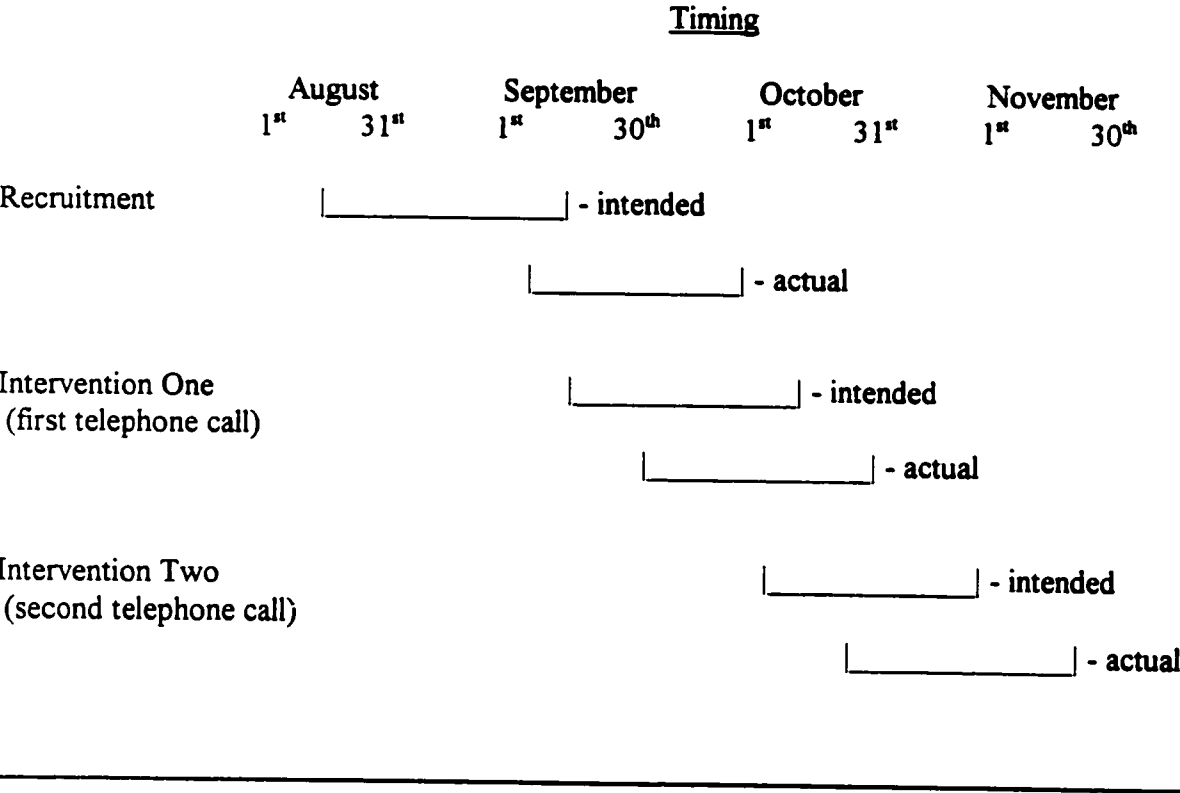
Summary of Fidelity Check for Content of Intervention Two^b

Advisor	# of Taped Calls	# of Topics Covered (out of possible 8)	
		<u>M</u>	<u>SD</u>
1	16	5.6	1.7
2	4	5.3	1.3
3	0	N/A	N/A
4	0	N/A	N/A
5	0	N/A	N/A
6	7	4.4	1.4
7	0	N/A	N/A
Total	28	5.5	1.6

^b Intervention Two was the second telephone call to students (see Appendix IX for script content)

Timing of intervention. The intervention was also checked for adherence to the intended timing according to the original design. Although it is not possible to know the exact timing of each intervention call because records were not kept by all advisors, the overall pattern of what took place compared to what was intended was tracked by signing in and out of files. In general, it can be said that the difficulties with getting the orientation materials sent out and the late recruitment resulted in approximately a one-month delay in all phases of the project. Recruitment was completed by the first week in October rather than early in September. Further, an overlap in personnel between those recruiting and those making intervention calls resulted in about a 2 to 3 week delay in starting the first intervention calls. The necessity to add extra staff after the intervention calls had started slowed the process further so that the first calls and letters were not completed until the end of October, and the second intervention calls and letters were not completed until the end of November. Reports from Advisors indicated that there was no problem in generating and sending the intervention letters within 24 hours of the calls. The comparison of intended and actual timing of recruitment, intervention one, and intervention two are displayed in Figure 2.

Figure 2. Intended and actual timing of contact with students for the purposes of recruitment and making the two intervention telephone calls.



Tests of Hypotheses

Hypothesis 1: Impact of the Intervention on Use and Perception of Orientation Materials

There are two questions on the Post-test Questionnaire regarding the orientation materials (The Starter Kit). The first asked if the student read and used The Starter Kit and the second asked the students to rate the usefulness of the materials on a 0 to 10 scale. Of the total 156 students in the study, 138 (88.5%) participants reported that they had read The Starter Kit, and of those, 131 (95%) rated its usefulness. The numbers were fairly evenly split between the experimental and control groups both for reading the orientation materials (70 experimental, 68 control) and rating them (65 experimental, 66 control). The main reason given by students for not reading The Starter Kit, or not wanting to rate it was that it had arrived too late (see 'Method' section for explanation) for them to use it at the beginning of their course.

Test-retest reliability for rating of the materials (but not for usage) was judged to be sufficiently high to support use of this item as a measure of the utility of The Starter Kit. However, an independent t -test conducted to determine if the groups differed with regard to their ratings of usefulness of the orientation materials yielded no significant difference between groups, $t(129) = -.61, p = .542$.

It should be noted that although most students received The Starter Kit late, they appear to have responded to it very positively. A fairly high percentage of the participants (88.5%) reported taking the time to read it. Further, ratings of usefulness by participants in both the experimental group ($M = 6.77$; $SD = 2.13$) and the control group ($M = 6.98$; $SD = 1.89$) are relatively high, indicating that most participants saw The Starter Kit as being quite useful despite the lateness of its arrival (see Appendix XIV for more detail).

Hypothesis 2: Impact of the Intervention on Learner Behaviour

Information about five different aspects of learner behaviour other than use of The Starter Kit was collected. These include the following: the time spent working on the course each week, the amount of learner initiated contact with the institution, the timing of the return of the first assignment, course completion, and grades. Each of these dependent variables formed the outcome for a sub-hypothesis, and with the exception of submission of first assignment, each was tested for differences between experimental and control groups. The data regarding submission of the first assignment was insufficient for analysis.

Hypothesis 2a: Time Spent on the Course. There were two questions (q. 3 and 4) on the Post-test Questionnaire which addressed the amount of time each learner spent on each distance education per week. The first asked about the average number of hours learners spent each week per distance education course, and the second asked about the average number of times which learners worked on each course per week. The data set had one missing response on question 4 (frequency of working on the course per week) which was replaced with the number closest to the mean (3) for that variable. As was done for the test-retest analysis on these items, the raw scores for each were converted to z-scores to facilitate comparing and combining the two types of score for time spent on the course. A reliability analysis yielded a Cronbach's Alpha of .71, indicating that the two items had sufficient internal consistency to be combined to form a single variable. A t-test on the combined dependent variable was used to investigate differences between the experimental and control groups on average time spent on course (hours and frequency) but no significant difference was present, $t(154) = .69$, $p = .491$.

Although the test-retest reliability for the average number of hours spent on a distance

education course per week was only approaching an acceptable level, rendering its use questionable, it is a more usual way to measure efforts toward completion. In this context, it is important to note that the average number of hours reportedly spent by students on their courses each week was close to the institutionally recommended level (7 hours) for both the experimental ($\underline{M} = 6.96$, $\underline{SD} = 6.25$) and the control group ($\underline{M} = 6.15$, $\underline{SD} = 4.94$). In other words, to the extent that students reported accurately, most appear to be spending the time on their courses which is required for successful completion (see Appendix XV).

Hypothesis 2b: Learner Initiated Contact. There were two questions on the Post-test Questionnaire which addressed learner initiated contact with the University. One asked about the number of times the professor for each course had been contacted during the term and the other asked the same question about University personnel other than faculty. The data gathered in response to these questions were found to be positively skewed (Skewness = 3.80 for contact with professors and 6.05 for contact with others), with over half of the sample reporting no contact with either professor or other University personnel, approximately one-third reporting only one or two contacts with either, and the rest of the participants spread over a range from 3 to 35, with most reporting toward the less frequent end of the scale (see Appendix XVI).

As reported earlier, test-retest reliability was not sufficient to support using 'learner initiated contact with other university personnel' (q.6) for further analysis. To correct for skewness, and in keeping with the procedure followed for the test-retest analysis, the variable of 'learner initiated contact with professors' (q. 5) was dichotomized into those having had no contact and those having some contact. A chi-square test was used to search for any significant difference between the experimental and control groups on this factor. None was found, $\chi^2(1, N$

= 156) = .10, $p = .749$.

Hypothesis 2c: Submission of First Assignment. A frequency count of data collected regarding the submission date of the first assignment revealed that out of the sample of 156 participants, data was available for only 41. Further investigation revealed that, although it had been thought that these data (date of submission of first assignment compared to actual due date of first assignment) were readily available from the student information system, only a small percentage of courses are on the system. Subsequently, all faculty teaching courses included in the study were contacted but not all had manual records of assignment submission dates. Further, it was discovered that one high enrolment course which had been taken by a number of students in the study had no first assignment, only a mid-term examination. Hence, as so little data were available for this particular variable, it was dropped from the analysis.

Hypothesis 2d: Course Completion. Completion rates and grades were collected at the end of the fall term (January, 1999) for those students in 3-credit (single term) courses and at the end of the winter term (May, 1999) for those students in 6-credit (full year) courses. Three completion categories were designated as follows: completion, failure, and withdrawal. In the case of students taking more than one course ($n = 26$), the records were considered on an individual basis and one overall designation was made. In all but one of these cases, all of the courses fell into one category, and the designation was apparent. In one case, a student had two withdrawals and two successful completions. Because the student made a decision to withdraw from two courses early in the term and successfully finished the two others, the case was designated as a completion. Overall, for the total sample, completion rates were relatively high at 83.3%. Withdrawal rates were low at 6.4%, failures accounting for the remaining 10.3% of the

sample. The percentages between the experimental and control groups appeared to be fairly similar, and a chi-square test confirmed that there was no significant difference in completion rates between them, $\chi^2(2, N = 156) = .43, p = .806$.

Hypothesis 2e: Final Grades. Information about grades was gathered in January for one semester courses, and in May for full year courses. Final grades were taken as either the single final mark given to students taking one distance education course ($n = 130$) or the average of final grades in the case of students taking more than one course ($n = 26$). In total, grades were available for 146 (72 experimental, 74 control) of the 156 participants. Ten students withdrew from their courses. The average final grade for the total sample was 69.53% ($SD = 21.38$), with marks ranging from 0% to 94%. Among experimental group participants the average final grade was 70.93% and among control group participants, 68.16%. A t -test revealed there was no significant difference between the two groups on final grades, $t(144) = .78, p = .436$.

Hypothesis 3: Impact of the Intervention on Learner Satisfaction

As noted above, the principal component and reliability analyses of the 6 items addressing learner satisfaction found strong support for their use as a multiple-item single measure. A t -test for independent samples was used to test for differences between experimental and control groups on learner satisfaction using the single measure but none was found, $t(154) = -.84, p = .404$. Congruent with the rating of the usefulness of The Starter Kit, learner satisfaction was high among all students, both those in the experimental group ($M = 7.48, SD = 1.95$) and those in the control group ($M = 7.72, SD = 1.64$). (See Appendix XVII for graphs.)

Hypothesis 4: Social Support as a Mediating Variable between Treatment and Outcomes

According to Baron and Kenny (1986), a series of three regression equations should be

estimated to test for mediation and the following conditions must be met to establish mediation. The first equation in which the mediator is regressed on the independent variable should show that the independent variable affects the mediator; second, the dependent variable is regressed on the independent variable and should show that the independent variable affects the dependent variable, and third, when regressing the dependent variable on both the mediator and the independent variable, the mediator should affect the dependent variable. If these conditions hold in the predicted direction, then the effect of independent variable on the dependent variable must be less in the third equation than in the second.

The dilemma that is posed for the present study is that the second condition of mediation assumes that a relationship has already been found between the independent variable (intervention) and the dependent variable (outcomes). As noted above, all tests for the impact of the intervention on outcomes yielded non-significant results. Hence, it was decided not to carry out further analysis on hypothesis 4, but rather to proceed with post-hoc analyses.

Post-Hoc Research Questions

Although no significant effects were found for the intervention with any of the desired outcomes, it was decided to do a more intensive search for variables which might either moderate the intervention in relation to the outcomes or predict the outcomes. The variables were divided into moderating factors, either learner attributes or subgroups, and processes which possibly could be manipulated by the institution.

For the purposes of the post-hoc analysis, the measure of perceived social support taken from the questionnaire was treated as an outcome variable as well as a process variable, to see if there were any processes which might predict perceived social support or if there were any

subgroups for whom the intervention was more effective in predicting social support. Process variables were those factors which possibly could be manipulated by the institution such as the amount of learner initiated contact with the institution. Potential moderator variables were drawn from the demographic and other data provided by students as part of the study.

The analyses for the post-hoc questions were carried out by testing the individual predictive strength of variables as opposed to using a multivariate analysis. Although the latter may have been preferable from the standpoint of advancing multivariate models of distance learner behaviour, no a priori decisions had been taken to investigate a particular model. Hence, it seemed more appropriate as a post hoc analysis to do a thorough investigation of the individual variables which were available from the existing data base, and examine the results for any patterns of relationship.

Research Question 1: Are there Attribute Variables which Interact with the Intervention to Moderate Outcomes?

The first post-hoc research objective was to investigate whether the treatment had a differential impact on learners according to certain attributes or subgroupings. The potential moderating variables included gender, age, previous level of education, language, enrolment status (part-time/full-time), location (on or off campus), and number of distance education courses enrolled in. In multivariate models of persistence in distance education, these types of attributes are consistently taken into consideration. The dependent variables included in the search were completion rates and final grades as well as those outcomes found to have acceptable test-retest reliability (utility of The Starter Kit, time spent on the course, learner initiated contact with professors, learner satisfaction, and intent to re-enrol). In addition, social support was treated as

treated as an outcome variable to see if there might be subgroups for whom the intervention was more effective in predicting social support.

A series of 56 regression equations, linear for continuous dependent variables and logistic for dichotomous dependent variables, was used to investigate this question. A separate regression equation was used for each potential moderating variable and was repeated with each dependent variable (7 moderating variables X 8 dependent variables). The potential moderating variable (e.g. age), the independent variable (group assignment), and the interaction variable (e.g., group assignment X age) were entered in one step in order to see if an interaction effect was present for any of the dependent variables. No strong pattern of interactions emerged from this investigation. In fact, only three statistically significant interaction effects were found at the $p = .05$ level, no more than might have found by chance given that 56 regressions were carried out.

When performing multiple tests as is the case here, it is important to consider the Bonferroni inequality (Stevens, 1986) which states that the overall alpha for a given set of statistical tests will be less than or equal to the sum of the alpha levels associated with each individual test (Weinfurt, 1995). Applying the Bonferroni correction procedure to calculate the probability level for 56 tests, $p = .0008$. At this level, there were no significant findings for Research Question 1, (ie., none of the 56 tests of group assignment X moderator interaction terms were significant at the .0008 level). The results of this series of analyses are presented in detailed format (Beta coefficients, F-tests, df, and variance) in Appendix XXI with a separate table for each dependent variable.

Research Question 2: Are there Attribute Variables which are Predictors in their own Right of Outcomes?

The second post-hoc research objective was to investigate whether it might be possible to identify learner attributes or subgroupings associated with the desired outcomes. The same series of 56 regression equations used to investigate Research Question 1 was used to investigate Research Question 2. As noted, a separate regression equation was used for each potential moderating variable and was repeated with each dependent variable (7 moderating variables X 8 dependent variables). The potential moderating variable (e.g. age), the independent variable (group assignment), and the interaction variable (e.g., group assignment X age) were entered in one step, and the results were checked to see if any of the moderating variables were predictors in their own right (as opposed to moderators) of the outcomes.

The potential predictor variables included gender, age, previous level of education, language, enrolment status (part-time/full-time), location (on or off campus), and number of distance education courses enrolled in. The dependent variables included in the search were completion rates and final grades as well as those outcomes found to have acceptable test-retest reliability (utility of The Starter Kit, time spent on the course, learner initiated contact with professors, learner satisfaction, and intent to re-enrol). In addition, social support was treated as an outcome variable to see if any predictor variables could be identified for it.

No strong pattern of interactions emerged from this investigation. Only four statistically significant predictors were found at the $p = .05$ level, no more than might have found by chance given that 56 regressions were carried out. When performing multiple tests as is the case here, it is important to consider the Bonferroni inequality (Stevens, 1986) which states that the overall

alpha for a given set of statistical tests will be less than or equal to the sum of the alpha levels associated with each individual test (Grimm & Yarnold, 1995). Applying the Bonferroni correction procedure to calculate the probability level for 56 tests, $p = .0008$. At this level, there were no significant findings for Research Question 2, (ie., none of the 56 tests for attribute predictors were significant at the .0008 level). The results of this series of analyses are presented in detailed format (Beta coefficients, F-tests, df, and variance) in Appendix XXI with a separate table for each dependent variable.

Research Question 3: Are there any Process Variables (Net of Attribute Predictors) which Predict Outcomes?

The third post-hoc research objective was to investigate whether there might be any processes which could be institutionally manipulated or influenced which were associated with the desired outcomes such as time spent on the course. The process variables identified for the purposes of this study included the intervention, the amount of time the learner spends on each course per week, learner initiated contact with the institution, and perceived level of social support. The latter three variables were also considered as outcome variables, along with perceived utility of The Starter Kit, course completions, grades, learner satisfaction, and intention to re-enrol.

Regression analysis, linear for continuous dependent variables and logistic for dichotomous dependent variables, was employed in order to investigate the potential process variables. The process variables (4) were entered as a block into the equation for each of the outcome variables (8). Applying the Bonferroni correction procedure (Weinfurt, 1995) to adjust for the number of tests (4 process variables X 8 outcome variables = 32), the probability level is

reduced from .05 to .0016. Under these conditions, three of the process variables significantly predicted outcomes as follows. Higher levels of perceived social support significantly predicted two outcomes, higher learner satisfaction ($p < .001$), and stronger intention to re-enrol ($p < .001$). Greater time spent on the course significantly predicted one outcome, increased learner initiated contact with professors ($p < .001$). And finally, greater learner initiated contact with professors predicted more time being spent on the course ($p < .001$). The results from the investigation of Research Question 3 are summarized in Table 5 below, as well as being presented in more detail in Appendix XXII with a separate regression table for each dependent variable.

Table 5

Summary of Regression Analysis for Process Variables which are Predictors of Desired Outcomes (N = 156)^a

	Outcomes ^b							
	1 S.Kit	2 Time	3 Cont.	4 Comp.	5 Grde.	6 Satis.	7 S.Sup.	8 R.En.
Process Predictor Variables (Beta)								
1) Group (Intervention)								
2) Social Support						.62 ^{e*}	----- ^c	.38 ^{d*}
3) Time Spent on Course		----- ^c	.74 ^{d*}					
4) Learner Initiated Contact		.28 ^{e*}	----- ^c					

^a Note. For The Starter Kit, N = 131 (the number of participants who provided ratings); for Course Completions, N = 148 (withdrawals were excluded). Also, to control for Type I error, a Bonferroni correction was applied, such that each of the predictor-outcome Beta coefficients was tested at the $\alpha/32 = .05/32 = .0016$.

^b Outcomes Key:

- 1 = Utility of The Starter Kit
- 2 = Time Spent on the Course (combined z-scores for hours and frequency per week)
- 3 = Learner Initiated Contact with Professors (Dichotomized)
- 4 = Course Completion (Successfully Completed or Failure; Withdrawals Excluded)
- 5 = Final Grade (For Single Course or Average of Multiple Courses)
- 6 = Learner Satisfaction
- 7 = Social Support
- 8 = Intention to Re-enrol

^c Note. Cell is empty.

^d B coefficient from logistic regression.

^e Beta coefficient from ordinary least-squares regression.

*p < .0016

Discussion

Preliminary Analyses

The preliminary analyses consisted of comparing the experimental and control groups, doing an attrition analysis, and checking reliability of measures, in particular the two multiple-item measures developed especially for the study (learner satisfaction and social support) and the test-retest reliability of the Post-test Questionnaire. The results revealed that there were no significant differences between the experimental and control groups, between the two language groups, or between the attrition group and the study group on the variables tested, indicating that the analyses for the main hypotheses and research questions could proceed without concern that there might be confounding results due to major differences on these factors.

The two measures developed especially for the study (learner satisfaction and perceived social support) show promise for the purpose of future research. Both measures were based on a combination of test items which proved to have strong reliability and internal consistency as well as high test-retest reliability (see below). The comparison of reliability for these two scales along linguistic lines revealed no apparent difference, both data sets (French/English) yielding a strong Cronbach's Alpha.

Test-retest reliability for the Post-test Questionnaire supported use of most of the test items in the investigation of the main hypotheses and for the post-hoc analyses. However, four items had to be eliminated because reliability was not at an acceptable level. These included: use of The Starter Kit, contact with university personnel other than faculty, and two items which were intended to be measures of expectation and desire for contact with the institution. Fortunately, the items addressing utility of The Starter Kit and contact with faculty did have an acceptable level

level of reliability so that measures related to these outcomes were available for the analyses. However, the measures of expectation and desire for contact could not be used as moderator variables as hoped.

Overall, it can be concluded that most of the test items proved to have good stability over time. It is of particular note that strong reliability was achieved on the multi-item measures of learner satisfaction and social support as well as the single item measure of intention to re-enrol. These measures are important not only to this study, but will be very useful for future research, particularly in light of the strong relationship found between social support and learner satisfaction, and social support and intention to re-enrol. The social support measure is one which could be used pre- and post-intervention, a procedure which would be highly advisable in a study which is attempting to make enduring changes in the target group's perceived and/or actual support.

A fidelity check, carried out to investigate how well the actual content and timing of the intervention matched what was intended, yielded some concerns that the intervention may not have received a fair trial. The content analysis was not as complete as intended because tapes were not available for all of the intervention calls. Hence, it is not possible to make solid comparisons among Advisors because taping was unevenly applied. One Advisor taped almost 100% of calls and at the other extreme, one made no tapes. That being said, the descriptive statistics indicate that there may have been some variation in the way in which the intervention was carried out. Each of the intervention calls had 8 main topics which were to be covered. Although overall, the average number of topics covered by the Advisors was 6.5 for the first call, and 5.5 for the second call, the averages represent a considerable range (3 - 8 out of 8). Averages

for individual Advisors appear to show that some were more consistent in following the scripts than others. Also of concern is that there were some topics which were more consistently missed than others, including discussion of the services available to distance learners, one of the main points which the intervention was intended to convey to students.

The fidelity check on timing indicates that overall, all phases of the project were approximately three weeks to one month behind schedule, supporting other evidence (e.g., comments in the final interviews) that lateness affected utility of the intervention. Given that the intervention was intended to help students get an early and effective start in their course(s), the problems with timing may be of even more concern than some lack of adherence to content. Timing has been identified as one of the key issues in effectiveness of social support interventions in terms of appropriately matching needs with resources (Gottlieb, 1992). In summary, the fidelity check on content and timing indicated that the intervention's impact on outcomes may well have been affected by the way in which it was applied.

Hypothesis 1, 2 and 3: Impact of the Intervention on Use and Perception of the Orientation Materials, Learner Behaviour, and Learner Satisfaction

The results provided no support for the main hypotheses, which held that the intervention would have a positive impact on the use and perception of the orientation materials, that is, that students would be more likely to use The Starter Kit, and would be more likely to rate it positively. As noted previously, an analysis of group differences on the usage of the orientation materials was not possible because of the level of test-retest reliability and there were no significant differences between the experimental and control groups on perceived utility of The Starter Kit. That being said, it must be noted that despite most students receiving The Starter Kit

late, the percentage of the sample who reported reading it was high (88.5%), and those who read it rated its utility fairly positively on a 10 point scale ($M = 6.88$, $SD = 2.01$). (See Appendix XIV for graphs.) Comments from students during the post-test interviews indicated that not reading The Starter Kit and lower ratings of usefulness were generally related to late arrival of the orientation materials as opposed to problems with the content. It is of note that Gottlieb (1992), citing a study which used a social support intervention to help with smoking cessation, pointed out the importance of appropriately matching the timing of the provision of resources with time of need. Hence, the lateness of The Starter Kit was of particular concern in the context of testing a social support intervention.

Given the positive response to The Starter Kit (lateness notwithstanding), it is most likely an effective and appropriate baseline service for all distance education students. No doubt usage rates and satisfaction with The Starter Kit can be improved by getting the materials out in a timely fashion. In reflecting on the lack of direct effects of the intervention tested, a possibility which should be considered is whether The Starter Kit played the role of a social support intervention in that it demonstrated the institution's efforts to assist students, and raised perceived social support in both groups. Based on the Cohen and Wills (1985) framework, it included both material intended to have the direct effect of demonstrating institutional care for students by reinforcing ease of contact and existing services, and buffering effects in addressing potential difficulties and challenges of concern to distance learners. Because both experimental and control groups received The Starter Kit, it is not possible to measure its effect. However, future research might address this issue with comparison groups.

The results did not support the second hypothesis which held that the intervention would

have a positive impact on desired learner behaviours associated with persistence and achievement in distance education. No significant differences were found between the experimental and control groups on the average amount of time spent on the course or the amount of learner initiated contact with faculty. In the case of the amount of time spent on the course, it is of note that on average, students did report spending the institutionally recommended 6 to 7 hours per week on each of their distance education courses ($M = 6.56$, $SD = 5.63$). Hence, it may be difficult to improve on this performance (see Appendix V). On the other hand, a review of the time spent on the course for both groups of students (see Appendix V) reveals large disparities among individuals that warrants further investigation.

Seventy-four students (almost half of the total sample) reported spending less than 5 hours per week on each of their courses including 2 students who reported spending no time, while 23 students reported spending 12 hours or more per week, including 8 who reported spending 20 to 30 hours. Some of the disparity in time spent, is, no doubt attributable to differences in course content and level as well as individual approaches to study. However, it is of concern that there are so many students who are spending so little time on their courses. One possibility is that lack of time spent on the course may be reflective of the lack of interaction experienced by students. In other words, in the absence of interaction with professor or peers, learners may do the minimum amount of work required to pass the course as opposed to engaging in more in-depth learning. This possibility was supported by the post-hoc analysis which showed a positive relationship between time spent on course and learner initiated contact with faculty. This issue deserves further attention, particularly as more full-time on-campus students are choosing to take part of their courseload at a distance. A student's choice of an alternate delivery

mode to gain flexibility in scheduling should result in a compromise in quality of the learning experience.

Unfortunately, the goal of having students initiate more contact with University personnel, particularly their professors, was far from met. Over half of the sample reported having no contact with faculty or others; approximately one-third reported only one or two contacts with either group, and the rest of the participants spread over a range from 3 to 35 contacts for the term, with most reporting toward the less frequent end of the scale (see Appendix XVI). These results are consistent with a previous study with Laurentian University distance learners (Brindley, 1998b) and are of concern in the context of ensuring sufficient academic interaction in distance learning courses.

Without further study, it is not possible to say why students do not make more contact with their professors when they clearly indicate when asked that they would like more interaction of this kind (Brindley, 1998a). However, as noted earlier, the social support literature points to the importance of an appropriate match between needs of the individual receiving the intervention and the source of the support (Gottlieb, 1992). Results from the needs assessment (Brindley, 1998a) and the follow-up study (Brindley, 1998b) indicated that one of the greatest concerns expressed by distance learners was about the amount of direct contact with faculty. For the purposes of the current study, it was decided that this issue would be addressed by encouraging and helping learners to initiate that contact but it may be that this approach was inappropriate or inadequate for meeting the expressed need for interaction with professors.

As an integral part of each intervention telephone conversations, the Student Advisor stressed the importance of the student making contact with the professor. However, this appears

to have had no significant impact on the amount of learner initiated contact with faculty. Hence, it may be that the Student Advisor was not the most appropriate source to dispense this advice, or for that matter, to create an enduring link with the institution. Even if a student's interaction with the Student Advisor was positive, the call to the professor would still be a call to a stranger. In retrospect, it makes intuitive sense that in order to create a link between the student and the professor, the call might more appropriately come from that source, particularly for first-time distance learners who have no experience of communicating with faculty by telephone. If the professor called the student and the first interaction was positive, students might be much more likely to initiate the second call. It will be important in future research to address the issue of source of support, perhaps by comparing the same intervention made by different sources, and to monitor the intervention closely so that its effectiveness in enhancing learner initiated contact can be better analyzed. In the current study, it can only be speculated that source of support was a factor in having no impact on this particular outcome but there may have been other more important factors at work such as the way in which the intervention was applied. This issue is discussed further later.

Grades and completion rates were not significantly different between experimental and control groups. However, completion rates for the sample were high overall at over 80% and average final grades at 70% were good, particularly considering that failures accounted for about 2/3 of the non-completions. Again, it may well be that completions and grades in Laurentian University distance education courses are at a such a level that it is difficult to make significant improvements. On the other hand, it should be noted that among new on-campus students at Laurentian, completion rates were higher at 90% (N= 1005; 1998-99 academic year). Further, it

is of some concern that 10% of the distance learning sample failed, some with extremely low grades (< 20%), particularly since they had the option to withdraw. This compares to a failure rate of 2.89% among new on-campus students (N = 1005, 1998-99 academic year).

Of particular interest for future research is whether the students who failed could have been identified early as being at risk. A study by Richman, Lawrence, Rosenfeld, and Bowen (1998) notes that adolescents at risk of school failure generally have fewer social resources. They recommended social support interventions for at risk students to strengthen social networks and maximize the possibility of receiving all types of support including assistance from teachers and counsellors. Greater interaction with faculty or other university personnel might have prevented some of the failures in the current study.

The results did not support the third hypothesis that the social support intervention would lead to greater learner satisfaction. In fact, although the difference was at a non-significant level, the direction was unexpected, with the mean average rating for learner satisfaction given by the control group being slightly higher than that for the experimental group. An explanation may lie in findings from both social support and distance education literature which show that interaction with a helper and/or teacher can be for better or worse.

Lahey and Lutz (1996) note that perceived social support is determined by the characteristics of the perceiver, the characteristics of the supporter, and the perceiver-supporter interaction. For example, different perceivers may experience the same supporter as more or less supportive. Alternatively, the same supporter can actually be more or less supportive depending upon their response to the individual perceiver. A number of social support researchers have looked at the effects of negative social exchanges (see, for example, Rook, 1992, for a review).

Similarly, distance researchers have found that interaction with faculty which is perceived as negative by the learner can have a detrimental impact on learning outcomes including satisfaction (Garland, 1993; Brown, 1996).

A closer examination of the results revealed there were only 14 students whose satisfaction rating was less than 5 on the 10-point scale, but 10 of these students were in the experimental group, indicating that the intervention may have had a negative effect for some people. For example, there were four older students (age 37-51) in the experimental group who rated themselves as being extremely dissatisfied. Although the reasons for this are not apparent, it may be due to the way in which the intervention was applied (e.g., the fidelity check on content indicated greater than desirable variation) or the way in which these particular students experienced the supporter or the content of the intervention. While it is possible that these extreme cases skewed the results so that the experimental group appears to have lower satisfaction overall, the main point is that interventions can have both positive and negative consequences. It will be important in future research to more closely monitor the process of the intervention, to ensure more consistent application, and to make better efforts to find out what kinds of students experience particular kinds of interventions as supportive or non-supportive. It is of note that the results across the entire sample indicated high overall learner satisfaction ratings ($M = 7.8$, $SD = 1.8$). It may be difficult to improve on these ratings without knowing more about specific sources of satisfaction and dissatisfaction and responding directly to these.

In summary, there were no significant differences between the experimental and control groups on any of the outcome measures applied. It therefore seems appropriate to regard the two orientation efforts (i.e. print materials plus intervention by telephone and mail, versus print

materials alone), as about equally (rather than differentially) effective in enhancing distance learner behaviour and satisfaction and to proceed with some consideration of why this might be the case.

In reflecting upon the reasons why the intervention did not produce the expected results, it is important to question whether the intervention received a fair trial. The problems with adherence to design no doubt affected the potency of the intervention, and that, together with the possible ceiling effect, may have been sufficient to neutralize the effects of the intervention. Firstly, it appears from the data collected, that most learners in the study performed well on all the outcome measures, making it difficult to have an impact. In other words, the intervention may produce different results in a context where the time students spend on their courses, satisfaction levels, and completion rates are not so high. One of the factors which determines how social support is received and perceived is need. Norbeck, DeJoseph, and Smith (1996) use a medical analogy to point out that if an intervention is provided to the entire population, as opposed to those most at risk because of apparent need of the intervention, an enormous sample size is needed to detect the effect. Although a substantial sample size was used for the current study, it appears that compared to many distance learning contexts, factors such as completion rates and satisfaction levels are quite high at the site chosen for the study.

Secondly, learners may not have received the intervention as intended. The fidelity check on content, although somewhat incomplete because of the inability to record all of the calls, indicates that the topics to be covered in the interventions were not consistently addressed, and that there was probably a fairly serious level of variation in application of the intervention among advisors. As discussed earlier, the variation in application of the intervention may account for

the somewhat counter-intuitive result of those in the experimental group having a tendency (statistically non-significant) toward lower levels of satisfaction with their learning experience than those in the control group.

Timing of the intervention may have been an even more serious problem than lack of adherence to content. The fidelity check on timing indicated that the interventions were made approximately three weeks to one month after the intended time. The orientation materials were received late, pushing back the time when the intervention calls could be made, and using extra staff than originally planned delayed the calls further. In brief, the intervention was intended to work in tandem with the orientation materials, one reinforcing the other, and both intended to help the student get an early and effective start in the course. Given that the calls were not made until after students had started their courses, there may have been some negative reaction as well as positive. In the follow-up interviews, a number of students mentioned the lateness of The Starter Kit, and if asked directly about the intervention, (which they were not), may have made similar comments, that is, that lateness affected usefulness. As noted earlier, appropriate timing of an intervention has been identified in the literature as an important factor in the positive rating of perceived appropriateness and helpfulness of social support.

Finally, an important consideration which may affected the outcome of the study was the choice of source of the intervention. This issue which was raised in the commentary on the Heller et al. (1991) study and the reviews by Gottlieb (1992) and Lakey and Lutz (1996) has already been noted briefly in the context of the intervention's failure to enhance learner initiated contact and will be given more attention in the section on implications for future research. In the case of the current study, a detailed needs assessment (Brindley, 1998a) determined the content

and design of the study but a decision was taken to use a generic Student Advisor instead of faculty as the helper even though students indicated that they wanted more contact with faculty. The rationale for this decision was that it would be difficult to maintain consistent application of the intervention using faculty, and further, that the issue of faculty contact could be addressed by encouraging and helping students to initiate this contact themselves as part of the intervention. However, this choice may have rendered the intervention less effective in terms of meeting expressed student needs to receive support, feedback, and encouragement from the person responsible for evaluating their progress in the course. It is of note that an informal check of the written notes of the comments from students who rated their satisfaction level less than 5 on the 10-point scale revealed that most were dissatisfied because of lack of contact with the instructor.

Hypothesis 4: Social Support as Mediating Variable between Treatment and Outcomes

Baron and Kenny (1986) describe mediating variables as transformation processes which intervene between input and output. In the case of the current study, it was hypothesized that perceived social support would act as a mediating variable between the intervention and the objective of the intervention or outcomes. However, as noted above, all tests to investigate the impact of the intervention on outcomes yielded non-significant results. Hence, one of the basic conditions necessary to test for mediating variables (Baron and Kenny, 1986) was not present, that is, there was no relationship between the independent variable (intervention) and the dependent variable (outcomes). This being the case, it was decided to not carry out further analysis on hypothesis 4, and rather to proceed with some extensive post-hoc analysis to see if any moderating variables for the intervention could be found which might reveal subgroups for whom it was effective or if any variables could be identified from the existing data set which might

predict the outcomes.

Research Question 1: Search for Attribute Variables which Interact with the Intervention to Moderate Outcomes

According to Baron and Kenny (1986), a moderator is a quantitative or qualitative variable which “...affects the direction and/or strength of the relationship between an independent predictor variable and a dependent or criterion variable” (p. 1174). Moderator variables can play a role in identifying subgroups of a focal independent variable which establish differential effectiveness with regard to a given dependent variable.

In the current study, having found that the intervention did not significantly affect the desired outcomes, the question arose as to whether there might be subgroups for whom the intervention was more effective in predicting these outcomes. It was thought that the identification of such interactions or patterns of interactions would be useful for future research and warranted this further investigation of the data.

The potential moderating variables included the following: gender, age, previous educational level, language of choice (French/English), enrolment status (part-time/full-time), location of student (on or off campus), and number of distance education courses enrolled in. The dependent variables included in the search were completion rates and final grades as well as those outcomes found to have acceptable test-retest reliability (utility of The Starter Kit, time spent on the course, learner initiated contact with professors, learner satisfaction, and intent to re-enrol). In addition, social support was treated as an outcome variable to see if there might be subgroups for whom the intervention was more effective in predicting social support.

Only 3 statistically significant interaction effects were found out of a possible 56 (7

moderating variables X 8 outcome variables) at the $p = .05$ level. Given that Type I error increases with the number of tests in a set, the most parsimonious interpretation would be that these findings are chance (i.e. probably non-replicable). This conclusion was confirmed by applying the Bonferroni correction procedure (Weinfurt, 1995) to find the probability level for 56 tests. Using the more conservative level of probability ($p = .0008$), none of the results are statistically significant.

Hence, it is not likely that the intervention's effectiveness was masked by strong moderating variables, at least none that were identified here. For example, other distance education studies which have concluded that gender is a factor in desire for interaction (see, for example, Kirkup and von Prummer, 1990) might lead to the speculation that females would respond more positively to the intervention, or it might have been expected that a variable such as location would moderate the intervention such that geographically isolated participants would respond more positively to institutionally initiated contact, but neither was the case in this study. The failure to find subgroups for whom the intervention might be more effective reinforces the conclusion that adding the intervention to the baseline orientation service, for a variety of reasons, did not add incrementally to other university processes in producing better outcomes.

Research Question 2: Search for Attribute Variables which are Predictors in their own Right of Outcomes

Research Question 2 addresses the extent to which the attribute variables investigated in Research Question 1, that is, gender, age, previous educational level, language of choice (French/English), enrolment status (part-time/full-time), location of student (on or off campus), and number of distance education courses enrolled in, are predictors in their own right of the

outcome variables. The same search process was followed as that in Research Question 1 with the same dependent variables included in the investigation: completion rates, final grades, utility of The Starter Kit, time spent on the course, learner initiated contact with professors, learner satisfaction, intent to re-enrol, and social support.

Only 4 of the attribute variables out of a possible 56 (7 attribute variables X 8 outcomes) showed any significant predictive strength for the outcomes at the $p = .05$ level. Given that Type I error increases with the number of tests in a set, the most parsimonious interpretation would be that these findings are chance (i.e. probably non-replicable). This interpretation is supported by applying the Bonferroni correction procedure (Weinfurt, 1995) to find the probability level for 56 tests. Using the more conservative level of probability ($p = .0008$), none of the results are statistically significant. It can be concluded that the investigation did not identify any learner attributes or pattern of attributes that might compose a particular learner profile which could guide further investigation.

Research Question 3: Search for Potential Process Variables (Net of Attribute Predictors) which Predict Outcomes

The third research question addressed the extent to which there might be any process variables (those that could be institutionally manipulated or influenced by the institution) that would predict the desired outcomes. The process variables identified for the purposes of this study included the intervention, the amount of time the learner spends on each course per week, learner initiated contact with the institution, and perceived level of social support. The latter three variables were also considered as outcome variables, along with perceived utility of The Starter Kit, course completions, grades, learner satisfaction, and intention to re-enrol.

Perceived social support was a factor of particular interest in this post-hoc question, having been proposed in the main hypotheses as an important mediating variable between the intervention and outcomes. As such, it was included in this post-hoc analysis as both an outcome variable and a process variable. This procedure was intended to investigate whether any processes identified in this study, other than the intervention, might predict perceived social support, and whether perceived social support would predict any of the desired outcomes.

After the Bonferroni correction procedure (Weinfurt, 1995) was applied to address possible Type I error, 3 of the process variables out of a possible 32 (4 process variables X 8 outcomes) were found to significantly predict four of the outcome variables. Higher levels of perceived social support significantly predicted two outcomes, higher learner satisfaction, and stronger intention to re-enrol. Greater time spent on the course significantly predicted one outcome, increased learner initiated contact with professors. And finally, greater learner initiated contact with professors predicted more time being spent on the course.

The most important finding is that perceived social support as it was defined and measured in this study obviously plays a strong positive role in learner satisfaction such that the more students have a sense that they are supported in their efforts by the institution, the more satisfied they are with their learning experience, and the more likely they are to re-enrol. It is not surprising that those students who spent more time on their courses each week also made more frequent contact with their professors, and vice versa. It seems intuitively correct that these two learner behaviours would be strongly associated. The finding also reinforces the need to find ways to encourage both behaviours.

It can be concluded from the results of Research Question 3 that students' sense of social

support is very important to their satisfaction with the learning and their intention to re-enrol. Although the manipulation check revealed a very weak trend (statistically non-significant) for those who received the intervention to be more likely to perceive a greater level of social support than those in the control group, the main results and post-hoc analyses indicate that it was not enough to influence outcomes in any significant way. Hence, it must be concluded that the source of perceived social support for these students was elsewhere. Participation in the research project may have affected students' perceptions of institutional caring because each of the participants had a conversation with a recruiter during which they were told the study was being done for the purpose of improving services to distance learners. As noted earlier, The Starter Kit, a new service introduced specifically for distance learners which was provided to both the experimental and control groups as a baseline service may have functioned as an enhancer of perceived social support. It was designed using the same social support framework used to develop the intervention and may well have contributed to students' sense of support available from the institution.

In summary, it appears from the results of this study that those distance learners with higher levels of perceived social support are more likely to be satisfied with their educational experience and are more likely to re-enrol. What is less clear is to what extent students' perception of social support can be enhanced by the institution, and what kinds of institutional processes are most effective in doing so. Secondly, if social support can be enhanced effectively by the institution, it will be important to find out whether it might be possible to target and improve other learner behaviours through this mechanism, in particular, learner initiated contact with the institution and amount of time spent on the course. These issues will be addressed in the

section on implications for future research and practice.

Limitations of Study

A number of limitations of the study, particularly those related to procedure, have been noted elsewhere, but are addressed here in a more general way in terms of implications. The term distance learning is commonly applied to a wide variety of educational situations in which learners are separated from the instructor. An intervention designed for one setting may not be appropriate in another. As described above, the setting for this study is Laurentian University, a dual mode (on-campus and distance) bilingual regional university serving a diverse population. Its distance education program relies mainly on print-based packaged courses supported by telephone tutorials. Students must meet the same entrance requirements as on-campus students, and courses have fixed start dates and strict deadlines based on a regular academic year. All courses have invigilated final examinations. Of note, is that over half of the students in this study are on-campus students taking one or more distance education courses as part of a regular full-time load. Generalization of results to other types of distance learning settings should be made with caution.

The data gathered for the study, with the exception of that drawn from student records such as demographics and grades, were gathered with a telephone-administered post-hoc questionnaire. Within the context of resource restrictions and the complexities of working with study participants at a distance, the use of a post-hoc questionnaire was the most feasible and appropriate data collection method. Although the time frame from intervention to data collection was relatively short (8-10 weeks), it should be noted that ideally, data for a study of an educational process which takes place over an extended period would be collected from students

throughout the term. Recognizing the concerns over accuracy and other issues associated with use of post hoc measures, a test-retest reliability check was carried out wherein the Post-test Questionnaire was re-administered to a sample of 40 of the participants approximately 3 to 4 weeks after the first administration and yielded acceptable results. Nonetheless, certain cautions should be used when interpreting data from post hoc measures.

The study was carried out during a regular academic year at Laurentian with existing staff, and the design had to be modified a number of times to accommodate the practicalities of working in a field setting. As well, some mistakes in procedure were made due to breakdowns in communication among staff working on various aspects of the project. The changes from the original design have been described under 'Method' and are summarized here.

The first major deviation from the procedural design of the study was when the wrong orientation materials were sent out at the first of term. Hence, The Starter Kit was sent out approximately three weeks late and required an errata sheet (see Appendix VI). This mistake resulted in many students not receiving The Starter Kit until the end of September, long after they were intended to have it. The intervention and The Starter Kit were designed as early interventions and to work in tandem, one reinforcing the other. Hence, the delay in sending out The Starter Kit may have had a significant negative impact on the outcomes of the study which were not possible to measure. Records were not kept of the timing of distribution to individual students making it impossible to track whether there were differences between experimental and control groups in this regard. Many students mentioned the lateness of The Starter Kit during the post test interviews, most in the context of expressing dissatisfaction with its delivery. Those who had not read it, or did not want to rate it, generally gave the lateness or its arrival as the

reason. The extra work and confusion created by the mistake with the orientation materials also contributed to subsequent delays with the project because rectifying the situation required additional staff time, and because intervention calls could not be made until The Starter Kit had been sent out.

Other complications and changes to the design of the study resulted from the under-estimation by staff of the time they had available for the project, and the amount of time which passed before the problem was diagnosed. Although other staffing arrangements were made quickly, recruitment of participants and the interventions were each delayed by at least two to four weeks, not an insignificant amount of time, given that the intervention was designed as an orientation to be made very early in the term. In particular, the necessity of recruiting 5 additional Student Advisors from Laurentian University staff under very serious time pressure when the project was already underway most certainly had a negative impact on control over consistency of approach as well as timing of the intervention calls. Despite all possible steps being taken by the researcher to adhere as closely as possible to the original design, the fidelity check on content and timing of the intervention confirmed that there was much greater variation in the application of the intervention among advisors and that the amount of time which passed between making the intervention calls from when the participants were assigned was increased significantly from what was planned. Further, as noted earlier, raters observed that at least two Advisors appeared not to be as comfortable or true to the scripts when working in their second language.

It should also be noted that the random assignment of experimental participants to Students Advisors was abandoned in favour of expedience in assignments of cases. As well,

workload issues affected the balance of assignments among Advisors. Two Advisors called approximately 20 students each, and the remaining students in the experimental group (approximately 50) were spread unevenly depending upon time available among the other 5 staff. Hence, any variance in outcomes due to inconsistency in application of the intervention was not overcome by random assignment or by evenly distributing caseloads.

In summary, a number of compensations had to be made in process due to the practicalities and constraints of carrying out the study in a field setting. Although all possible steps were taken to try to stay as close as possible to the original design of the study, the potency of the intervention, and hence, the outcomes were no doubt affected to some extent by the delays and staffing changes described above. Indeed, it may be somewhat questionable as to whether the intervention had a truly fair test of its effectiveness, particularly in light of the possible ceiling effect. Hence, the changes from the original design in application of the intervention should be kept in mind when interpreting and considering the results of the study.

Implications for Research and Practice

The most important finding of the study is the very strong relationship between students' perceived level of social support and their satisfaction, including their intention to re-enrol. As measured in this study, perceived social support consists of the following: the extent to which distance learners feel welcomed to the institution and encouraged to make contact; believe that they have received the information, instrumental help, and support needed to get started; have a sense that there is someone at the institution who will listen and help if it is needed, that there is institutional support available which is appropriate to their needs, and that assistance can be obtained in a timely fashion.

To the extent that the intervention made any positive contribution toward the outcomes, it appears to have done so by weakly enhancing the learners' sense of social support. It is unfortunate that there were difficulties with the administration of the intervention, particularly the lateness of it for many students, because it is unclear how much of the lack of direct positive effects of the intervention was due to those difficulties and how much was related to the design and content of the intervention itself and its congruence with learner needs and expectations.

Given the lack of direct effects of the intervention and the concern in the literature about the dilution of the term social support (see, for example, Turner, 1992), it is important to ask whether the intervention designed for this study was truly a social support intervention. Lakey and Lutz (1996) point out that the original promise of social support research was that individuals' naturally occurring social networks and resources could protect them from stress and other disorders and reduce the need for professional helping. However, the progression of concept of social support to include other types of social resources was inevitable. The main premise of social support is that people can benefit from optimizing their psychosocial resources from those in their primary social field (Gottlieb, 1992), and individuals no longer rely strictly on family and friends as their primary social field.

Teachers, school counsellors, home helpers, physicians, and other professionals, paraprofessionals, and volunteers are very much part of most peoples' everyday lives, at certain times more intensively than others. The current social support literature demonstrates that interventions are now seen to encompass both support from family and friends as well as those who might be introduced from the outside and become temporarily or permanently allied in ways that have relationship meaning (see, for example, Lanza and Revenson, 1993). As Gottlieb

(1992) points out, the focus in social support intervention should be on an appropriate matching "...between the psychosocial needs aroused by the demands people face and the social and emotional provisions they receive" (p. 294).

In the case of the current study, the network of institutional support (e.g., counselling, teaching, administrative staff) exists to meet the needs of students and in this sense, is a "naturally occurring" source of support for them. The intention of the intervention was to make learners more aware of and feel more part of that support network in order to enhance positive outcomes. To the extent that outcomes might be improved, it was hypothesized that it would be through enhancing perceived social support.

Lakey and Lutz (1996) define social support interventions as interventions which attempt to change one or more aspects of social support in order to enhance psychosocial well-being. They acknowledge the very broad variety of interventions this includes, but address this by advising that intervention studies should employ a clear theoretical model, and a reliable measure of perceived social support. The current study applied a well known theoretical model of social support (Cohen and Wills, 1985) and employed a measure of perceived social support consistent with this model. From this point of view, the intervention was a social support intervention. That being said, the issue of future research based on the findings of the current study can be addressed.

Based on the results of intervention research in which new forms of social support (Gottlieb, 1992; Lakey and Lutz, 1996) have been introduced, it is likely that there are university processes, and possibly learner attributes other than the ones tested in this study, which contribute to a learner's perception of social support. For example, it may well be that an intervention of a

similar type which attends to the desire for interaction but focuses on different areas, possibly academic content, may be effective in meeting the stated goals, particularly for those learners who reported lower levels of satisfaction, both in providing them with a more satisfactory learning experience and in increasing long term retention. It is encouraging to have found a theoretical model and reliable measures of social support and learner satisfaction with which to further investigate the question of how to best accomplish social integration of distance learners, and to continue to explore some of the more problematic aspects of social support interventions such as matching of support with needs, timing and source of support, and identification of the mechanisms which make support effective.

Following are three major questions which might be included among those addressed by future research:

1. To what extent is it possible to change the level of perceived social support in a positive direction in a distance learning context? Although there is a small literature on using social support in the academic context which has shown promising results, the distance learning context provides a more challenging environment. For example, one of the main difficulties is that there is generally a more heterogeneous population than in other campus bound educational settings which may make it more difficult to accurately identify needs and match these with appropriate support. Future studies should try using perceived social support as an outcome measure as well as a mediating variable which may focus efforts more clearly on finding appropriate types and sources of support. As well, studies should include a variety of comparison groups, such as a no treatment group and groups who receive a single minimal treatment such as The Starter Kit. It would be preferable if measures of perceived social support could be taken a

number of times over the course of the academic experience of students, including in the early stages but this may not be practical or feasible in many settings.

2. To the extent that it is possible to have a positive impact on perceived social support, is it possible to more clearly identify the mechanism(s) by which this happens? The current study used the main and buffering effects model of social support proposed by Cohen and Wills (1985). Although this is still the most commonly discussed explanation for how social support works, others such as Lakey and Lutz (1996) propose that more basic research is needed on the mechanisms of social support to guide intervention design. Lakey and Lutz (1996) acknowledge that models such as that of Cohen and Wills (1985) make intuitive sense, but assert that the process by which social support is effective may be more complex with the personality of the person supported playing a more important role in perceived support than previously thought. In order to investigate the process by which social support works, it will be necessary to try different modes and sources of support, and more closely monitor the actual process (Gottlieb, 1992), for example, by asking students directly about what enhances their perception of support and what types of behaviours they find supportive.

3. Are there some contexts and groups which are more appropriate for the application of social support interventions and what contextual factors are most important to take into consideration in planning interventions? In the current study, both the control and experimental groups had very positive scores on most all of the outcome measures. Future research should address this issue by comparing at least two institutions, including groups where baseline outcome measures are not so high. The institutional setting for the current study has a long successful history of offering distance education courses, and demonstrates their concern about

their distance education students in a variety of ways (including the resources expended to carry out the current research as part of an extensive two-year study). Future studies should include comparison groups at higher levels of risk (or stated another way, with lower levels of apparent social support) in order to give the intervention fairer trial (Norbeck, DeJoseph, and Smith, 1996).

In the current study, potential moderating variables were drawn from the existing data base for individual post-hoc analysis. In order to further advance the work that has been done on multivariate models of persistence in distance learning, it would be advisable to choose one of the existing models (for example, Bajtelsmit, 1988; Brown, 1996; Kember, 1989b) as part of the design of a study and examine the effects of an intervention in relation to it. Other contextual factors may include a realistic appraisal of what type of intervention can be implemented with existing resources and how well it can be maintained over the long run. In the current study, staff underestimated their availability considerably. If an intervention cannot be maintained over the longer term, it may not be practical to test it.

Another contextual issue which was noted earlier but which deserves a lengthier discussion here is the appropriateness of the choice of the source of support in the current study. Sweet (1993), as noted in the literature review, makes a strong case for an all-encompassing role for the distance learning instructor which would incorporate the objective of social integration. By contrast, this study argued that having the instructor as the main facilitator of social integration might not be practical or feasible in all institutions if the goal was to have consistency of experience for students across courses and disciplines, and proposed instead that the intervention be carried out by a student advisor with a more generic helping role than the instructor. In retrospect, this may have not been the best decision for a number of reasons.

The orientation materials developed for the study rely on having one point of contact (a student advisor) to reinforce the idea that getting help from the institution is easy. Rating of The Starter Kit would indicate that this approach is an effective one and service-use statistics for the student advisor at Laurentian point to the necessity of having a generic helper to play the role of academic counsellor and problem solver. Hence, the need to have generic helpers for distance learners just as there are generic helpers for learners on campus is not in question. However, the distance education instructor plays a critical role in mediating between packaged (or technology based) course content and the learner, and it may be that learners might be more inclined to initiate contact with their professors and experience a greater level of social support if an early intervention (experienced as positive support) was made by the instructor.

The needs assessment which preceded this study (Brindley, 1998a) pointed to the strong desire of distance learners to have more contact with the institution, but particularly with instructors. Hence, one of the objectives of the intervention was to encourage students to initiate this contact. Recognizing that instructors have different approaches to teaching and interaction with learners, it was thought that it might be more effective to help learners develop the skills needed to make contact than to try to have instructors take a uniform approach to initial contact with students (similar to a social skills training approach to social support intervention). Unfortunately, the intervention was not successful in meeting this objective. Again, it is not clear whether this is mainly due to the way in which the intervention was carried out or whether most learners expect and want the instructor to make the first contact. Given the number of studies which point to the importance of the instructor in distance learning and the rapidly expanding use of technologies which facilitate more and better quality interaction between learners and

instructor, this question is worthy of further investigation. In short, it would be useful to try a similar type of intervention with the instructor as the intervener to investigate the important question of the primary role which the instructor can play in social integration of the student.

Another contextual issue which deserves attention in future research is the implications of the changing profile of distance learners. Much of the distance education literature, including that reviewed for this study, refers to more traditional distance learners, that is, adult students with little or no post-secondary experience, studying away from campus because of barriers which prevent on-campus attendance. However, both Wallace (1998) and Brindley (1998a) have suggested that there appears to be a strong trend in Canada toward distance education becoming an issue of choice rather than access, with many younger on-campus students choosing to take distance education courses as part of their regular full-time load. Obviously, this trend has implications for the type of support services which students need and expect. Although the needs assessment preceding this study indicated strongly that students wanted more contact with the institution, a differentiation was not made between on- and off-campus students, and the type of contact desired.

In the current study, fully 67% of the participants were studying on-campus as well as taking at least one distance education course. It would seem that for many or most of these students, the term distance education student may be a misnomer. Although there was no difference between experimental and control groups with regard to location of students and there was no strong evidence from the post-hoc analyses to suggest that the results for off-campus students were different from those on-campus (e.g. location did not predict perceived level of social support), the high percentage of participation by on-campus students in the study was not

anticipated. Hence, the question of possible differing needs and expectations, as well as differing response to services between on- and off-campus students, was not specifically addressed in the design.

In future, for program development and research, it will be important to more fully explore the similarities and differences between on- and off-campus students engaged in distance learning. For example, with regard to social support, on-campus learners not only have easy access to university support services but these institutional support systems are much more immediately apparent in their everyday environment. As noted earlier, perceiver characteristics interact with the social environment to help determine the level of perceived social support (Lahey and Lutz, 1996). According to the needs assessment (Brindley, 1998a) prior to the current study, younger students (who are more likely to be on-campus) have higher expectations for contact with and support from the institution. Hence, they may be more aware of and respond more positively to any indications of institutional support.

The rapidly changing profile of distance learners points to the need for future research to attend to location, participation in classroom courses, and access to support systems as important learner profile variables. It also points to the need for institutions to continue to collect data on learner characteristics in order to appropriately match resources to learner needs.

From a practical and positive perspective, it is of note that The Starter Kit developed for the study represents a cost-efficient simple approach to improving the quality of the learning experience of students by providing them with assistance to get a quick and effective start in their course and by linking them to the existing institutional support system. Most of those who received The Starter Kit used it, and lateness of its arrival notwithstanding, most found it useful.

These materials have already been adopted for use by Laurentian University and could easily be adapted for use by other institutions.

Closing Comments

This study makes a contribution to the study of student support in distance education, an area that has been identified as critical, particularly as new technologies make more and better quality interaction with learners possible. It is significant in that it introduced a psychosocial theory to guide an intervention within the distance learning context, and employed an experimental design to test it, an approach which has not been used frequently in the field. Although the intervention designed for the study was not found to be more effective than the baseline service, the discovery of the strong link between social support and learner satisfaction is an important one. It appears that the concept of social support is a useful one for helping explain the importance of interaction to learner satisfaction and intention to re-enrol in distance learning. Future studies addressing interaction in distance learning will benefit from the application of social support theory, as well as the measures developed for this study, to design and test other interventions and interaction models, such as those developed for computer-based learning. The research makes a contribution to social support theory by designing an intervention and measure based on an existing model and the current literature, and testing it in a novel setting. It is only through the systematic study of intervention trials that we can discern how interactions occurring in different types of intentionally created relationships take on supportive meaning, and how they confer measurable benefit, particularly those desired by the parties involved.

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APPENDICES

Appendix I - Recruitment Script for Intervention Project

Hi, I'm _____ at Laurentian University. I'm calling about a research project that we're carrying out about the services which we provide to new distance learners. Since you are a new distance learner at Laurentian, we'd like to know if you would be interested in participating.

It will only take a few minutes to explain the project but I don't want to interrupt something else that you might be doing—is this a good time?—or is there a time that might be better? *(If it is not a good time, make a specific appointment for later.)*

The purpose of the project is to evaluate two different approaches to orienting students to distance learning. If you agree to participate in the study, you will be assigned at random to one of two groups. Both groups will receive all of the services we currently offer to distance learners including the orientation package called "The Starter Kit", and will be asked to respond by telephone to a short questionnaire at the end of the term.

In addition, students in one group will receive a couple of telephone calls and some written communications from a student advisor (*give name*). If you are in the group receiving telephone calls, you will be asked if these can be audiotaped. However, if you prefer that the calls are not taped, you can still participate. The audiotaping is strictly for the purposes of the research—your name would not be attached to the tapes and they will not be kept beyond the end of the project.

By participating, you will have the opportunity to improve your study skills and you will be helping us to improve our services to distance learners. In appreciation for your participation, we will enter your name in a draw for a \$100.00 gift certificate at the Laurentian University Bookstore.

You should know that if you decide to participate in the project, you can opt out at any time—and your decision to participate, not participate, or withdraw from the study will not in any way influence your status in the course or the services which you receive from Laurentian. No one other than the student advisor (*provide name*) and the researchers directly involved in the project will be aware of your participation.

It may also be helpful for you to know that any information which you provide as part of the project will be kept strictly confidential. Results of the study will be reported as grouped data only, with no names attached. And if you wish to receive a copy of the findings of the study, this can be arranged.

Do you have any questions about the study?

Would you like to participate?

If the answer is yes: That's great. We very much appreciate your participation in the study. What I will need from you in order to begin is a signed consent form. The consent form covers all of the information I have just given you about the study in detail. Your signature indicates that you have been fully informed about the nature and conditions of the research and that you agree to participate. We would like to get started as quickly as possible, so I am wondering if I could FAX the form to you and have you FAX it back. If not, I will mail it right away and if you could sign it and mail it back as soon as possible, it would be much appreciated. In the meantime, I wonder if I could just get some contact information and a few other details from you (*refer to attached Recruitment Form*).

If the answer is no: That's fine. If you reconsider or if you have further questions about the study, you may call Cindy Ives-Bigeau at 1-800-701-2816 or 675-1151, ext. 3933. She is the Manager in Continuing Education who has responsibility for the project. Thank you for your time and good luck with your course. We hope you enjoy your studies with Laurentian.

Recruitment Form for Intervention Project

Name of Student: _____ Birthdate _____

Agreed by telephone to Participate: Yes _____ No _____ Date _____

Consent Form: Date Sent _____ Date Received _____

Prefers services in: English _____ French _____

Contact Information

Address: _____

Daytime Telephone: _____ Evening/Weekend Telephone: _____

FAX #: Home _____ Office _____

E-mail address: _____

Any special information on best time/how to contact: _____

Enrolment Status

total # of courses in progress _____ # of d.e. courses in progress _____ institutional affiliation _____

Background Information

Gender: Female _____ Male _____

Highest level of previous education:

Less than high school graduation: _____

High school diploma _____

Some college _____

College Graduation _____

Some university _____

Bachelor's degree _____

Master's or professional degree _____

Doctoral degree _____

Appendix II - Consent Form
Distance Learning Research Project
Laurentian University

Project Investigator: **Cindy Ives-Bigeau**
Senior Manager, Marketing and Development
Centre for Continuing Education
Laurentian University
(705) 675-1151, ext. 3933

The following is information about and a consent agreement to participate in the orientation research project which was discussed with you by telephone. When a research project is undertaken through Laurentian University, written consent is required from participants.

The purpose of the project which is being carried out by the Centre for Continuing Education is to study the effect of two different approaches to orientation services for students new to distance learning. We expect both methods to be helpful, but would like to know if one method is more effective than the other.

Participation in the study is voluntary. If you agree to participate you will be randomly assigned to either Program A or Program B. All participants will receive orientation materials with their course package and at the end of the term, will be asked to respond by telephone to a short

questionnaire (10-15 minutes) about their study habits during the course, their satisfaction with their experience, and the help available from Laurentian. A small sample of the total group will receive a second telephone call at the end of the term to re-administer the questionnaire. In addition, Program B students will receive two brief telephone calls from a student advisor during the first weeks of their course, one to help them get started, and one to follow-up, check on progress, and see if further assistance is required. With your permission, as indicated by your signature at the end of this form, these two telephone calls will be audiotaped. (Your permission for taping will requested again at the time of the telephone call. **Please note that if you do not wish to be taped, you can still participate in the study.**) A sample of these tapes will be used strictly for the purposes of the study and all will be destroyed once data is collected.

As well as the information which you provide, some information will be required for the study from Laurentian University student records. This would be collected following completion of the current academic term and will include demographics (age, previous educational experience), grades and information about course progress and completion. As with all other information, it will be kept strictly confidential. Only the researchers will have access to it, and it will not be reported in any way which identifies individuals.

Your participation in the study may help you to learn more about the skills required for distance learning and to develop improved study habits. It is our hope that the study will give us more information about how to more effectively help distance learners get started in their courses.

Consent Form - page 2

This study involves essentially no risk or discomfort, and will take very little of your time. All information which you provide will be kept strictly confidential. Results of the study will be reported as group data only, with no names attached. If direct quotes from participants are used in the final report, any identifying information will be removed. If you wish to receive a copy of the findings the study, this can be arranged through the Centre for Continuing Education. A summary should be available in the fall of 1999.

If you decide to participate, you may withdraw from the project at any time. Your decision to participate, not participate, or participate and subsequently withdraw will in no way influence any other services that you receive from Laurentian or your status in your course. No one other than the student advisor and researchers involved in the project will be aware of your participation.

We would be pleased to provide further information about the study. Should you have any questions, please do not hesitate to contact Cindy Ives-Bigeau at the Centre for Continuing Education, (705) 675-1151, ext. 3933.

I (please print), _____, have been informed about what is involved in the study described above and agree to participate as a research subject.

I understand that I have and will continue to have opportunities to obtain information about the study, and that I will have the opportunity to discuss the study with the investigators if I so choose.

I also understand that there are two copies of this consent form, one which I keep and one which the researchers keep.

Date: _____

Signature of Participant: _____

Date: _____

Signature of Researcher: _____

Please return one copy of this form as soon as possible by FAX to (705) 675-4897 or in the postage paid return envelope provided.

Appendix III - Ethical Approval from Laurentian University

Appendix IV - Orientation Materials

The Starter Kit

FOR DISTANCE LEARNERS

especially designed for the

LAURENTIAN UNIVERSITY

ENVISION PROGRAM

Centre for Continuing Education

1-800-701-2816

September/1998

WELCOME

Welcome to Laurentian University and the world of distance education. Laurentian started The Envision Program (distance education courses and programs) in 1972 as a way of responding to learners who could not easily get access to on-campus university courses. Since that time, the number of students enrolled in distance education and the number of courses offered through alternative delivery modes at Laurentian has grown considerably. Currently, there are approximately 5000 students enrolled in 250 courses. Students who enrol in distance study are no longer just those who are geographically isolated or prevented from studying on campus for other reasons. Many people are now choosing distance learning because of the flexibility it offers in time and place of study, including a considerable number of full-time on-campus students who are taking distance courses as a part of their program.

Whatever the reasons for choosing distance education, learners often find it a very challenging way to study. Although in some ways, distance learning appears to be an easier way to take a course because there is no class attendance required, it has its own special demands. Most distance learners report being quite surprised by the amount of time, motivation, and self-management that this type of study requires. In response to what learners have told us about the challenges of distance study and based on what studies here and at other distance learning institutions have identified as being associated with successful distance study, we have developed this brief guidebook called The Starter Kit.

Laurentian University strives to offer a quality learning experience to all of its distance learners and as part of that effort, The Starter Kit is intended to provide you with information, advice, and other tools which will help you assess your readiness for distance learning, prepare you for the special challenges you may face, and help you to get an early and effective start in your course. We have tried to make it short enough so that it is not an onerous task to review and work through it, and at the same time to ensure that it includes meaningful and helpful content. To this end, we have tried as much as possible to give you what you would get if you met other distance learners face to face, that is, the benefit of their experience.

We wish you all the best in your distance studies with Laurentian and ask that you contact us if there is any way at all that you think we can help. The guidebook provides a list of contacts for various services but if, at any time, you are not sure who to call or you have trouble reaching us, please call 675-1151 or 1-800-701-2816 and ask to speak with one of the student advisors, Ruby Gervais (ext. 4819) or Denis Lauzon, (ext. 1040). We look forward to hearing from you.

Cindy Ives-Bigeau
Senior Manager
Marketing and Development
Centre for Continuing Education

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GETTING STARTED

AN EARLY START IN YOUR COURSE IS THE FIRST STEP TOWARD SUCCESSFUL COMPLETION.

The following are the first steps toward a successful start in your distance learning course:

1. **SET UP A PLACE TO STUDY** with all of the things that you will need. As much as possible, make this a comfortable and permanent place with as few distractions as possible.
2. **REVIEW THIS GUIDEBOOK** this guidebook and keep it with course materials for reference
3. **WORK THROUGH THE SELF-ASSESSMENT QUESTIONNAIRE**, making note of any issues where you might need to follow up with some action or getting assistance (e.g. getting family cooperation with study times, acquiring better time management skills, participating in career counselling, etc.)
4. **REVIEW THE TYPES OF ASSISTANCE AVAILABLE FROM LAURENTIAN** and make any contacts that might be helpful. If at any time, you need help with something but you don't know who to contact, **CALL THE STUDENT ADVISOR**. This person is there to provide assistance and will either help directly or find the appropriate person for you. **POST THE LIST OF CONTACTS IN YOUR STUDY AREA.**
5. **REVIEW ALL OF THE INTRODUCTORY INFORMATION FOR THE COURSE.** In particular read the introductory letter (which will be at the very beginning) and the "about the course" section. Skim the subjects to be covered, make note of the course requirements and major deadlines, and note who your professor is and how to contact him or her. **ADD THE CONTACT INFORMATION FOR YOUR INSTRUCTOR TO YOUR LIST OF CONTACTS.**
6. **DEVELOP A WEEK TO WEEK STUDY PLAN.** You will find a blank scheduling form at the back of this booklet in Appendix B. Taking into consideration the information from the course package about requirements and deadlines and the many other commitments you will have other than your course(s) during the next four months, develop a week to week study plan which shows when you will complete the major course requirements. You will need to set aside about 10 hours per week for each distance learning course. **POST YOUR SCHEDULE IN YOUR STUDY AREA** and keep it up to date when there are changes.
7. **START TO WORK ON THE COURSE** and enjoy. Stay active in the course. Try to work on it every week and find ways to keep your interest up. Read, question, interact with your materials and your instructor. Think about what you are learning, how it relates to other things that you know or are studying and talk to others about it. If you want to talk to other learners, call your **STUDENT ADVISOR** who will help you get in touch with other Laurentian University distance students.

WHAT DO DISTANCE LEARNERS HAVE TO SAY?

Laurentian University has collected extensive information about incoming distance learners, including what their reasons for study, their expectations, and what they are most concerned about upon entry. It may be interesting and helpful to compare your own thoughts about study to theirs. The points in each box are listed in the order of priority given them by learners.

THE THREE MOST OFTEN CITED REASONS FOR CONTINUING STUDY:

- Intellectual Development
- Personal Growth
- Acquire Knowledge and Skills for Employment

THE MOST IMPORTANT EXPECTATIONS OF STUDY:

- Courses will be challenging
- Will be able to get help from instructor when needed
- Courses will be interesting
- Will enable me to develop intellectually
- Academic standards will be high
- University staff will be courteous and helpful
- Courses will require a great deal of study time
- Students' opinions will be valued in discussions and/or assignments
- There will be opportunity for interaction with other students

CONCERNS UPON ENTRY:

- Handling the workload and managing time
- Achievement of desired grades
- Obtaining information and academic advice
- Availability of faculty for help
- Having sufficient funds
- Reading and Writing at the university level

AM I READY FOR DISTANCE LEARNING?

A Self-Assessment Questionnaire

To Help You Prepare

for Distance Study at Laurentian University

TAKING STOCK*

Distance learning offers many advantages in terms of flexibility in time and place of study. Generally, no class attendance is required and that allows you to make decisions about your study schedule. (The exception is with courses which have audioconferenced or videoconferenced sessions.) You will have packaged materials to guide you through the course as well as access to a faculty member who can help you with the course content. Other types of help such as academic advice, career and personal counselling, and assistance with special needs are also available. (See the **Learning Resources** list in the next section of **The Starter Kit**.)

On the other hand, you likely will not have day to day contact with other students taking the same course and you will not have the benefit of the structure of attending regular classes to pace your study and keep you on track. Sometimes the isolation and finding the self-motivation required for independent study can become very difficult and challenging. And, given that life is never static, it is inevitable that you will face some stressors during the term such as moving, changing jobs, illness, or unexpected and heavy draws on your time from other areas of your life.

Being prepared by being clear about your goals and knowing what resources you have to draw on can really make a difference if and when the going gets tough.

Please take a few moments to work through this short questionnaire. It is based on research in distance learning about factors which hold students back and help move them forward. These include having **clear goals**, the **commitment and motivation** to make the time required for study, **support** from those around you, and adequate **academic preparation**. The following questions are designed to help you consider how well you are prepared in these particular areas and steps you can take to improve your chances of success.

*This self-assessment questionnaire was adapted and re-written with permission from Athabasca University from a publication called "Am I Ready for Athabasca University?", (1991/1992).

GOALS

What goal do I have that will keep me going when my motivation sags?

University study requires a large commitment of time, energy, and money. Have you analyzed your own situation to know that this commitment will be an appropriate and useful investment for you?

Distance learning, in particular, requires a great deal of energy and self-motivation. Often everything else seems more important, and the course just gets left behind. You don't have to attend classes so not working on the course is visible only to you. What important goal will keep you motivated?

Think about your reasons for study. Are they related to intellectual and personal growth, gaining knowledge and skills for career entry or change, or are you trying to discover your interests? Are you trying to qualify for a particular occupation? Will the course or courses that you are taking help you reach your goal? Review your planning process with the following questions.

	Yes	No
1. Can I explain clearly to myself, to my friends and family, my reasons for returning to formal study?	_____	_____
2. Am I seeking some specific credentials(s) to qualify for a particular job that is important to me?	_____	_____
3. Am I pursuing a degree in order to open new opportunities?	_____	_____
4. Do I need a degree in order for entry to a career that I want to pursue?	_____	_____
5. Have I decided whether my goals are short or long term?	_____	_____
6. Do I want to pursue university studies for intellectual and/or personal development regardless of whether I need it for career or job?	_____	_____
7. Will having a university credential make me feel more self-confident?	_____	_____
8. Will the distance study course(s) that I have chosen to take through Laurentian University help me achieve my goals?	_____	_____
9. Have I considered other ways of furthering my education?	_____	_____
10. Is taking a distance study course or program at Laurentian University the best way to work toward my goal at this time?	_____	_____
Total number of responses in each column.	_____	_____

GOALS (cont'd)

Some questions may not appear to be directly related to your situation. However, the point is to review your planning process and think about your reasons for study.

The higher your number of "yes" responses, the more likely it is that you have done some careful planning and are fairly clear about your goals.

If you feel like your goals are not as clear as you would like, or you would like to give more consideration to clarifying academic and career plans, there is help available. Laurentian offers career counselling as well as academic advising so that you can choose courses to form an academically sound program which is consistent with your goals. All you have to do is speak with the Student Advisor to ensure that you get the assistance that you need. These services are available at a distance for those not in the Sudbury area. Speak to your Student Advisor for details.

Excellent self-help books are available for career planning and goal clarification. Check with your local library and bookstores. One very popular book is "What Colour is Your Parachute" which takes you through the career and life planning process in a fun and interesting way, opening up avenues that you may not have considered. If you choose this route (reading and working on your own to clarify your goals), it may be helpful to set up an cooperative arrangement with a friend or relative, possibly someone who is going through the same process, to meet regularly to discuss your plans and get feedback.

COMMITMENT

Do I have the time, energy, skills and motivation required for distance study?

You will need to spend an average of 10 hours per week for approximately 14 weeks for each semester course you take through the distance study program. Presumably you have a full schedule already with commitments to work and/or study, family activities, community and other volunteer tasks, leisure, and other activities. Where will you find that 10 hours per week per course which is necessary? What activities will you give up in order to take on your studies?

As well as time, you will need energy, motivation, and sufficient finances. This section of the questionnaire will help you assess these factors:

	Yes	No
1. In order to find the time for my Laurentian U. studies, will I be able to reduce the time I now spend each week on the following:		
• full or part time employment	_____	_____
• housekeeping/home maintenance	_____	_____
• family care	_____	_____
• other educational programs	_____	_____
• volunteer/community activities	_____	_____
• recreation/relaxation	_____	_____
2. Can I reorganize my week to leave me ten free hours on a regular basis?	_____	_____
3. Do I have resolve and determination to make time for studying while handling other daily obligations?	_____	_____
4. Can I postpone certain life changes (parenthood, travel, job changes, geographical moves) for the next year(s) or make them in a way that they cause less disruption to my studies?	_____	_____
5. Do I have some ability to be flexible with my time?	_____	_____
6. If needed, can I find five to eight extra hours on top of the regular ten, to study for exams, complete big assignments or master work that I find particularly difficult?	_____	_____
7. Can I occasionally free myself from personal and professional obligations to take exams, attend seminars or labs, or take part in other activities which may not be time flexible?	_____	_____
8. Once I decide to do something, do I sit right down and get started?	_____	_____

COMMITMENT (cont'd)

	Yes	No
9. Am I willing to stay at a task even when it seems very difficult or when I question its value?	_____	_____
10. When faced with a new situation or challenge, do I begin by trying to work things out for myself?	_____	_____
11. If I need help, do I pursue it assertively even if it seems difficult or I feel intimidated?	_____	_____
12. Have I determined how to pay for my courses(s)?	_____	_____
13. Do the benefits of pursuing a course or program appear to be worth my investment?	_____	_____
Total number of responses in each column.	_____	_____

The more "yes" responses you have, the more you have thought through your commitment to your studies, and set aside the required time, energy, and finances. In times when your motivation falters, this will help. If you have more "no" answers than you would like, you may want to contact your Student Advisor to discuss your concerns. Knowing that there is someone who is concerned about your studies and wants you to succeed can really boost your commitment and desire to do well. There is a whole support system at Laurentian that wants you to succeed and can help you to do so. (See the section on **Learning Resources**.) As well, family, friends, and colleagues can play an important role. Read on in the next section to find out more about how.

SUPPORT

Will the people around me hinder or help my studies?

Taking on the obligations of being a student significantly affects other parts of your life. Most likely, you will not have the same amount of time for family, friends, work, or other activities. If the people around you are supportive of your studies, and are willing to try to help, it will certainly boost your motivation and increase your chances of success. On the other hand, if they resent your new obligations related to your study or are just unaware of how their lack of support and cooperation affects you, it may put some obstacles in your path that you do not need at this demanding time.

As you answer the following questions, consider how being a distance learner is not quite as visible as going to classes. You may have to make people more aware of your needs and your commitment to study.

	Yes	No
1. Do I know which of my present activities (time with family or friends, work, leisure, social and volunteer commitments) I will reduce to give me the study hours that I will need?	_____	_____
2. Have I discussed my study time requirements and the implications it will have for others with the people who will be most affected by my studies?	_____	_____
3. Do I have the genuine and enthusiastic support of my:		
● spouse/partner/parents	_____	_____
● children and/or other family members	_____	_____
● close friends/room mates	_____	_____
● work colleagues/employer	_____	_____
● other peers (volunteer, community)	_____	_____
4. Are my significant others willing to actually change their behaviour (e.g. participate more in home or child care to facilitate my studies?)	_____	_____
5. Will my significant others and friends accept my need to withdraw from them for several hours in order to study?	_____	_____
6. Am I prepared to begin and continue my studies even if I don't have the support I would like from family and friends?	_____	_____
7. Will my employer cooperate if I occasionally have to change my work schedule to take an examination, attend a lab or participate in an audioconference?	_____	_____

SUPPORT (cont'd)

	Yes	No
8. Do the people around me encourage me? Do they say things like, "I think you have everything it takes to be successful" or "I think you're doing the right thing to get an education"?	_____	_____
9. Is there anyone I know who has done a course by distance study or would have some special understanding of the challenges I am facing?	_____	_____
10. If so, can I turn to that person for encouragement?	_____	_____
11. Do I know any other Laurentian University students who might give me some support, encouragement, or advice?	_____	_____
 Total number of responses in each column.	 _____	 _____

The higher your score in the "yes" column, the more support you can count on from those around you. This will be most important during times of stress when your commitments appear to be much greater than the time you have available.

If you score high in the "no" column, you can do something about it. Often just explaining the situation, being open, and asking for specific kinds of help is effective. People often are not sure how to provide support or are simply unaware that there is any need for change in their behaviour to help you succeed in your studies. Friends and family can help in many ways: respecting your time and place of study, cooperation with household or other tasks, encouragement when motivation is a problem, study assistance, talking through ideas for an assignment, or sometimes just offering to get a cup of tea at the right moment. Be prepared to be specific about the kind of help you need and be prepared to reciprocate when the time comes. For further discussion of support networks, see the section on **Some Practical Suggestions for Success in Distance Study** at end of this guide.

Remember that you do not need to work totally independently on your course. You will have a faculty member who can help with course content and questions about assignments and examinations. Think through carefully what you need help with, write down your questions and call. It is sometimes intimidating to make contact by telephone if you have not studied this way before. Being prepared with written questions can help. If you have trouble reaching your instructor or you don't feel that you are getting sufficient help for any reason, contact your Student Advisor. They will do their best to help you get the assistance you need.

If you are having difficulty coping with the demands in your life, both telephone and face-to-face advice and counselling are available. A counsellor may be able to help you with difficult issues, flagging enthusiasm, and with finding ways get the support you need at home. Whenever you don't know who to call, call your Student Advisor first. They can also give you information about how to get in touch with other students.

ACADEMIC PREPARATION

Do I have the tools?

Studying with Laurentian University in the distance learning program will require that you feel confident about reading and writing at the university level. Knowing how to study effectively, particularly on your own, is different from understanding the content of a course. If you have some weak spots in your study skills, the following questions may help you identify them so that you can improve them.

	Yes	No
1. Have I been involved in formal or informal study in the past two years?	_____	_____
2. Have I demonstrated good study skills in the past (reading, keeping up with a schedule, preparing for exams, writing clearly)?	_____	_____
3. Am I able to remember facts, even if that requires effort and repetition?	_____	_____
4. Do I sometimes read for pure enjoyment?	_____	_____
5. Do I usually meet deadlines without too much trouble?	_____	_____
6. Do I work on a task steadily until it is complete?	_____	_____
7. If I don't understand something at first, am I able to go back and review it until it becomes more clear?	_____	_____
8. Did I enjoy being a student in the past?	_____	_____
9. Do I use mathematical skills on a regular basis?	_____	_____
10. Am I capable of analyzing what I read, recognizing the major points, seeing how the argument is developed, and judging whether or not the conclusions are justified?	_____	_____
11. When I read, do I think about whether I agree or disagree with the text and why?	_____	_____
12. Am I confident about my writing skills (developing a point of view and supporting it, writing in grammatically correct sentences, summarizing other peoples' opinions)?	_____	_____
13. Do I know the strengths and weaknesses of my writing skills?	_____	_____
14. Have I ever learned a new craft or skills on my own?	_____	_____

ACADEMIC PREPARATION (cont'd)

	Yes	No
15. Do I believe that asking questions is the best way to learn?	_____	_____
16. Do I feel comfortable asking for help when I don't understand something or would like further clarification?	_____	_____
17. Do I feel confident using a computer for simple tasks like word processing?	_____	_____
Total number of responses in each column.	_____	_____

The more "yes" responses you have to these questions, the more likely it is that your study skills are fairly strong and up-to-date. And as you progress through your studies, you will continue to improve. If you scored high in the "no" column, you probably need to do some brushing up on your study skills in order to give yourself the best opportunity for success. Review the section on **Some Practical Suggestions for Success in Distance Study** in this guide and think about what you might need some help with.

Laurentian does offer a variety of services which can help you with your study skills including specific help with issues such as time management, examination preparation, and writing at the university level. Contact your Student Advisor to find out how to get access to these services either on campus or at a distance.

There are also good study skills books available which you can use on your own or with counselling support. Some are listed on the Book Order Form which you will find in Appendix A of this guide and in the Continuing Education calendar. Check with your local library or bookstore to see what is available. At the very least, it is always helpful to have a dictionary, a Roget's thesaurus, a good reference book for writing essays and papers, and a guidebook for examination preparation. Taking a bit of time out to find out how to most efficiently and effectively approach study tasks such as reading a textbook can save you a lot of time in the long run and make study more enjoyable.

THE CHOICE IS YOURS

Now that you have completed the questionnaire, you should be more aware of how ready you are to tackle the challenge of distance study. You have reviewed your reasons for continuing your study and why you have chosen a distance learning course or courses. And you have had the opportunity to assess your level of commitment, the amount of support you have, and your level of academic preparation and study skills. You may want to finish your review of your resources by reading the section on **Some Practical Suggestions for Success in Distance Study** which is at the end of this guide.

You bring to your study a unique set of strengths, weaknesses, and experiences. This questionnaire cannot possibly identify them all but is intended to help you start thinking about them so that you can prepare yourself as best as possible for the challenges of studying at a distance. You know better than anyone else what you have been able to accomplish in the past and where you might need to improve or make some changes in order to have an enjoyable and successful experience as a distance learner. **Do you think that you can successfully apply your strengths and experience to your distance learning task?**

If you feel like you need more information or advice before proceeding, please contact your **Student Advisor**. Other **Learning Resources** which you may want to use are listed in the next section.

YOUR LEARNING RESOURCES

This section of The Starter Kit provides you with contact information and descriptions of the services available from Laurentian University to help you with your studies. However, if you have not been on campus or even if you have but you have not made use of any of the services before, you may not know who to contact for help or you may be reluctant to request services by telephone. Please note that **all of the services offered can be provided at a distance. If you do not know who to call or if you having difficulty contacting your faculty member, please call 1-800-701-2816 and ask to speak to a Student Advisor.** He or she will provide the help you need or assist you in getting in touch with the right person.

The information provided in this section is divided as follows:

I. Distance Education Contacts

Distance education courses are offered through the Laurentian University Envision Program, and the federated institutions, Huntington University, Thomeloe University, and University of Sudbury. Contact information is listed for each institution.

II. May We Help?

This is a listing of contact information for various offices at Laurentian which is organized by topics. For example, if you are interested in finding out about fees, there is a listing for the Treasury Office. Or if you would like to get some help with career planning, there is a listing for the Counselling and Resource Centre. As always, if you're not sure who to call, get in touch with your Student Advisor at 1-800-701-2816.

III. Description of Services

This section lists and describes the kind of help available to you from Laurentian University. You will find descriptions for services such as those offered by the Library, the Special Needs Office, the Counselling and Resource Centre, and the Student Awards Office. If you see something which interests you, you can find the contact information in the "May We Help?" section. If you don't see what you are looking for, call your Student Advisor.

IV. Administrative Issues

This section is where you will find practical information about how to go about doing things like getting an ID card, changing your address, requesting a deferred examination, appealing a grade, or withdrawing from a course+-.

V. Course Information

This section provides reference information which will help you as you get started and progress through your course. Topics covered include contacting your professor, submitting assignments, writing examinations, and how the grading system works.

I. DISTANCE EDUCATION CONTACTS

Distance education courses are offered through the Laurentian University Envision Program, and through the federated institutions, Huntington University, Thorneloe University, and the University of Sudbury. Contact information for each institution is listed below. On the following pages you will find more specific information about the types of services available for distance learners and who to contact for each. However, whenever you have a question and you don't know who to call, please contact one of the Student Advisors at 1-800-701-2816. He or she will assist you or refer to the right office or person.

Laurentian University Envision Program
 Telephone: (705) 675-1151, ext. 3936/3937/3938/ 3952/3922
 1-800-701-2816 (toll free)
 FAX: (705) 675-4839
 e-mail:

Laurentian's Home Page
<http://www.laurentian.ca>

Centre for Continuing Education's Home Page
<http://www.laurentian.ca/www/cce/index.htm>

Huntington University
 Billie Christiansen - Gerontology, Music, Religious Studies
bchristiansen@nickel.laurentian.ca

Telephone: (705) 673-7761 (Music)
 (707) 673-7011 (Religious Studies)
 1-800-461-6366 (toll free)
 FAX: (705) 673-6917

Thorneloe University
 Judy Leore - Executive Assistant
jleore@nickel.laurentian.ca

Telephone: (705) 673-1730
 (705) 675-1151, ext. 1052
 1-800-461-4030 (toll free)
 FAX: (705) 673-4979

University of Sudbury
 Lucie Beaupre - Registrar
lbeaupre@nickel.laurentian.ca
 Claudia Ferron - Secretary
cferron@nickel.laurentian.ca
 Mary Recollet - Secretary, Native Studies
mrecollet@nickel.laurentian.ca

Telephone: (705) 673-5661
 (705) 675-1151, ext. 1053
 FAX: (705) 673-8165

II. MAY WE HELP YOU?

QUESTIONS ABOUT	CONTACT	EXTENSION	FAX
academic counselling	Continuing Education or appropriate department/school	3942	675-4897
admission	Admissions Office	3915	675-4891
career counselling	Counselling and Resource Centre	6506	675-4847
complaints	Continuing Education	3932	675-4897
course changes	Office of the Registrar	3934	675-4891
course content	your professor	—	
course materials or appropriate college	Continuing Education	3938	675-4839
course withdrawals	Office of the Registrar	3934	675-4891
examination scheduling	Continuing Education	3936/7	675-4839
fees	Treasury Office	3030	675-4867
financial assistance	Student Awards	3050	675-4865
grade appeals	your professor/department		
grade reports	Office of the Registrar	3906	675-4891
graduation	Office of the Registrar	3911	675-4891
ID card	Continuing Education	3932	675-4897
income tax receipts	Treasury Office	3030	675-4867
language requirement	Language Centre	4111	671-3835
library services	Library	3317	673-6524
Native student services	Native Student Services	1051	675-4847
personal counselling	Counselling and Resource Centre	6506	673-4847
petitions	Continuing Education	3942	675-4897
registration	Office of the Registrar	3934	675-4891
refunds	Treasury Office	3030	675-4867
selected readings packages	Bookstore	2603	675-4801
special needs	Special Needs Coordinator or TDD 675-4806	3324	675-4847
student organization	ALPS	6503	675-4880
study skills	Continuing Education	3934	675-4897
textbooks	Bookstore	2603	675-4801
transcripts	Office of the Registrar	3914	675-4891
withdrawals	Office of the Registrar	3934	675-4891
writing competency test	Language Centre	4111	671-3835

All offices may be contacted by calling the University's general number, 705-675-1151, and the correct extension. If you prefer to write, send your request to the specific office at

Laurentian University
Sudbury, Ontario
P3E 2C6

III. DESCRIPTION OF SERVICES

ACADEMIC COUNSELLING

You may want to get some help with planning your program to meet your goals and the requirements of the degree. Information on degree requirements is included in the Continuing Education calendar as well as the Laurentian University calendar.

You may contact either the Academic Advisor in Continuing Education (not the same person as the Student Advisors who are mentioned throughout this document) or your school director or department chair for help with program planning. Please note that the registration period gets very busy in terms of requests for this service, so if possible, make your request for assistance well in advance to avoid the rush.

To change programs, (e.g. B.A. to Nursing), please contact the Dean of the area (Humanities, Professional Schools, Sciences, or Social Sciences) you wish to enter.

BOOKSTORE

Most textbooks and all selected readings packages which you need for your Distance Education course(s) are available from the **Laurentian University Bookstore**. Check the Continuing Education calendar for more information and Bookstore hours.

See the Book Order Form in the Continuing Education calendar or Appendix A of **The Starter Kit**.

COUNSELLING AND RESOURCE CENTRE

The **Counselling and Resource Centre** is part of the **Office of Student Life** which is responsible for coordinating the various services available to students. The Centre offer counselling related to career planning, academic skills, and matters of personal concern. If you are not sure who to call about a particular matter, call your Student Advisor who can refer you to someone in the Counselling and Resource Centre. Services are available face to face and at a distance. The **Office of Student Life** also includes the **Special Needs Office**, **Native Student Services** and the **Placement Centre**.

FINANCIAL ASSISTANCE

Ontario Student Assistance Plan

Students who are Canadian citizens or landed immigrants who have been residents in Ontario for one year prior to beginning their academic program, may apply for financial assistance under the **Ontario Student Assistance Plan (OSAP)**. A student qualifies for assistance from OSAP on the basis of an established financial need and funds are provided to supplement a student's own financial resources and those of his or her immediate family, if applicable.

Students are encouraged to submit applications prior to the beginning of the study period as applications require eight to ten weeks to process. Application forms are available from the **Student Awards Office**.

Scholarships/Bursaries

A number of scholarships are available to part-time students for the Winter Session of each year. Selection is based on academic standing and applications are not required.

Bursaries, awards based on a student's established financial need, may be available for the Winter Session to qualifying students. Applications are available beginning in October of every year in the **Student Awards Office**.

For complete award descriptions and eligibility requirements, please refer to the University calendar. For additional information on any financial assistance programs, please contact the **Student Awards Office**.

LIBRARY SERVICES

If you have not used a library recently or you feel unsure about using the services of the Laurentian University library, there is a videotape and an information package on Laurentian University's Off-Campus Library Services, both of which are available from the Centre for Continuing Education. And distance education students who are geographically remote need no longer be disadvantaged when it comes to learning library research skills. Students at a distance are able to follow a **self-directed program in foundation library research**. The aim of the program is to assist you in developing your information research skills. At the end of the course there is a test that is to be returned to the J.N. Desmarais Library for correction. You may order this package through **Off-Campus Library Services**. There is no cost for the package. If you are able to come on campus to use the Library, you can benefit from the orientation sessions and tours which are given each term.

If you live 50 km or more from Sudbury and are taking a distance education course you are eligible for **Off-Campus Library Services**. The J. N. Desmarais Library provides students with supplementary readings and books and/or articles on the topics you are researching for your courses. You are encouraged to pursue information resources in your local community to complement the Library's materials. The Library's Online Catalogue is available if you have a microcomputer and modem through dial-in access or at a local Contact North site. Call Glen Kelly (705) 675-1151, ext. 3323 for more information. You can also access the Online Catalogue through Laurentian's home page on the Internet. The URL for Laurentian's home page is [Http://www.laurentian.ca](http://www.laurentian.ca). Follow the links to "Student World" and then "Library" to access the catalogue.

Public libraries in the following locations have a CD-ROM copy of Laurentian's library catalogue, titled **Library Access Database**: Bracebridge, Chapleau, Elliot Lake, Espanola, Gore Bay, Gravenhurst, Huntsville, Kapuskasing, Parry Sound, Sault Ste. Marie, and Timmins.

You can reach the contact the **Off-Campus Library Services** by telephone (24 hours), fax, mail, or e-mail. Note: all telephone calls go directly to an answering machine. When telephoning, always be prepared to clearly state your name, telephone number (including the area code), and the nature of your request. Off-Campus Library staff will return your call as soon as possible.

Telephone: 1-800-661-1058, or (705) 675-1151, ext. 3317

FAX: (705) 673-6524

E-mail: distance@library.laurentian.ca

Address: Off-Campus Library Services

J.N. Desmarais Library

Laurentian University

Ramsey Lake Road

Sudbury, Ontario

P3E 2C6

If the books which you request are in our library, they will be sent to you for a **three-week loan period** calculated from the date of mailing. Please allow one week for the books to arrive. Permission to renew can be obtained, subject to recall should someone else need the book. At the end of the loan period, return the books using the prepaid address labels that will be provided.

Photocopies of articles from magazines, newspapers and public documents are available to you on request and normally need not be returned. There is a charge of 10 cents per page.

If the material which you request is not available, an appropriate substitute will be sent. Also, if you need material in a specific area for an essay, paper, presentation, or other assignment but do not know what books or articles are available, a bibliographic search will be done for you, if you specify the nature and scope of your topic.

If you are following a course given by Huntington University or the University of Sudbury, please refer your request to the appropriate libraries:

Huntington College Tate Library
1-800-461-6366 or (705) 673-4148
for Music and Religious Studies

The Library
University of Sudbury
(705) 673-5661
for Sciences religieuses, Droit et justice
Folklore, Native Studies, and
Religious Studies

SPECIAL NEEDS

Because of the flexibility it offers in terms of time and place of study, distance learning may be particularly attractive to students with certain kinds of special needs. The purpose of the **Special Needs Office** is to encourage equal access, create awareness, and advocate when necessary for disabled students. Students with special needs may consult the Coordinator of Special Needs who can help with issues such as wheelchair accessibility and computer use or other special requirements for study or examinations. Every effort will be made to accommodate special needs students. Medical documentation will be required.

STUDENTS' ASSOCIATIONS

Laurentian has four students' associations and a variety of groups and clubs for students. Students taking distance education courses but who also come on campus can get information about how to get involved from the association offices. ALPS (Association of Laurentian Part-time Students) may be of particular interest to distance education students because it was formed to serve the needs of part-time students both on and off-campus. Students are kept informed of activities through regular monthly meetings and newsletters. ALPS represents part-time students on various committees including Senate, Board of Governors, Student Awards, Writing competency, continuing Education, and Library. Part-time students are encouraged to drop into the ALPS office (Room A126) or call (705) 673-6503 and leave a message, or FAX (705) 6754880, or e-mail: jperras@nickel.laurentian.ca. You may also visit us at our web site: www.laurentian.ca. Follow the links to "Student" and then to "ALPS".

STUDY SKILLS

Distance learning requires high motivation and good study skills, including reading, writing, time management, and preparing for examinations. The Centre for Continuing Education occasionally offers teleconference workshops on different aspects of study skills. These workshops are offered over the Contact North network and are open to students at a minimal fee. Consult the current Continuing Education calendar for dates and times of upcoming workshops.

You will find some suggested study skills self-help materials listed on the Book Order Form and in the Personal and Professional Development section of the Continuing Education calendar. You can also check with your local library and bookstore to find self-help materials that suit your particular needs.

If you wish to speak to someone directly about your study challenges, please contact your **Student Advisor** who will help you or refer you to the appropriate person. Help is available with study skills, motivation, and writing assessment.

WRITING COMPETENCY

Developing effective writing skills is an integral part of learning. As a condition of graduation, Laurentian University has a writing competency requirement and offers students a number of ways to improve their writing. There are special courses with the designation "Writing Across the Curriculum" which integrate writing with learning the subject matter. These courses are specifically intended to help students develop their writing skills. Students may also seek help from a Writing Assistant at the Language Centre. Writing Assistants are trained to comment on students' written drafts and to recommend changes for revisions. Students enrolled in distance education courses and who live more than 50 km from Sudbury may communicate with the Centre by telephone and mail. Plans are being made to offer this service by e-mail and through the Internet. For more information, review the section on Writing Competency in the Continuing Education calendar and contact the Language Centre.

IV. ADMINISTRATION

ADDRESS/NAME CHANGES

Distance Education materials are sent to your permanent address. If you prefer your material to be sent to another address, please notify the Centre for Continuing Education.

If you change your address or name during the course, please notify the Centre for Continuing Education. Remember to include your telephone number if that has changed as well.

COURSE CHANGES

To change courses, please notify the Office of the Registrar in writing by mail or FAX. No course changes may be made by speaking to professors or other staff, or by telephone. The deadlines for making course changes are listed in the Continuing Education calendar.

COURSE EXTENSIONS

Under exceptional circumstances, course extensions may be granted until the end of the next academic session. Requests must be made in writing at least one month prior to the scheduled examination. Please send your request, with complete details, to the Centre for continuing Education, where it will be forwarded to the appropriate dean for a decision. If your request is approved, you will write your examination during the next regular examination sitting.

GRADE APPEALS

If you are dissatisfied with a final mark and wish to appeal, the first step is to discuss your concerns with your professor. If the issue cannot be resolved at this level, you can then submit a formal, written appeal to the appropriate department or school (within 30 days of the publication of Grade Reports). Your final recourse is to petition the Senate Committee on Student Appeals (within 30 days of the decision of the department or school). This Committee will hear appeals only when the department's/school's decision affects your academic standing. For further information or advice contact your Student Advisor.

GRADE REPORTS

Upon completion of your course, after all exams are received and marked, your professor will submit final grades to the Office of the Registrar. You will then receive a Grade Report by mail. This may take up to six weeks from the date of your exam. No University personnel are allowed to release final grades by phone or letter prior to the sending of final Grade Reports.

GRADUATION

If, on your last registration form, you indicated your intention to graduate at the next convocation, you will automatically receive an application. If you do not receive an application, you may obtain one from the Office of the Registrar. Check the current Continuing Education calendar for the application deadline.

ID CARDS

All distance education students receive an Identification Card for the current academic year (May to April). These cards allow you to borrow books from your local library and the Laurentian University Library. Remember to bring your card with you when you go to the Library. See the section on Library Services for information on the Laurentian Library.

INCOME TAX RECEIPTS

Your income tax receipt for all courses taken during the previous year will be mailed to you at the end of February. If you have any questions concerning your receipt, contact the Treasury Office.

PETITIONS

If you wish to be exempted from regulations pertaining to admission, promotion, graduation, academic

standing, registration or course changes, you must present your request to the Senate Committee on Admissions, Promotions and Requests (A.P.R. Committee). Your request must be complete and accurate; and it should be sent, along with all supporting documentation, to the Centre for Continuing Education. The Centre will present the request on your behalf to the A.P.R. Committee.

TRANSCRIPTS

Official transcripts are issued on a first come first served basis, so be sure to order well in advance. Signed written requests should be sent to the Office of the Registrar along with \$5.00 per copy. Include your name, student number, and the address where the transcript is to be sent.

WITHDRAWALS AND REFUNDS

You must notify the Office of the Registrar *in writing or by FAX* if you decide to withdraw from your Distance Education course. Check the current Continuing Education calendar for withdrawal deadlines.

Refunds are calculated on the basis of the withdrawal date. Refund cheques will not be available until all processing has been completed, no earlier than four weeks after the withdrawal date.

Incidental fees, auditor fees, and the *material fees* are non-refundable.

V. COURSE INFORMATION

ACADEMIC DISHONESTY

Intellectual honesty is an important part of academic work. As such, plagiarism and cheating are considered serious offences and are accompanied by stiff penalties. It is important for you to understand the meaning of both terms.

Plagiarism involves taking ideas from someone else and presenting them as your own. Most commonly, plagiarism occurs under the following circumstances: a) when the work submitted was done, in whole or in part, by an individual other than the one submitting or presenting the work; b) when parts of the work (e.g. phrases or sentences) are copied from a source without reference to the original author; c) when the whole work (e.g. an essay) is copied from another source; and/or d) when a work submitted or presented in one course which has also been submitted or presented in another course (although it may be completely original) without the knowledge or prior agreement of the instructors involved.

Cheating includes, but is not limited to, dishonest or attempted dishonest conduct such as speaking to other candidates or communicating with them during an examination; bringing into the examination room any textbook, notebook, or memoranda not authorized by the examiner; or leaving answer papers exposed to the view of other candidates.

The penalty for academic dishonesty may range from receiving a grade of zero in the work involved to expulsion from the University. Academic dishonesty notations remain on a student's transcript until completion of a degree programme.

ASSIGNMENTS

Submitting assignments on time is very important in distance education. Research shows that those students who submit their first assignment early or on time are much more likely to complete the course. The following are instructions which you may find helpful in preparing assignments for submission:

Double space your written assignments and leave sufficient margin space for comments, unless your course materials state differently. Be sure that your name, the course name and assignment number are on all of your assignments. If Cover Sheets are supplied with your course material, please use them. Staple the Cover Sheet and the assignment pages together. **Remember to keep a copy of each assignment in case of loss.**

Please note that your assignments are not submitted to your professor. Instead please use the return envelopes provided with your course materials to submit your assignments and make sure to affix sufficient postage.

It can take up to one month from the date you mail your assignment to the time you receive it back corrected. If you need feedback more quickly before proceeding with the course, please contact your professor.

CONTACTING YOUR PROFESSOR

You have a professor (sometimes referred to in the course package or other materials as the **course supervisor**) for each distance education course whose role it is to help you with questions to do with course content, assignments, and/or examinations. You will find his or her name in the introductory letter to the course package along with information about how to contact them (telephone numbers, FAX, e-mail address). The professor can often save you a great deal of time and frustration. They know the course content and design well and can provide you with guidance in everything from where to budget most of your time during the semester to how to prepare for your examination.

If you have access to e-mail, you may find this an easy way to get questions answered because you can write them down and you don't have to be concerned about being able to get through on a busy telephone line. On the other hand, you may prefer to talk to your professor by telephone. In this case, it often helps to prepare your questions in writing in advance of contacting the professor, especially if you are new to distance education and not used to talking to a professor by telephone. It is easy to get sidetracked and not get all of your questions answered. You may be a bit nervous the first time you call but be assertive in asking your questions and ensuring that you get the help you need to progress in the course.

At certain times, it could be difficult to reach your professor if many students are trying to make contact at the same time. If for any reason you are having difficulty reaching with your professor, contact your **Student Advisor** who can help you get the information you need to proceed with the course. You may also leave messages for professors with the Centre for Continuing Education or, if the course is administered by Huntington or University of Sudbury, you can contact the appropriate personnel there. Telephone numbers and e-mail address are listed under **Distance Education Personnel** in this guide.

COURSE MATERIALS

As soon as you receive your course package, check it over to make sure you have all the materials listed. If anything is missing, please contact the Centre for Continuing Education (or Huntington or University of Sudbury if appropriate). Course materials are yours to keep unless otherwise indicated.

Textbooks are not included in course packages. If you have not ordered your textbooks and/or Selected Readings Packages, see the section on **Textbooks** below.

EXAMINATIONS

Invigilated (supervised) examinations are compulsory in all distance education courses.

Everyone must write the invigilated examination at the specified time. Final examinations are normally written in December, April, and late July. Check the current Continuing Education calendar or your course materials for dates of examinations and keep these dates free for your examination.

Requests for deferred examinations are only considered for students in good standing who, for medical reasons, legal obligations, religious affiliation, or personal/family tragedy, are unable to write on the scheduled date. A written request, accompanied by the appropriate documents, must be submitted to the Centre for Continuing Education. If the request is approved, a fee of \$40.00 must be paid before alternate arrangements can be made.

Examination centres are located throughout Ontario. If you live more than forty km from one of these established centres, you will be contacted to make other arrangements.

GRADING SCHEME

The grading scheme for assignments and courses is:

A -	80 - 100%
B -	70 - 79%
C -	60 - 69%
D -	50 - 59%
F -	0 - 49% (Failure)
W -	Honourable Withdrawal
I -	Incomplete Course Work

A indicates **Exceptional Performance**: comprehensive knowledge in depth of the principles and materials treated in the course, fluency in communicating that knowledge and originality and independence in applying material and principles.

- B** indicates **Good Performance**: thorough understanding of the breadth of materials and principles treated in the course and ability to apply and communicate that understanding effectively.
- C** indicates **Satisfactory Performance**: basic understanding of the breadth of principles and material treated in the course and an ability to apply and communicate that understanding competently.
- D** indicates **Minimally Competent Performance**: adequate understanding of most principles and material treated in the course, but significant weakness in some areas and in the ability to apply and communicate that understanding.
- F** indicates **Failure**: inadequate or fragmentary knowledge of the principles and materials treated in the course or failure to complete the work required in the course.

TEXTBOOKS

The textbooks you need for your Distance Education course are listed in the course description in the Continuing Education calendar. If you have not already done so, you can order textbooks and Selected Readings packages from the Laurentian University Bookstore. A Book Order Form is included in the Continuing Education calendar and as Appendix A of this Guide. If they are available, used books can be sent to you upon request.

If you obtain your texts from somewhere other than the Laurentian University Bookstore, make sure you have the correct edition.

Should you withdraw or change courses and wish to return your books, the Bookstore *may* reimburse you. See the Book Order Form (see Appendix A) for the Refund and Exchange Policy.

SOME PRACTICAL SUGGESTIONS FOR SUCCESS IN DISTANCE STUDY

Success in distance study is dependent upon a number of factors. This section contains some brief but practical suggestions which have been excerpted and in some cases, slightly adapted from orientation materials for distance students at Athabasca University*. The following topics are covered:

Building a Support Network
Facing the Study Challenge
Time
Place
Study Skills
Motivation and How to Keep It

BUILDING A SUPPORT NETWORK

The defining characteristic of distance education is the separation between the learner and his or her instructor and peers. While distance study offers maximum flexibility of time and place, it can sometimes be frustrating and isolating not having any immediate feedback on your progress (or lack of same) and no peers with whom to compare ideas. However, family, friends, and colleagues can play an important role in supporting your efforts.

The support of significant others has been shown to be a critical factor in distance study success. Rather than just assuming or hoping that those around will be helpful, or being frustrated when they are not, you can play an active role in setting up your own support network at the beginning of your studies.

Studying involves important commitments and obligations on the part of the learner, and often implies some changes in the amount of time available for other activities. This not only affects you, but those around you. It is great to have the moral support of family, friends, and colleagues, but you will most probably need other tangible forms of help as well, particularly during times of heavy workload and stress. **Keep in mind that as a distance learner who does not attend classes as part of your studies, your educational obligations and commitments can be invisible to those around you.**

Non-support for your studies can take a number of forms from outright opposition to lack of cooperation in sharing household or other responsibilities to simply being unaware of your needs. These forms of non-support can often be overcome or decreased if you use effective communication and negotiating strategies, two of which are described below:

1. Ask and it May be Given: Demand and It Shall Be Denied or Given Grudgingly

The first principle asserts that you have a right to ask others for something that you want. You could be asking for time to study, a reduction in household or parenting responsibilities, or anything that may appear necessary for you to meet your needs as a student. Others who are affected by your needs and the changes in your lifestyle must be consulted. A frank discussion with these people can be helpful, especially if it is done **before** making any changes.

Asking for co-operation is more likely to have positive results than demanding that your needs be met. You consult with the people involved, taking their needs into consideration as well as yours. It is also important to be specific about what it is you need so that others can know exactly what it is you would like from them.

2. Give to Get

When asking for more time for yourself or for the reduction or rescheduling of responsibilities, an important factor to consider is the need to give others something in return. The ability to negotiate

successfully (which we do continually in our daily lives) will result in what has been called a "win-win" situation. Both sides end up satisfied with the decisions reached.

Asking for a change in your lifestyle or schedule (you are going to be available to friends or family for less hours per week than previously) is more likely to get a positive or successful response if you give others involved the opportunity to be heard and show respect for their needs. Although sometimes it is very difficult, you must (a) listen and (b) respect other' needs by being open to options that may satisfy them as well as yourself.

Listening allows you to make plans that are less likely to encounter snags. If your fist choice of study time is Monday evening, but your partner's craft class or your son's soccer game are scheduled that night, a trade-off of some sort is required. The priority of needs may be difficult to establish, but listening helps when everyone understands that their needs cannot always come first and should not always come last. Options that are reasonably satisfying to everyone can usually be worked out if honest communication and respect for rights exists in a relationship.

There are excellent self-help books available on the topics of communication, assertion, and negotiation skills. If you are having difficulty with getting the cooperation of those around you and it is negatively affecting your study, you might try looking at some of these and/or consulting with the **Counselling and Resource Centre** for advice and support.

FACING THE STUDY CHALLENGE

If you are a person who would rather study than eat, sleep, drink, make love, play—or any of the other activities that fill your life—you may as well skip this section of **The Starter Kit**. On the other hand, if this is not an accurate description of you, you may want to learn to use the study time you have as efficiently as possible, so that you still have time to eat, sleep, drink, and maybe play a little.

To learn and remember as much as possible in as little time as possible involves learning techniques that help you work with the way your brain works rather than in a way that is in opposition to your brain functioning or powers of concentration. Many people complain of not being able to concentrate. The problem is not really a lack of concentration—obviously we are concentrating on something. The problem is gaining the ability to concentrate on what we want to concentrate on rather than allowing ourselves concentrate on the distracting thoughts that interfere with the task at hand. To gain control over our minds often takes arduous practice. However, with practice, this control can become automatic.

Learning a new skill requires a great deal of conscious effort during the initial stages. But, slowly and gradually, it becomes an easy and familiar process. Learning to drive a car is a good illustration of the process involved. A wide variety of techniques applicable to all types of study, as well as techniques useful for completing specific assignments such as writing papers or solving problems can be found in study skills manuals. If you want to pursue self-help materials further, consider the list on the Book Order Form in the Appendix in this Guide or check with your local library or bookstores. Here will be presented some brief ideas and suggestions that we hope will give you a good start in your course. There are three basic needs that students have and these are the ones that will be addressed:

- (A) TIME**
- (B) PLACE**
- (C) STUDY SKILLS**

A) TIME

You need to work out a time schedule that works for you.

Having specific times when you habitually study can aid concentration. In addition, inventiveness in using odd times for reviewing materials can also be effective some students. You may decide for example, that

you will always study before or during the hours that your professor is available in case you have questions or ideas that you would like to discuss.

Using time in creative ways is also important. Some students find that if they wisely choose a few tasks like an assigned reading to carry with them each day, they can accomplish it if they have to wait somewhere (like at their physician's office), during a bus commute, or during a lunchbreak.

Finding a schedule that works often takes a bit of trial and error. A major accomplishment during your first course is simply learning to learn—and part of that is finding the time to do it, discovering the joy in overcoming obstacles and finding out your capabilities, and rewarding yourself for meeting goals, both small and large.

B) PLACE

You need to find a place to study that is free of distractions, and if possible, where you can leave your study materials out so that you don't have to unpack them each time you want to study.

This is a very important element which may have a very individualized solution. Some people are able to concentrate with activities going on around them. (These people are rare. The rest of us usually find them easy to dislike.) Others of us need a great deal of quiet and isolation. Many women, for instance, find that they have become so in tune with the children, that they have a very difficult time not attending to them even when they know another adult is in charge. Solutions may involve finding a study place away from home or creating a space in the basement or attic, away from household sounds.

C) STUDY SKILLS

Useful suggestions for learning to learn encompass factors in your physical environment, in your social environment, and in your internal environment. If you have supportive and helpful people in your social environment, you already have a major advantage. Setting up a physical environment in which to learn may go beyond time and place, and into an analysis of the distractions that occur in that environment. Your internal environment or "mind set" needed to maintain concentration may include setting up a schedule of graduated work goals or deadlines, charting your progress, learning techniques of studying, writing papers, overcoming test anxiety, training yourself to read to remember, and so on.

The skills involved in studying are exactly that—skills which can be learned like any other skills. For example, many students feel more confident in studying and taking examinations after having learned new techniques and skills involved in performing these tasks. If you feel a little shaky in some areas, after doing the self-assessment questionnaire, look at the Study Skills resources and services available in the Learning Resources section of this guide. You may be able to find what you want in self-help materials or you may want to consult with the Student Advisor or the Counselling and Resource Centre.

MOTIVATION AND HOW TO KEEP IT

Maintenance of motivation can be one of the toughest challenges of distance study. Developing good time management and study skills can help. If you feel like you are making consistent progress, it will no doubt buoy your motivation. And if you have a good support network around you, that will help too. Sometimes, it's important just to feel like someone understands that you are facing a challenge. However, for most all students, there are times when the motivation to study lags. What personal resources do you call on then? There are two strategies which can really help. Both deal directly with the negative feelings and anxiety that can start to creep in and undermine your sense of control over yourself and your studies.

1) Self-Talk

There can be many distractions that keep you from your study. The external ones like noise from a lawnmower next door are the easiest to control or work around. However, there are also internal

distractions and these are more challenging to confront. Humans are quite adept at talking themselves into or out of any behaviour that seems satisfying or dissatisfying at the moment. We can often deny the long-term implications of our behaviour or find rationalizations which maximize the benefits and minimize the negatives involved in the activity in which we are engaged.

A major internal distraction to your studies may be your own self-doubt, or negative statements you make about yourself. With such thoughts you can effectively cut off further effort and possible success. But, we have an equally strong capacity to eliminate negative thought patterns. Recent studies indicate that what we say to ourselves—even when we are not consciously aware of it—may effectively sabotage our efforts, or may alternatively give us the critical boost we need to keep working toward our goal.

Realize that capability requires attending to your own internal monologue. There is evidence (see for example, Meichenbaum, 1975) which suggests that people who are able to turn off their negative self-referent statements (e.g., "This is impossible. I'll never be able to do this.") and switch to positive self-referent statements (e.g., "This difficult. But, if I work at it, I can do it.") are more likely to succeed whether success is focused on physical stamina, interpersonal stress, tolerance of pain, or academic effort. So the first step in using self-talk to your advantage is to **become aware of your self-talk**. And the second step is learning to **change your negative self-talk to positive self-talk**. Talk to yourself as you would to your best friend if he or she was having difficulty with motivation.

With practice, you will become more aware of what you say to yourself in situations where you feel anxious or are dissatisfied with your own performance. Do you tend to start thinking in catastrophic proportions: "If I can't do this course, then everyone will know that I'm a failure"? Or do you tend to blame everything around you: "How can I possibly get any work done with everything I've got going against me"? Do you harshly criticize yourself: "I'm just incapable of any kind of self-discipline; I'm hopeless"? Would you say any of these things to anyone else? Most probably not. Rather, you would be supportive, encouraging, and reinforcing of the person's resources.

Elimination of all self-doubt is not the goal. Most everyone has occasional doubts about their own competence. You can, however, make small, gradual inroads that in the long run will substantially change your approach to many of life's problematic situations. The sooner you are back to focusing on how you can cope and on actually coping (concentration on the tasks at hand rather than on your self-doubts), the better and more effectual your progress will be.

2) Relaxation: Decreasing Physical Tension

An additional element in dealing effectively with self-doubts and fears which is often overlooked is the physical tension that accompanies these feelings. It may seem that talking about relaxation as a coping resource for effective studying is counter-intuitive. How can you relax and study at the same time? How can you find time to relax if you can't find time to study? The answer is that it is a great deal easier and more time efficient to study when you are relaxed and focused as opposed to stressed and scattered. Physical reactions to stress can drain energy and make concentration difficult. Combining relaxation with self-talk strategies is often a productive combination in overcoming fears and self-doubts that eat away at your motivation, enthusiasm, and confidence.

Learning to relax is a skill and like any other skill, it can be learned through practice. It involves becoming aware of when and how your body reacts to stress and then learning ways of relaxing those reactions. There are many different kinds of relaxation techniques and people differ in their preferences for them. If you practice with different techniques, you will soon learn which ones work best for you.

One method is as follows: Sit in a comfortable position in a quiet place with no distractions: close your eyes and pay no attention to the outside world, concentrate on your breathing, slowly inhaling and exhaling; softly say "relax" when each breath has been exhaled completely. This should be a gentle, passive process – a relaxing experience. Eventually the word "relax" will be associated with a sense of

physical calm and just saying it in a stressful situation will induce a sense of peace.

Another simple, effective way to induce relaxation is through tension release. The general idea is to first tense a set of muscles and then to relax them so that they will be more relaxed than they were before they were tensed. Each muscle group is practised separately, but the ultimate goal is to relax all groups simultaneously to achieve total body relaxation. For each muscle group, in turn, tense the muscles, hold them for five seconds, then relax them. Repeat the tension-release sequence three times for each group of muscles. Next, tense all the muscles together for five seconds, then release them, take a slow deep breath, and say, "relax" softly to yourself as you breathe out. This sequence is also repeated three times. To incorporate this technique into everyday life, notice your bodily tension, identify the tense muscle groups, and then relax them while say "relax" inwardly.

Total relaxation can also be obtained through exercise, either aerobic or Yoga type. The relaxation experience can be extended into daily life through personal fitness programs in conjunction with inner messages to "relax".

It is extremely good for study concentration to train yourself to clear your mind of stressful thoughts and let go of the physical tension which accompany them. And with practice, you will have the capability to call up the relaxation response whenever it is needed, for example, to concentrate on study materials and during examinations. Once you start using relaxation techniques, you will find that you can recognize quickly when your body is under stress, and within a few moments, you will be able to relax your muscles, let go of tension, and breathe more easily. There are many good self-help materials and tapes on relaxation techniques. Check with your local bookstore or library or ask for suggestions from the **Counselling and Resource Centre**.

*The preambles to and suggestions about building a support network (the two guidelines), improving study habits (time, place, and study skills), and self-maintenance of motivation (self-talk and relaxation) were reprinted (with some changes and adaptation) with permission from Athabasca University from the following publication: A Package of Shoelaces (And some Guidelines for Lacing and Tying), An Athabasca University Student Services Orientation Guidebook, 1985, pp 19-25.

Appendix A - Book Order Form

BOOK ORDER FORM

Receipt of books from the Bookstore is not a guarantee that you have been admitted or that your registration is complete.

Mail to: Laurentian University Bookstore, Ramsey Lake Road Sudbary, Ontario P3E 2C6
(705) 673-6504 or (705) 675-1151, ext. 2603 • Fax (705) 675-4801

TO ORDER BOOKS

The books are listed under the course description. The easiest way to order your books is to fax or mail the completed book order form with your VISA/MasterCard number and expiry date. If paying by cheque, send your completed book order form to the Bookstore. A detailed invoice will be sent to you as confirmation of your order. Upon receipt of this invoice, forward your cheque to the Bookstore. All books are subject to postage and handling and GST. The cost of books cannot be deducted from OSAP payments. Allow 4 to 6 weeks for delivery.

REFUND AND EXCHANGE POLICY

All returns must be accompanied by a sales receipt and be in mint condition. Textbooks - Refunds will be given in full only up to two weeks after classes start. Reference and General Trade Books - Cloth - up to 48 hours with receipt; Paper - All sales final, no returns. Should you withdraw from a course for any reason, it is your responsibility to cancel your book order and/or return any purchased books to the Bookstore within two weeks of the change.

RECOMMENDED SUPPORT MATERIAL FOR STUDENTS

- ACCTS Guides: Self Evaluation and Résumés*
- Fit to Print: The Canadian Student's Guide to Essay Writing*, Joanne Buckley
- MLA Handbook for Writers of Research Papers*, Joseph Gibaldi
- A Canadian Writer's Reference*, Diane Hacker
- Effective Study: A Manual for Academic Survival*, R.F. Patchett
- The Learning Adventure: Anishinabe Student Survival Guide*, Gina Sarazin
- Notes on the Preparation of Essays in the Arts and Sciences*, Trent University
- Strategies for Studying: A Handbook of Study Skills for Part-time Students*, University of Victoria

Used books are
sometimes available.
Would you prefer
receiving a used book?
 Yes No

Name	Student Number if issued
Address	
POSTAL CODE	
Home Telephone	Business Telephone
<input type="checkbox"/> VISA <input type="checkbox"/> MasterCard <input type="checkbox"/> Cheque <input type="checkbox"/> Sponsor - Enclose letter of authorization	
Card No.	Expiry date
Signature	Date
Course Number	Author
	Title

Appendix B - Time Scheduling Form

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
7 AM							
8							
9							
10							
11							
12							
1 PM							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
1 AM							
2							
3							
4							
5							
6							

DIRECTIONS:

For each box (hour of the day) note the dominant activity of that hour, e.g. studying, sleeping, eating, work (including housework), recreation, etc.

Appendix C – The Starter Kit EVALUATION FORM

1. TO WHAT EXTENT DO YOU FEEL YOU HAVE RECEIVED EACH OF THE FOLLOWING BENEFITS FROM The Starter Kit?

(a) Information to help me get started in my course

to a large extent
to some extent
not at all

(b) Specific skills, approaches or techniques that I will apply during my studies

to a large extent
to some extent
not at all

(c) Increased sense of Laurentian University's commitment to distance learners

to a large extent
to some extent
not at all

(d) Increased knowledge of what learning resources there are to help me

to a large extent
to some extent
not at all

2. OVERALL, HOW WOULD YOU RANK The Starter Kit IN TERMS OF MEETING YOUR NEEDS FOR ORIENTATION MATERIALS FOR THE ENVISION PROGRAM?

excellent
good
fair
poor

3. WOULD YOU RECOMMEND THIS STARTER KIT TO OTHER STUDENTS NEW TO DISTANCE LEARNING?

yes
no

4. The Starter Kit WOULD BE MORE EFFECTIVE IF:

5. ANY OTHER COMMENTS:

Appendix V - Student Advisor Training Outline

1. Introduction
 - topics to be covered
2. Advisors
 - background, interests, focus for training
3. Social support
 - why this model?
 - types of social support
 - how social support works
 - support network at Laurentian
 - information, advising, counselling, instructional, administrative, other
4. Role of Student Advisor for this project
 - the critical link into the system
 - service provider
 - referral agent
 - advocate
 - other?
5. Skills of the Student Advisor
 - a) Telephone Communication Skills
 - Climate setting and personalizing
 - Voice
 - Attending and active listening
 - Responding—appropriate and inappropriate
 - Filling in non-verbal gaps
 - Closure
 - b) Problem-Solving
 - Diagnosing
 - Generating alternatives
 - Assessing resources
 - Providing advice and encouragement
 - c) Referral Skills
 - Assessment
 - Communication, promotion
 - Creating links
 - d) Enhancing Motivation
 - Acknowledgment
 - Empathy
 - Encouragement

Advisor Training Outline - page 2

6. Case Studies (from Advisors)

- difficult situations/making referrals
- forming ongoing relationships

7. The Initial Intervention Call

a) Purpose

- welcoming
- providing needed information/advice/specific kinds of help
- assessing needs and abilities
- linking student to resources–written, human, on-line

b) Steps

- climate setting
- assessing the situation-showing consideration
- establishing relationship and building trust
- advisor role clarification
- assessing learner expectations and resources
- encourage early success
 - The Starter Kit and how to use it
 - The course package and how to get started
 - How to contact the professor/Other support from the university
- assessing needs, motivation level, need for referral or follow-up
- reassurance and encouragement for contact
- bringing closure

8. The Second Intervention Call

a) Purpose

- demonstrating support
- assessing progress and any need for assistance
- advice, encouragement, reinforcement
- review of help available

b) Steps

- climate setting
- assessing the situation-showing consideration
- renewing the relationship and building trust
- progress check
- assessing needs, motivation level and need for referral or advisor assistance
- provision of any needed information and/or advice/review of resources
- encouragement for contact and reinforcement of effort
- bringing closure

9. Open Discussion/Questions/Some final points about the project/Review of Recruitment calls

Appendix VI - Errata Letter sent out with The Starter Kit

September 17, 1998

The enclosed orientation booklet called **The Starter Kit** is intended to help you be a more effective distance learner. It includes a one page guide to getting started, a self-assessment questionnaire to help you anticipate where you might need some extra help, a comprehensive guide to services for distance learners at Laurentian University, and some tips and suggestions specifically for those new to distance study. **Please note that The Starter Kit replaces a booklet that you may have been sent with your course package called "May We Help". Please discard this booklet and refer to The Starter Kit for contact information.**

Good luck with your distance studies. Please contact us if we can be of assistance.

Appendix VII - Intervention Script One

Identify yourself and the purpose of the call, ensure that this is a good time

This is _____ from Laurentian University. I'm a student advisor and I'm calling about your distance education course(s). I would like to just take a few moments and check to see whether you have everything you need for your course and answer any questions you might have. Is this a good time to do that or should we make an appointment for another time?

Get permission for taping

First, I'd just like to make sure that it is ok to tape our conversation. This is just for the purposes of our current research project on orientation services. Your name will not be attached to the tape and once data is collected for the study, it will be destroyed. Is this ok with you? If you are uncomfortable in any way with the taping, we don't have to do it.

Explain your role v. professor

My job is to help you get started in your course and make sure that you get the help you need. You also have a professor for the course--have you had any contact with them yet?

We can talk about their role and the best way for you to use their help. Do you have any questions so far?

Find out whether they come on campus--get an idea of how much they might know about services-introduce the idea of services for distance learners

Part of what I would like to do is just let you know what services are available to distance learners. Do you ever come on campus? If you do, you are probably familiar with some of the services we offer for students here in Sudbury. However, even if you can only communicate with us by telephone and e-mail, there are many different types of help available. But, first--let's see if you have the materials you need.

Check whether they have received materials and review the contents of the course package

Have you received your course package(s). (If not, deal with that--check on status--ensure package has gone out and make another time-specific appointment-when you are pretty sure they will have the package). Have you had an opportunity to review it? If you have it handy--perhaps I can go over it briefly with you. You will notice there is a letter with the package--that tells you the name of your professor and how to get in touch with them. You will also see that there is an outline for the course, a list of the course requirements (papers, exams), and a suggested schedule. If you haven't already done so, it's a good idea to start here so that you can get an overview of the course and what's to come. You can then use this information to make up a personalized study schedule by using **The Starter Kit**.

Introduce and review The Starter Kit

Have you had a chance to look at **The Starter Kit**? It's intended to help you get an early and effective start in your course by helping you to anticipate some of the things that may cause you difficulties. For example, if you are new to distance learning--the amount of work and challenge of scheduling and time management can come as a surprise. If you turn to the table of contents in **The Starter Kit**, you will see that the booklet contains a one page reference guide to getting started, a self-assessment questionnaire to help you identify any areas where you may need some extra assistance, a comprehensive guide to the services available to distance learners at Laurentian, and some tips and suggestions that might help you with the challenges of distance learning.

Intervention Script One - Page two

If you turn to page 4 of The Starter Kit, you'll see the a one page guide to getting started—one of the suggestions is to use the time scheduling form at the back of the Kit to develop a study schedule. This is good exercise to help you make decisions about when you will study and how much time you will need in order to meet deadlines in the course. The general suggestion is that you will need to spend about 10 hours per week on your course. (Respond to questions-try to ascertain how confident and enthusiastic the learner feels about starting the course, and whether they need help with making up their schedule)

Introduce the topic of the professor and check to see if the student needs help with contact

Your professor can also help with scheduling—he or she knows the course well-- where the most work is and what students might have difficulty with. Did you say that you have already talked to your professor? (If yes ask-- How did it go?) The professor is there to help you with the content of the course and give you feedback on your progress. Some students feel a bit intimidated at first calling the professor but it is an important part of learning and sometimes you might really need their help with certain parts of the course. (Judge how much help the student needs with professor contact and offer advice and listen as appropriate. The following are some examples of what could be offered.) If you're not used to talking on the phone to get help, sometimes you can forget some of the things you want to say-- it helps to write down questions before making the call.

Keep in mind that this way of learning is no different than any other in that there will be some professors that seem more friendly or interested than others. It can be easy to be a little thrown off by someone who does not immediately sound warm and welcoming especially when you cannot see them—but just remember, they are subject matter experts for your course and they are there to help you so keep your questions front and centre and focus on getting the answers that you need in order to progress. Sometimes professors can be very busy and it might be difficult to get through. If you ever have trouble getting in touch with the professor (line always busy or not available) or if you ever feel like you're not getting the help you need, please don't just set your course aside. Get in touch with me and I'll see what I can do. It may also be helpful for you to speak with other students and I may be able to put you in touch with others who are taking the same course.

Introduce the idea of the importance of support from family and friends

Another important source of help for distance learners can be family and friends—some distance students find it helpful to discuss course content and assignments with a friend or family member. Others ways that your family or friends can help is with encouragement when your motivation sags and helping to ensure that you get the study time you need. But it's good to keep in mind that if you are doing distance education for the first time, those around you will be new to it as well—and when you don't go to class, your need for study time may not be as obvious to them. The Starter Kit offers some suggestions for how to negotiate your study time at home. Do you think that this might be an issue for you? (Pause here to see if they have any concerns or questions on any of the topics discussed so far—do this throughout the telephone call.)

Check for any other possible difficulties or need for assistance

Are you anticipating any particular difficulties with the course or do you have any concerns? (Respond to any that they might have. The following are just examples of how you might do this.) Yes, time management is the number one concern among distance learners—that is why we recommend setting up your schedule before you start the course—but if you need extra help or you feel like you are falling behind and don't know what to do, we can try and help—never hesitate to call. Some students feel like once they fall behind, they don't want to make contact—just give us a call and we'll try to help you get back on track.

Intervention Script One - Page three

Reiterate the purpose of the call, start to bring closure, and reinforce the invitation to call you if they need help

We have found that distance students don't always know what help we can offer them so we're calling you because we want to ensure that you get off to a good start—research shows that students who get their first assignment done early or on time will likely complete the course successfully so we want to do everything we can to help you get to that point. Distance study is not an easy way to learn, especially at first. You will notice in The Starter Kit that we offer all different kinds of help—(Briefly review these: study skills, writing skills, counselling, etc.) If you don't know who to call about a particular issue, then please call me and I'll try to put you on to the right person.

(If they have not already done so, leave them with a suggestion on how to get started. If they have not reviewed The Starter Kit, suggest again that they start here, focusing on the "Getting Started" page and making up their study schedule. Let them know that not everything in The Starter Kit may be applicable to them—use what they find works.)

Make a time for next appointment

It sounds like you are ready to proceed/doing fine with the course right now. I'd like to check back with you in about 3 or 4 weeks time to see how you are progressing. Would that be alright? May we make an appointment for me to call you? (Set a specific time to call them back.)

Check for any further questions and bring closure

(Ask again if they have any further questions and reiterate that they can call you for any reason. Make sure they have your name and contact information and that their contact information is up to date (e-mail, mailing address, daytime telephone). Tell them that you will send them a note to confirm the next appointment and wish them well in getting started.)

Questions you might ask as part of the conversation:

How did you decide to do a distance learning course?

Is it easy for you to study at home?

What are the main concerns you have about doing a distance education course?

Do you enjoy studying and reading?

What do you hope to gain from your course?

Is there anything Laurentian can do to better facilitate your studies?

Try to encourage students to discuss any concerns by responding in a way that shows empathy and opens the dialogue:

It sounds like you have a very hectic schedule right now.

It sounds like you really enjoy studying.

It sounds like you might be a little worried about balancing everything—maybe we can help with time management.

It sounds like you are a little concerned because you haven't studied in a while—many adult students are a bit apprehensive when they start their first course. The study schedule will help you break the course down into manageable pieces, and

Listen for any indication of need for extra help.

Reinforce confidence.

Appendix VIII - Intervention Letter 1

Dear

This is to follow up on our recent conversation about your distance education course(s) with Laurentian. I enjoyed speaking with you and hope that by now you have a good start with your studies.

As we discussed, distance learning can be challenging but the discipline and skills required for this type of study will help you in all future academic endeavours, whether at a distance or on campus. I hope if you need assistance at any time you will not hesitate to get in touch. We want you to be a successful distance learner and to enjoy your experience with us.

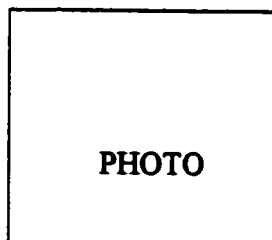
Remember, getting cooperation from those around you and setting up a regular study schedule will help. You can review **The Starter Kit** for tips on getting support from family and friends, developing a study schedule, and maintaining your motivation. Do not hesitate to get in touch with your professor if you need help with course content, assignments, or preparation for examinations.

As I told you when I spoke with you, if you do not know who to call about a particular issue, please get in touch with me.

Sincerely,

Student Advisor

P.S. As we agreed, I will be calling you on -----, at ----- to see how you are progressing and whether you might need any assistance. Just so you know what I look like when you are speaking with me, I am including a photo:



Appendix IX - Intervention Script Two

Identify yourself and the purpose of the call, ensure that this is still a good time

Hello, this is ----- again from Laurentian University. I am calling you as we arranged just to see how you are doing with the course(s). Is this still a good time to talk or should we set another appointment.

Get permission for taping

Is it still ok with you if I tape our call? As I mentioned before, this is just for the purposes of our current research project on orientation services. Your name will not be attached to the tape and once data is collected for the study, it will be destroyed. Is this ok with you? If not, it's fine—we'll just proceed.

Check on progress, assess motivation level and need for extra assistance or referral

So how are things going with the course? Have you had a chance now to set up your study schedule and do a little work on the course? How are you finding it? (**Assess the student's confidence and motivation level, need for help.**) About how much time are you finding you need to spend on the course each week? (**Record what the student says-and respond if they sound unsure.**)

Check on professor contact and whether any assistance is required

What about contacting the professor? Have you talked to him/her? How did it go? Are you getting the help you need with the course?

Follow-up on use of Starter Kit, time scheduling, use of course materials

Did you have a chance to look at The Starter Kit? Was it helpful? (**Record the responses.**) Are there any other questions or concerns that you have today that I might help with? How are you finding the workload? Are you able to find the time that you need to spend on the course? Now that you have had a chance to look through the materials and start work on them, do you feel fairly confident at this point about the course?

Respond to any issues, make referrals as necessary, ensure that they have any necessary contact information

(E.g., if the student appears to be procrastinating or finding it difficult to get started for other reasons, assess the situation through active listening and empathy. Explore the issues and assess need for help. If you can help, suggest how you might do this and see if they agree. If appropriate, make a referral to the professor or other professional in the Counselling Centre. Ask if you can call them again to see how they are doing. Keep the door open and be encouraging.)

Reinforce their confidence and motivation level

(If the student appears to be progressing well, reinforce that. Also anticipate that they may have some difficulty later and reinforce both their coping skills and that there is help available.) You may have a time when your motivation lags but it sounds like you have a good handle on the course, and I am sure you will complete it. If you ever need a boost in motivation or you think we can help though, by all means don't hesitate to call. For now, keep up the good work.

Intervention Script Two - Page two**Bring closure and reinforce the invitation to call you if they need help**

(As you bring closure, check to see if they have any other questions and ask them if they would like you to call again. Thank them for their time and wish them well in the course.) Do you have any other questions that I might help you with? Would you like me to call you again before the end of the course? Well, it appears that you are well on your way to finishing the course successfully. I hope you enjoy your studies with us and if I can be of further assistance, please do not hesitate to contact me. Good luck on the final examination. (Leave the door open to further contact-remind them that they can call you at any time.)

Appendix X - Intervention Letter 2

Date:

To:

This is just to follow up once again on our recent conversation about your distance learning course(s). By now you have a very good idea of how distance learning works, and the kind of skills such as time management which are required to be successful in this kind of study. Although this type of study presents special challenges, it provides you with the opportunity to gain independent learning skills which will help you in all future academic endeavours.

We hope that you have found your distance learning experience rewarding and we wish you well with your final examinations. As I mentioned when I spoke with you, someone will be calling you at the end of the term to ask you about your experience as a distance learner. Please feel free to be candid in your responses. You will be helping us to improve our services to learners.

Once again, if you need any type of assistance, please do not hesitate to get in touch.

Sincerely,

Appendix XI
POST-TEST QUESTIONNAIRE - INTERVENTION PROJECT
DISTANCE EDUCATION
CENTRE FOR CONTINUING EDUCATION
LAURENTIAN UNIVERSITY
1998 - 1999

Name: _____

Student I.D. # _____

Address: _____

Telephone numbers:
day _____ evening _____ other _____

Any special contact information for December 1998 and January/February, 1999 (please be as specific as possible):

Post-test questionnaire - page 2

BACKGROUND INFORMATION

Gender _____

Birthdate _____ Age _____

Previous education: High School graduation or less: _____
College/University partial or completion of diploma/1st degree _____
University Graduate Studies partial or completion _____

Enrolment Status (during 1998 fall term): Part-time _____
Full-time _____

Number of distance education courses (during 1998 fall term): _____

Language of choice for contact with the university: _____

Group assignment: Experimental _____
Control _____

Post-test questionnaire - page 3

I. LEARNER OUTCOMES

1. Did you read and use the orientation materials called **THE STARTER KIT** which were provided with your course package?

_____ (Yes/No). If no, proceed to Question 3.

2. How useful did you find **THE STARTER KIT** in helping you with getting started in your distance studies? On a scale from 0 to 10 with 10 being the most useful, please rate these materials.

0 1 2 3 4 5 6 7 8 9 10
 Not at all useful Extremely useful

3. How much time on average would you estimate that you spent working on your distance education course each week during the term? (For those taking more than one course, make sure that the figure provided is an average of the number of hours per week for a single course.)

_____ # of hours/week

4. How many times on average did you work on your distance education course per week? (For those taking more than one course, make sure that the figure provided is an average of the number of times per week for a single course.)

_____ times/week

5. How many times during the term did you initiate contact with the professor for your distance education course? (If in more than one course, ask the student to estimate for each course and use an average. Make a note about calculation.)

_____ # of contacts per term per course

6. How many times during the term did you initiate contact with university personnel other than your professor?

_____ # of contacts during the term (regardless of number of courses)

Post-test questionnaire - page 8

V. DATA FROM STUDENT RECORDS

1. Timing of Return of First Assignment:

Course _____ Date _____ Actual Due Date _____

Course _____ Date _____ Actual Due Date _____

Course _____ Date _____ Actual Due Date _____

Course _____ Date _____ Actual Due Date _____

Course _____ Date _____ Actual Due Date _____

2. Course(s) Successfully Completed:

Course _____ Yes _____ No _____

Course _____ Yes _____ No _____

Course _____ Yes _____ No _____

Course _____ Yes _____ No _____

Course _____ Yes _____ No _____

3. Grade Received:

Course _____ Grade _____

Course _____ Grade _____

Course _____ Grade _____

Course _____ Grade _____

Course _____ Grade _____

Appendix XII - Script for Administration of the Post-test Questionnaire

The Post-test Questionnaire is to be administered to **all students from whom consent forms were received**. When calling students, please use the following script:

Identify yourself and the purpose of the call

Hello, this is _____ from Laurentian University. I am calling because you consented to participate in our study of services for distance education students.

Confirm that this is a good time to talk or book an appointment for later

I have a short questionnaire which takes about 10 minutes to administer. Would you have time to do this right now or should we book another time?

Describe the questionnaire and ask if they have any questions

The questionnaire is fairly straightforward. There are only 23 questions. Most ask you to rate your answers on a scale of 0 to 10. If I read them too quickly or if you have a question, don't hesitate to stop me. Do you have any questions before we start?

Work through the questionnaire reading each question carefully—as you are going through, note any substantive comments that they make on page 7 of the questionnaire in the space provided

Ok, I'll start with a question about the orientation materials.....

Let them know that is the end of the questionnaire and ask for any questions or comments

That is the end of the questionnaire. Do you have any questions or are there any other comments that you would like to make? (Record any comments on page 7 in the space provided.)

Remind the student that there may be one more phone call and check their contact info

I would just like to let you know that we will be calling a small random sample of students back in a few weeks to re-administer the questionnaire. I hope you will not mind if you are one of these. May I just check your contact information with you to make sure that I have it correct. (Ensure that the information on the front of the form is correct—including any special instruction for contact—evening, day, etc.)

Bring closure and thank the student for their participation

I want to thank you very much for participating in the study—the information you have provided will help us to improve our services to students.

Appendix XIII - Script for Re-Administration of Post-test Questionnaire

The Post-test Questionnaire is to be re-administered to 40 (20 from each of the two groups) of the students who were interviewed previously. When interviewing these students, please use the following script:

Identify yourself and the purpose of the call:

Hello, this is----- from Laurentian University. I am calling you because you agreed to participate in our study of services for distance education students. Recently you responded to a questionnaire about your experience in your distance education course(s). We are in the process of re-administering the questionnaire to a small group of randomly chosen students in order to determine the reliability of our instrument and the data. I wonder if you would be willing to respond to the questionnaire again. As you know, it does not take long and it would be very helpful for our study. (If they decline, thank them very much for their previous participation and let them know that if they want a copy of the results of the study, that there will be a report available later this year. If they consent, move onto the next step.)

Confirm that this is a good time to talk or book an appointment for later.

Thank you for being so willing to help. Do you have time right now or would it be better to book another time?

Remind them about the format of the questionnaire, assure them of confidentiality, and ask if they have any questions.

As you will remember, the questionnaire is fairly straightforward. There are only 23 questions Most ask you to rate your answers on a scale of 0 to 10. If I read them too quickly or if you have a question, don't hesitate to stop me. As I mentioned before, any information which you provide will be kept strictly confidential and no one will have access to it other than the researchers directly involved with the project. The report of the study will not reveal any identifying information about individual students. Do you have any questions before we start?

Work through the questionnaire reading each question carefully--as you are going through, note any substantive comments that they make on page 7 of the questionnaire in the space provided.

Ok, let's begin with the orientation materials.....

When you are finished, let them know that this is the end of the questionnaire and ask for any questions or comments.

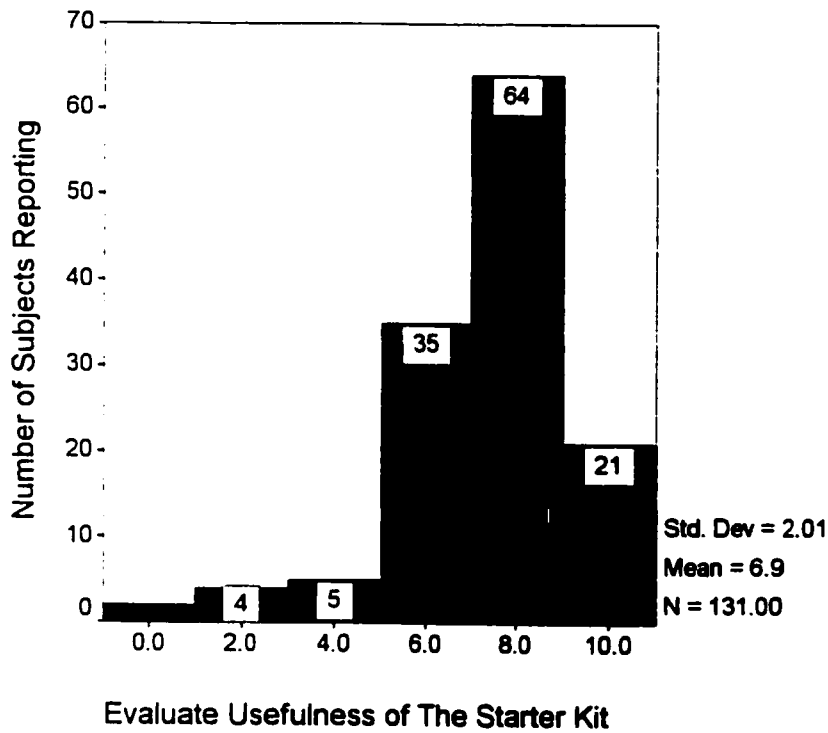
That is the end of the questionnaire. Do you have any questions or are there any other comments that you would like to make? (Record any comments on page 7 in the space provided.)

Bring closure and thank the student for their participation.

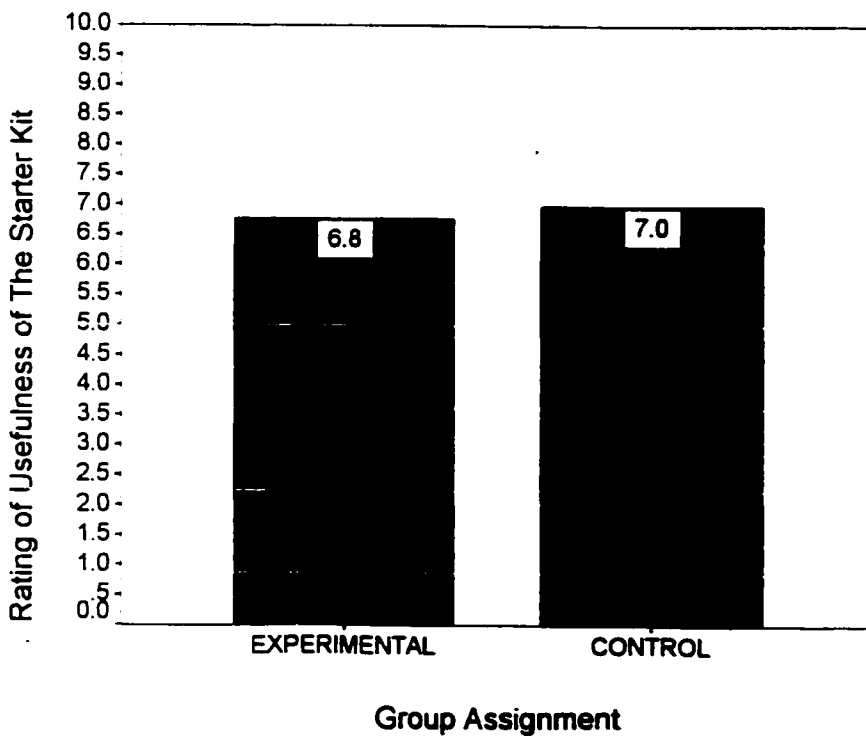
I want to thank you very much for participating in the study--especially for being willing to answer our questionnaire twice. I'm sure that it will help us to identify ways to improve our services to students. If you would like a copy of the final report from the study, it will be available later this year, probably some time in late summer or early fall. Thank you again and good luck with your studies.

Appendix XIV - Utility of The Starter Kit

Utility of The Starter Kit (Total Sample)

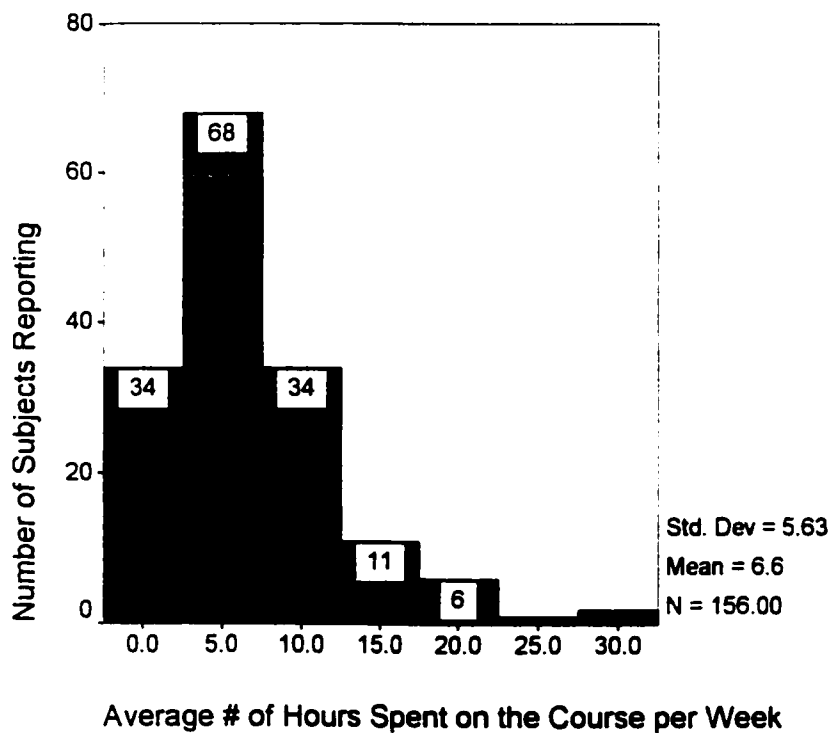


Utility of The Starter Kit by Group Assignment

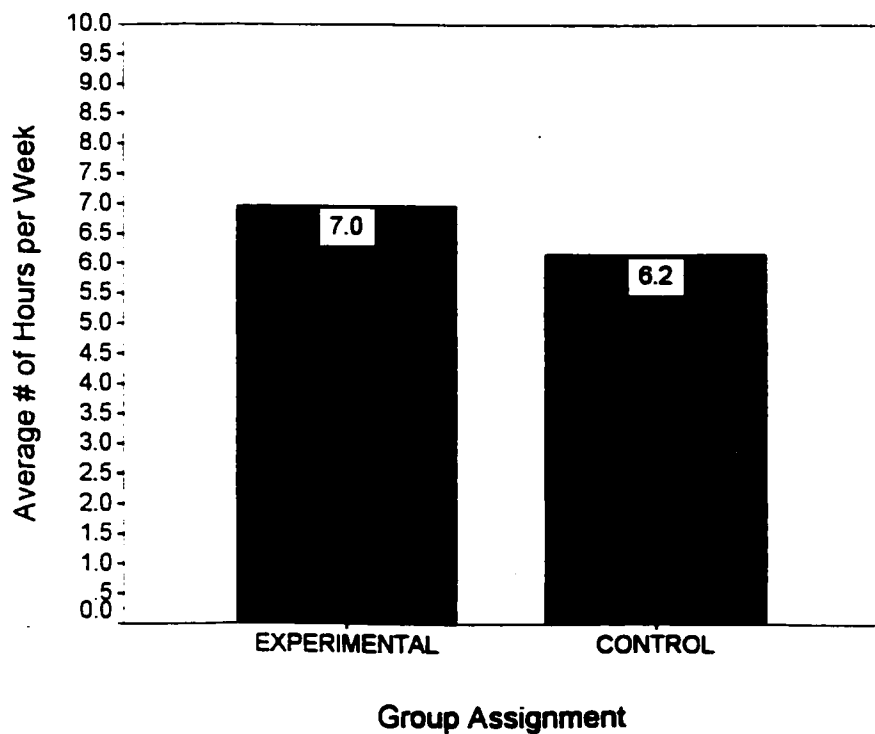


Appendix XV - Time Spent on Course

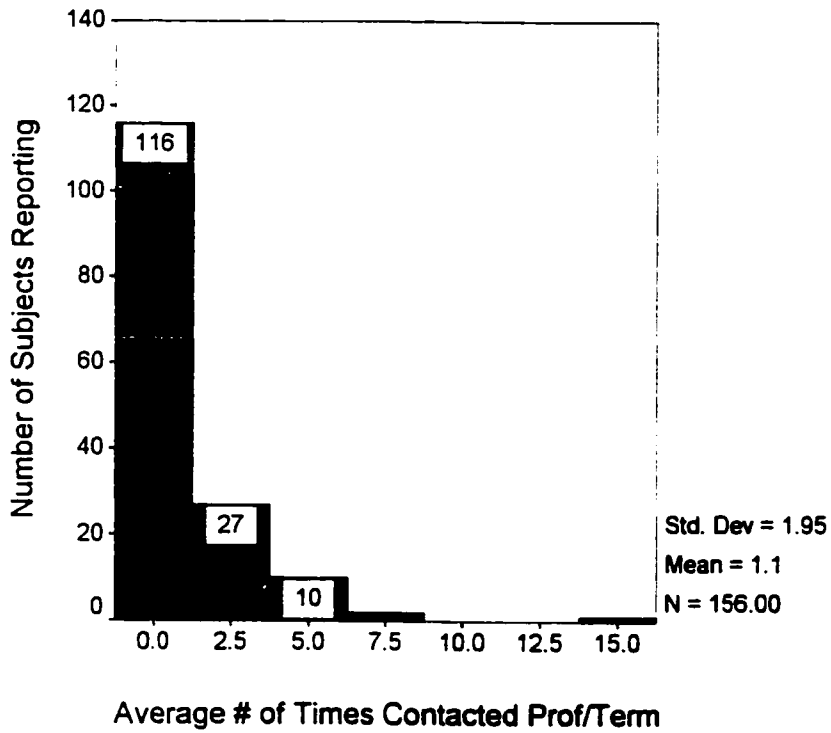
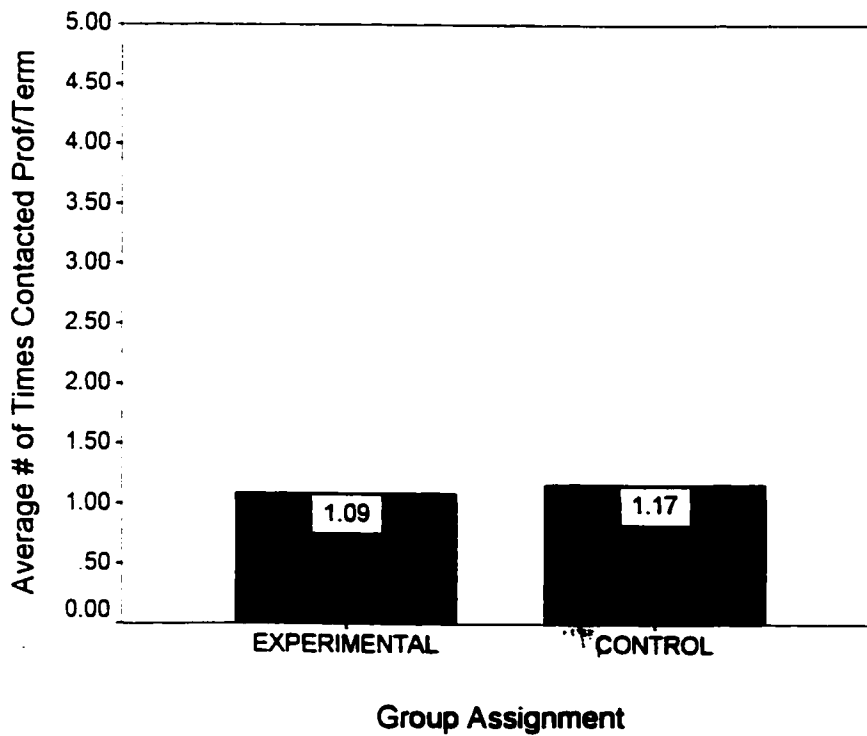
Time Spent on the Course per Week (Total Sample)



Time Spent on the Course per Week by Group Assignment

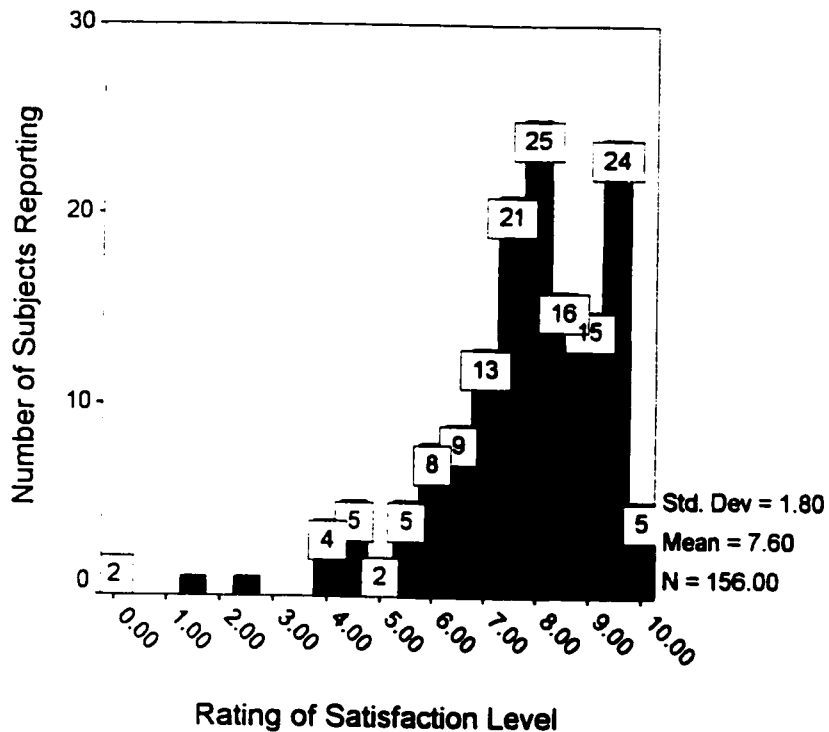


Appendix XVI - Learner Initiated Contact

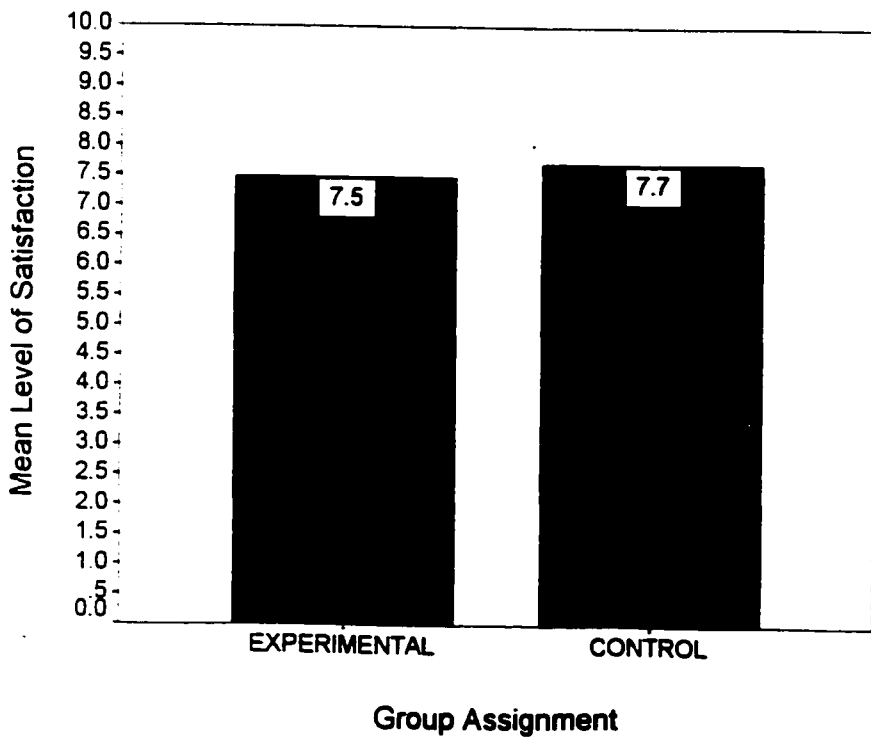
Learner Initiated Contact with Professor (Total Sample)**Learner Initiated Contact with Professor by Group Assignment**

Appendix XVII - Learner Satisfaction

Level of Satisfaction (Total Sample)



Level of Satisfaction by Group Assignment



Appendix XVIII - Rating Forms for Interventions

RATING FORM FOR INTERVENTION ONE

ADVISOR NUMBER: _____

Topics Covered by the Advisor:	Yes	No
Role of Student Advisor	_____	_____
Availability of services for distance learners	_____	_____
Contents of the course package	_____	_____
Using The Starter Kit	_____	_____
Study schedule	_____	_____
Contacting the professor	_____	_____
Support from family and friends	_____	_____
Check for difficulties or need for assistance	_____	_____

RATING FORM FOR INTERVENTION TWO

ADVISOR NUMBER: _____

Topics Covered by the Advisor:	Yes	No
Purpose of the call	_____	_____
Progress check/need for assistance	_____	_____
Time spent on course per week	_____	_____
Contact with professor	_____	_____
The Starter Kit	_____	_____
Study schedule/workload	_____	_____
Motivation level	_____	_____
Invitation to call if necessary	_____	_____

Appendix XIX - Instructions to Raters

Instructions to Raters

The tapes you are going to listen to were made as part of project which offered different kinds of orientation services to distance learners. Participants in the project were starting their first university distance study course, and **each received two telephone calls from a Student Advisor, approximately 3 to 4 weeks apart.** Some of these calls were taped. **The purpose of rating the tapes is to see whether the intended content was delivered.**

There were scripts for the two telephone calls (see attached: Script for Intervention One and Script for Intervention Two) which callers could adapt to their own style. The scripts covered specific topics intended to help students with their courses, and to let them know about and encourage them to use existing support services at the university.

Steps:

- When listening to the tapes, you should be able to **tell the first call from the second call** by the content and whether it is the first time the caller has talked to the student. **Make sure that you rate first calls on the Rating Form for Intervention One and second calls on the Rating Form for Intervention Two.**
- Each of the tapes is marked with an Advisor number—**mark the Advisor number on the rating sheet.**
- **Each of the interventions have 8 key topics to be covered.** These are listed on each of the rating forms and should be clear from the scripts. **Rate whether or not each of the 8 topics was addressed simply by checking yes or no. Even if a topic is only mentioned, you can mark it as having been covered by the caller.**
- Please note that some Advisors used the whole tape, filling it with a number of calls. Others put only one or two calls on a tape. Some Advisors marked quite clearly what is on each tape and whether the calls are the first or second one. **If a tape is not marked, please skim through it to make sure that you find all the calls.**

Appendix XX - Sample Course Information



Envision

Laurentian University Distance Education • L'Université Laurentienne et la formation à distance

SPRING SESSION 1998

Dear Student:

Welcome to *Introduction to Psychology, PSYC 1105EZ*. Please find enclosed the materials that you will require in order to get started with your studies.

Your course supervisor is Dr. Elizabeth Levin. Dr. Levin is available anytime by voice mail at (705) 675-1151, ext. 4242 or by e-mail at elevin@nickel.laurentian.ca. You may also leave a message for your course supervisor at the Centre for Continuing Education, (705) 675-1151, with Vicky at ext. 3937 or with Monique at ext. 3938; within Ontario, call toll-free 1-800-701-2816.

You should begin with a thorough reading of the enclosed course material in order to get a sense of what is expected of you. The Assignment Schedule contains information on the relative values and due dates for each assignment and all exams. The Assignment File contains specific instructions on how to complete assignments as well as the assignments themselves. Most courses contain a Course Manual which is your guide to the course material. Pay special attention to the About the Course section of the manual for details on how to proceed.

The exam periods for all distance education courses have been set. Details on exam period dates as well as on how many exams you are expected to write are included in the enclosed Assignment Schedule. You will be notified by mail of the exact date, time, and location of each exam once the final schedules are determined. Students living in the Sudbury Region during the current session will be required to write all their exams, both for in class and distance education courses, on campus.

Also enclosed are Envision assignment cover sheets and self-addressed envelopes to help facilitate returning assignments to our office. Please ensure the completed cover sheet for each assignment is submitted.

Each Envision course is designed in such a way as to maximize your chances of success. We hope that you enjoy the course as much as the course developers enjoyed preparing the material.

Sincerely,

Denis Mayer
Director of Student Affairs

PSYC 1105EZ

INTRODUCTION TO PSYCHOLOGY

SPRING SESSION 1998

SPECIAL NOTES

Welcome to the introductory psychology course. As the name implies, the course is designed to introduce you to the field of contemporary psychology. You will not only learn about the various branches of psychology, you will learn about the scientific method as used in psychology.

THE PSYCHWORKS PACKAGE

The PsychWorks package, described as an innovative psychology learning package has been selected for the course. For the same price as the hardcover text you will receive a complete package of materials. The course focuses on the textbook *Psychology, The Science of Behavior* (5th edition) by Carlson and Buskist. Be sure to use the pedagogical aids built into the text to assist you in your learning such as the chapter summaries and bold face definitions.

The package includes two (2) audiotapes. You may find these a useful supplement and you can use them for review. You can listen in the car, while exercising, etc., but they won't replace the textbook. Some of you may, however, benefit from listening in addition to reading and it is one way to increase your involvement as a learner. The package also includes some practice tests. Most students find practice tests useful study tools. However, don't cheat (yourself). If you want to be sure you remember the information, don't take the test as soon as you finish the chapter but wait a bit, don't look ahead to the answers and then convince yourself "I knew that." Take the test as if it were real and you'll have a better idea of what you do and don't know. There are further test items on the strategic learning disks which you can use but **ACCESS TO A COMPUTER IS NOT REQUIRED** for the course. There is also an interactive CD-ROM which again is not a core component of the course but if you have a computer or occasional access to one, you may wish to try it out. These last two supplements may be used by students with access to a computer to enhance learning, to provide another medium for learning than reading a textbook, and to increase your activity as a student. They are only supplements; the text remains core and if you do not have a computer don't worry about it. The course design assumes that computer access is not necessary. And speaking of computers, while I am available to answer questions by e-mail, **DO NOT E-MAIL ASSIGNMENTS** to me. They must be processed through the Continuing Education office.

THE COURSE

Many students are surprised to discover that psychology is a science and relies on the scientific method. Pay careful attention to chapter two. Although you may be anxious to get into the core subject matter, a thorough understanding of the material in chapter 2 will assist you greatly in understanding the other chapters and in completing the assignments, especially the labs.

This course has six (6) assignments. Four of them have to do with chapters in the text, and your reading of them. Two of the assignments are actual experiments which you must conduct, analyze, and then describe in an experimental report. There are three assignments due for each term — two chapter assignments and one experimental report.

This course has a midterm exam and a final exam, each worth 25% of your grade. The exams are composed of multiple-choice questions. The midterm exam will cover the material in Chapters 1-9, while the final exam will cover Chapters 10-18.

The precise date, time and location of the exams is set by the Centre for Continuing Education and you will be notified. If you have problems with exam scheduling, you must deal with them and not me.

Your exams are multiple-choice and your exam answers must be copied onto a computer scoring card. It is very important that you complete the scoring card correctly (only your name and student number are needed) or you may miss out on marks you have earned since only the answer card will be graded. You must, however, also hand in your exam copy. **YOU MUST USE A SOFT LEAD PENCIL - no pens are allowed, so be sure to bring pencils with you.** Erase any changes completely or they may count against you. Fill in the circles completely. If you complete your exam in pen, you will receive a 0 grade.



PSYC 1105EZ

INTRODUCTION TO PSYCHOLOGY

SPRING SESSION 1998

COURSE MATERIALS

In this package you will find the following. Contact the Envision Program if anything is missing: 1-800-701-2816 or 705-675-1151, ext. 3938 or 3937.

- Introductory letter, Assignment Schedule, Special Notes, Assignment File
- 6 Assignment Cover Sheets
- 6 return envelopes
- Laurentian University Course Evaluation and return envelope
- I.D. card
- "We Can Help"
- 1" binder

In addition, you must obtain the following. It is available from the Laurentian University Bookstore. (See reverse.)

- Carlson, N. and Buskist, W., *Psychology (5th ed.)*

PSYC 1105EZ

INTRODUCTION TO PSYCHOLOGY

SPRING SESSION 1998

ASSIGNMENT SCHEDULE

ASSIGNMENT	VALUE	DUE DATE
Assignment 1	8%	May 19, 1998
Assignment 2	8%	June 1, 1998
Assignment 3 Experimental Report #1	10%	June 8, 1998
Mid-term Examination	25%	June 12 or 13, 1998 (You will be notified of the exact date, time, and place.)
Assignment 4	8%	June 22, 1998
Assignment 5	6%	July 6, 1998
Assignment 6 Experimental Report #2	10%	July 13, 1998
Final Examination	25%	July 27 - 31, 1998 (You will be notified of the exact date, time, and place.)

Appendix XXI - Statistical Data for Moderator Variables and Attribute Predictor Variables
(Tables XXI-a - XXI-h)

Table XXI-a

Beta Coefficients, F-tests, and Amount of Variance Explained from Individual Moderated Regression Equations in Which "Perceived Utility of The Starter Kit" Has Been Regressed on Intervention, Moderator Variables, and Intervention-by-Moderator Interaction Terms (N=131)

Equation	Intervention	Attribute (Predictor)		Intervention- by-Attribute Interaction	$F_{\Delta}(1, 127)$ Intervention- by-Attribute Interaction (Moderator)	R^2	R^2 adj.
1	-.02	Age:	-.13	.12	.19	.01	-.02
2	-.26	Gender:	-.13	.38	.58	.01	-.01
3	-.37	Prev. Ed.:	-.42	.57	1.83	.02	-.00
4	-.72	Language:	-.48	.87	2.57	.02	.00
5	-.19	Location:	.18	.20	.31	-.01	-.02
6	.06	Enr. Stat.:	.04	-.02	.00	.00	-.02
7	-.26	# DE Crs.:	.33	.50	1.32	.01	.01

Note.

For the 56 moderated regressions presented in Tables XXI-a to XXI-h, the Beta coefficients for the intervention, attribute, and intervention-by-attribute interaction terms were all tested at the $\alpha/56 = .05/56 = .0008$ level.

Table XXI-b

Beta Coefficients, F-tests, and Amount of Variance Explained from Individual Moderated Regression Equations in Which "Time Spent on the Course" Has Been Regressed on Intervention, Attribute Variables, and Intervention-by-Attribute Interaction Terms (N=156)

Equation	Intervention	Attribute (Predictor)	Intervention- by-Attribute Interaction	$F_{\Delta}(1, 152)$ Intervention- by-Attribute Interaction (Moderator)	R^2	R^2 adj.
1	-.16	Age: .38	.17	.61	.26	.25
2	-.50	Gender: -.11	.56	1.81	.06	.04
3	-.69	Prev. Ed.: -.52	.82	4.45	.03	.01
4	.01	Language: .04	-.07	.00	.00	-.02
5	-.06	Location: .60	.05	.04	.41	.40
6	.32	Enr. Stat.: -.15	-.48	1.89	.21	.20
7	.28	# DE Crs.: .79	-.60	2.57	.17	.15

Note.

For the 56 moderated regressions presented in Tables XXI-a to XXI-h, the Beta coefficients for the intervention, attribute, and intervention-by-attribute interaction terms were all tested at the $\alpha/56 = .05/56 = .0008$ level.

Table XXI-c

Constant, B-Coefficients and Statistical Significance of Intervention, Attribute Variable, and Intervention-by-Attribute Interaction Term from Individual Moderated Sequential Logistic Regression Equations, in Which "Learner Initiated Contact" Was the Criterion Variable (N=156)

Equation	Constant	Intervention	Attribute (Predictor)	Intervention- by-Attribute Interaction (Moderator)
1	.22	-1.04	Age: -.01	.04
2	1.41	-.89	Gender: -.74	.45
3	-2.07	1.00	Prev. Ed.: 1.27	-.65
4	-5.09	3.62	Language: 2.79	-2.01
5	.25	-1.49	Location: -.21	1.12
6	1.25	-.14	Enr. Stat.: -.72	.04
7	-.53	-.33	# DE Crs.: .55	.12

Note.

The statistical significance (or non-significance) of each term in the equation was derived from the Wald statistic (not shown).

For the 56 moderated regressions presented in Tables XXI-a to XXI-h, the Beta coefficients for the intervention, attribute, and intervention-by-attribute interaction terms were all tested at the $\alpha/56 = .05/56 = .0008$ level.

Table XXI-d

Constant, B-Coefficients and Statistical Significance of Intervention, Attribute Variable, and Intervention-by-Attribute Interaction Term from Individual Moderated Sequential Logistic Regression Equations, in Which "Course Completion" Was the Criterion Variable (N=148)

Equation	Constant	Intervention	Attribute (Predictor)	Intervention- by-Attribute Interaction (Moderator)
1	-2.37	.50	Age: .02	- .02
2	-1.46	.19	Gender: -.28	-.13
3	-2.44	-.20	Prev. Ed.: .29	-.10
4	12.19	-14.40	Language: -7.14	7.28
5	-1.96	.15	Location: .04	-.16
6	-4.86	1.75	Enr. Stat.: 1.71	-1.04
7	-3.34	1.17	# DE Crs.: 1.23	-1.04

Note.

The statistical significance (or non-significance) of each term in the equation was derived from the Wald statistic (not shown).

For the 56 moderated regressions presented in Tables XXI-a to XXI-h, the Beta coefficients for the intervention, attribute, and intervention-by-attribute interaction terms were all tested at the $\alpha/56 = .05/56 = .0008$ level.

Table XXI-e

Beta Coefficients, F-tests, and Amount of Variance Explained from Individual Moderated Regression Equations in Which "Final Grades" Has Been Regressed on Intervention, Attribute Variables, and Intervention-by-Attribute Interaction Terms (N=146)

Equation	Intervention	Attribute (Predictor)		Intervention- by-Attribute Interaction	$F_{\Delta}(1, 142)$ Intervention- by-Attribute Interaction (Moderator)	R^2	R^2 adj.
1	-.14	Age:	.03	.12	.13	.02	-.00
2	-.63	Gender:	-.34	.72	2.81	.03	.01
3	.16	Prev. Ed.:	.15	-.29	.51	.01	-.01
4	-.13	Language:	-.18	.07	.02	.02	.00
5	-.17	Location:	-.02	.16	.23	.02	-.01
6	-.18	Enr. Stat.:	-.23	.17	.17	.02	.00
7	-.21	# DE Crs.:	-.08	.22	.25	.01	-.01

Note.

For the 56 moderated regressions presented in Tables XXI-a to XXI-h, the Beta coefficients for the intervention, attribute, and intervention-by-attribute interaction terms were all tested at the $\alpha/56 = .05/56 = .0008$ level.

Table XXI-f

Beta Coefficients, F-tests, and Amount of Variance Explained from Individual Moderated Regression Equations in Which "Learner Satisfaction" Has Been Regressed on Intervention, Attribute Variables, and Intervention-by-Attribute Interaction Terms (N=156)

Equation	Intervention	Attribute (Predictor)		Intervention- by-Attribute Interaction	$F_{\Delta}(1, 152)$ Intervention- by-Attribute Interaction (Moderator)	R^2	R^2 adj.
1	-.35	Age:	-.41	.66	4.17	.04	.02
2	.04	Gender:	.07	.04	.01	.01	-.01
3	-.16	Prev. Ed.:	-.27	.30	.59	.02	-.01
4	-.35	Language:	-.22	.47	.93	.01	-.01
5	-.23	Location:	-.25	.44	1.74	.02	.00
6	.30	Enr. Stat.:	.21	-.32	.67	.01	-.01
7	.07	# DE Crs.:	.13	-.02	.00	.02	-.00

Note.

For the 56 moderated regressions presented in Tables XXI-a to XXI-h, the Beta coefficients for the intervention, attribute, and intervention-by-attribute interaction terms were all tested at the $\alpha/56 = .05/56 = .0008$ level.

Table XXI-g

Beta Coefficients, F-tests, and Amount of Variance Explained from Individual Moderated Regression Equations in Which "Perceived Social Support" Has Been Regressed on Intervention, Attribute Variables, and Intervention-by-Attribute Interaction Terms (N=156)

Equation	Intervention	Attribute (Predictor)		Intervention- by-Attribute Interaction	F _Δ (1, 152) Intervention- by-Attribute Interaction (Moderator)	R ²	R ² adj.
1	-.43	Age:	-.57	.46	2.09	.09	.07
2	-.03	Gender:	-.09	-.14	.11	.05	.03
3	.01	Prev. Ed.:	.03	-.20	.26	.03	.01
4	-.04	Language:	.12	-.10	.01	.02	.01
5	-.14	Location:	-.30	-.03	.01	.12	.11
6	.02	Enr. Stat.:	.40	-.23	.39	.09	.07
7	-.05	# DE Crs.:	.09	-.15	.11	.02	-.00

Note.

For the 56 moderated regressions presented in Tables XXI-a to XXI-h, the Beta coefficients for the intervention, attribute, and intervention-by-attribute interaction terms were all tested at the $\alpha/56 = .05/56 = .0008$ level.

Table XXI-h

Beta Coefficients, F-tests, and Amount of Variance Explained from Individual Moderated Regression Equations in Which "Intention to Re-enrol" Has Been Regressed on Intervention, Attribute Variables, and Intervention-by-Attribute Interaction Terms (N=156)

Equation	Intervention	Attribute (Predictor)		Intervention- by-Attribute Interaction	$F_{\Delta}(1, 152)$ Intervention- by-Attribute Interaction (Moderator)	R^2	R^2 adj.
1	-.13	Age:	-.17	.38	1.37	.03	.01
2	.18	Gender:	.18	-.09	.04	.03	.01
3	-.24	Prev. Ed.:	-.46	.45	1.35	.06	.04
4	-.23	Language:	-.22	.39	.62	.02	-.00
5	.15	Location:	.14	-.06	.03	.02	.00
6	.19	Enr. Stat.:	.02	-.11	.08	.01	-.01
7	.10	# DE Crs.:	.19	-.02	.01	.04	.02

Note.

For the 56 moderated regressions presented in Tables XXI-a to XXI-h, the Beta coefficients for the intervention, attribute, and intervention-by-attribute interaction terms were all tested at the $\alpha/56 = .05/56 = .0008$ level.

Appendix XXII - Statistical Data for Process Variables as Predictors of Outcomes
(Tables XXII-a - XXII-h)

Table XXII-a

Summary of Regression Analyses in which Four Process Variables Were Used to Predict
"Utility of The Starter Kit" (N = 131)

Variable	<u>B</u>	<u>SE B</u>	<u>β</u>	R ²	R ² _{adj.}
Process Variables					
Group Assignment (Exp./Control)	.35	.35	.09		
Perceived Social Support	.29	.10	.26		
Time Spent on Course/Week	.06	.22	.02		
Contact with Professors	.09	.37	.02	.06	.03

Note. For the 32 regressions presented Tables XXIIa to XXIIh, in which the 4 process variables were used to predict each of 8 outcomes, each predictor was tested at the $\alpha/32 = .05/32 = .0016$ level.

Table XXII-b

Summary of Regression Analyses in Which Four Process Variables Were Used to Predict "Time Spent on Course" (N = 156)

Variable	<u>B</u>	<u>SE B</u>	<u>β</u>	<u>R²</u>	<u>R²_{adj.}</u>
Process Variables					
Group Assignment (Exp./Control)	-.14	.13	-.08		
Perceived Social Support	-.12	.04	-.24		
Time Spent on Course/Week	---- ^a	---- ^a	---- ^a		
Contact with Professors	.49	.13	.28*	.15*	
					.13*

Note. For the 32 regressions presented Tables XXIIa to XXIIh, in which the 4 process variables were used to predict each of 8 outcomes, each predictor was tested at the $\alpha/32 = .05/32 = .0016$ level.

^aCell is empty.

*p < .0016.

Table XXII-c

Summary of Logistic Regression Analyses in Which Four Process Variables Were Used to Predict "Learner Initiated Contact" (N = 156)

Variable	<u>B</u>	<u>Wald</u>
Process Variables		
Group Assignment (Exp./Control)	-.07	.04
Perceived Social Support	-.04	.17
Time Spent on Course/Week	.74	11.90*
Contact with Professors	---	---
Constant	.41	.15

Note. For the 32 regressions presented Tables XXIIa to XXIIh, in which the 4 process variables were used to predict each of 8 outcomes, each predictor was tested at the $\alpha/32 = .05/32 = .0016$ level.

*Cell is empty.

*p < .0016.

Table XXII-d

Summary of Logistic Regression Analyses in Which Four Process Variables Were Used to Predict "Course Completions" (N = 148)

Variable	<u>B</u>	<u>Wald</u>
Process Variables		
Group Assignment (Exp./Control)	-.10	.03
Perceived Social Support	-.20	1.06
Time Spent on Course/Week	.07	.05
Learner Initiated Contact	.64	1.23
Constant	.10	.00

Note. For the 32 regressions presented Tables XXIIa to XXIIh, in which the 4 process variables were used to predict each of 8 outcomes, each predictor was tested at the $\alpha/32 = .05/32 = .0016$ level.

Table XXII-e

Summary of Regression Analyses in Which Four Process Variables Were Used to Predict "Final Grades" (N = 146)

Variable	<u>B</u>	<u>SE B</u>	<u>β</u>	<u>R²</u>	<u>R²_{adj.}</u>
Process Variables					
Group Assignment (Exp./Control)	-2.17	3.60	-.05		
Perceived Social Support	1.30	1.30	.08		
Time Spent on Course/Week	.16	2.20	.01		
Contact with Professors	4.72	3.70	.11	.02	.01

Note. For the 32 regressions presented Tables XXIIa to XXIIh, in which the 4 process variables were used to predict each of 8 outcomes, each predictor was tested at the $\alpha/32 = .05/32 = .0016$ level.

Table XXII-f

Summary of Regression Analyses in Which Four Process Variables Were Used to Predict "Learner Satisfaction" (N = 156)

Variable	<u>B</u>	<u>SE B</u>	<u>β</u>	<u>R²</u>	<u>R²_{adj.}</u>
Process Variables					
Group Assignment (Exp./Control)	.59	.24	.01		
Perceived Social Support	.66	.07	.62*	.36*	.34*
Time Spent on Course/Week	.34	.15	.02		
Contact with Professors	.29	.25	.24		

Note. For the 32 regressions presented Tables XXIIa to XXIIh, in which the 4 process variables were used to predict each of 8 outcomes, each predictor was tested at the $\alpha/32 = .05/32 = .0016$ level.

* $p < .0016$.

Table XXII-g

Summary of Regression Analyses in Which Four Process Variables Were Used to Predict "Perceived Social Support" (N = 156)

Variable	<u>B</u>	<u>SE B</u>	<u>β</u>	<u>R²</u>	<u>R²_{adj.}</u>
Process Variables					
Group Assignment (Exp./Control)	-.52	.26		-.16	
Perceived Social Support	----	----	----		
Time Spent on the Course/Week	-.11	.27	-.03		
Contact with Professors	-.48	.16	-.25	.01	.07

Note. For the 32 regressions presented Tables XXIIa to XXIIh, in which the 4 process variables were used to predict each of 8 outcomes, each predictor was tested at the $\alpha/32 = .05/32 = .0016$ level.

^aCell is empty.

Table XXII-h

Summary of Regression Analyses in Which Four Process Variables Were Used to Predict "Intention to Re-enrol" (N = 156)

Variable	<u>B</u>	<u>SE B</u>	<u>β</u>	<u>R²</u>	<u>R²_{adj.}</u>
Process Variables					
Group Assignment (Exp./Control)	1.10	.48	.18		
Perceived Social Support	.72	.15	.38*	.17*	.15*
Time Spent on Course/Week	.91	.29	.25		
Contact with Professors	.48	.50	.07		

Note. For the 32 regressions presented Tables XXIIa to XXIIh, in which the 4 process variables were used to predict each of 8 outcomes, each predictor was tested at the $\alpha/32 = .05/32 = .0016$ level.

* $p < .0016$.