

ATHABASCA UNIVERSITY

THE EFFECT OF A PRE-COURSE ORIENTATION HANDBOOK  
ON STUDENT PERSISTENCE  
IN UNDERGRADUATE ONLINE COURSES

BY

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A thesis submitted to the  
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The undersigned certify that they have read and recommend to the Athabasca University Governing Council for acceptance a thesis THE EFFECT OF A PRE-COURSE ORIENTATION HANDBOOK ON STUDENT PERSISTENCE IN UNDERGRADUATE ONLINE COURSES submitted by KATHRYN E. LOCKHART in partial fulfillment of the requirements for the degree of MASTER OF DISTANCE EDUCATION.

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## DEDICATION

I would like to dedicate this paper to the two great researchers in my life - Dr. Peter J. Krueger, D.Phil., and Mr. Grant Lockhart, B.Sc., B.Appl.Sc.

## ABSTRACT

The purpose of this study was to investigate whether or not orientation for new online students presented in a pre-course handbook would impact student persistence. In this sequential mixed-methods quasi-experimental study involving 15 new online students at a small community college, the treatment group received an orientation handbook emphasizing both the importance of online interaction for building community and the need to identify supports for and barriers to online study. Both treatment and control groups completed web-based questionnaires about their perceived barriers to and supports for online learning, and Rovai's (2002b) 40-item Sense of Classroom Community scale. Qualitative data were also gathered from the questionnaire and a telephone interview. Data were insufficient to establish a relationship between the handbook and persistence, or between answers on the two questionnaire scales and persistence. The study revealed that student dropout is a complex phenomenon; that students' preferred form of support was through interaction with peers and the instructor; and that the definition of "online course" is not consistent among institutions. Answers to the questionnaire items revealed that both the treatment and control groups encountered time-related barriers, perceptions that their courses were not what they expected, and difficulty with course content. For both groups, the lowest scores on the questionnaire occurred in the Sense of Classroom Community subscale. These data are explained by the follow-up interviews and College records which revealed that very few courses required online interaction, either as part of the grade or for a group project. Since online interaction was not required, students did not participate. The study concludes with a review of the limitations of the study and implications for professional practice. Recommendations include a call for more distance education

research, accompanied by suggestions for improving its quality. Finally, it is recommended that institutions establish benchmarks for provision of student orientation, online interaction, and faculty development.

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# CHAPTER I

## INTRODUCTION

The growing demand for online courses and programs has meant that many students who would not have been able to commute to classes because of employment, family responsibilities, or distance from campus are now able to participate in post-secondary education. While many students successfully complete online courses, there are many who fail to complete courses due to a complex mixture of external, personal, and institutional factors. A certain amount of attrition occurs in all post-secondary education courses, but the available statistics, however measured, indicate that dropout in online education is significantly higher than in conventional education (Carr, 2000).

There have been many studies to determine the reasons for student attrition in online education, some attempting to determine why students drop out (Packham, Jones, Miller, & Thomas, 2004; Willging & Johnson, 2004); some attempting to identify characteristics of students at risk for dropping out in order to target retention strategies (Dupin-Bryant, 2004), and others examining the effects on retention of specific interventions (Chyung, 2001), all revealing that both the student and the institution share responsibility for attrition.

Since studies show that there is no significant difference in cognitive achievement between students studying online versus students learning in a conventional classroom (Russell, 1999), then the reason for dropout from online courses must lie elsewhere. One aspect of online learning requiring further research is the adaptation to computer-mediated communication students need to make in order to succeed in the online environment. In the conventional classroom students share the same physical space and experience immediate

verbal communication. In the online classroom, however, students who are separated geographically use the computer to communicate by posting synchronous or asynchronous written messages to one another.

Online interaction poses particular challenges to students who are unfamiliar with computer communications, or who thrive on face-to-face interaction of the classroom. Students who do not adapt to online communication can become frustrated, leading either to dropout, or to psychological withdrawal, in which the student fulfills only the minimum requirements to pass the course but does not have a satisfying experience (Russo & Campbell, 2004). Just as face-to-face discussion is important for building classroom community, so is online interaction considered crucial to the building of virtual community, which may encourage students to persist (Rovai, 2002c).

Online learning also presents challenges to self-discipline. Students in a conventional classroom experience the luxury of time and space devoted to study, temporarily protected from interference by home and work issues. Online students may have trouble focusing on their courses if they are unable to find a regular time and place to study without interruption.

The dual demands of computer-mediated communication (CMC) and student self-discipline require new online learners to make role adjustments which may require institutional assistance (Palloff & Pratt, 2000). “[T]he responsibilities and requirements of working online are not readily apparent to those new to the role. Online learners need to accept and become proficient with the technology; adjust to new modes and amounts of communication with instructors, peers and administrators; deal with increased levels of learner self-direction; and adjust to a new place and space for learning” (Garrison,

Cleveland-Innes, & Fung, 2004, p. 5). The best time to help students make this role transition is at the pre-course stage (Torres-Gil, Maffris, Garcia, & Roig, 2000).

### Summary

There have been many studies to determine why dropout in online education is significantly higher than in conventional education. One aspect of online learning requiring further exploration concerns the role adjustment which students need to make as they adapt to a computer-mediated environment which demands a high level of self-discipline. It may be that some students drop out of online courses because they cannot adapt to the online environment. It is proposed that the educational institution can assist students with this role transition at the pre-course stage.

## **CHAPTER II**

### **THE PROBLEM**

#### Rationale for the Study

The purpose of this study was to investigate how orientation for new online students presented in a pre-course handbook will impact student persistence. The handbook, “Introduction to Online Learning,” addressed issues pertinent to online study, namely, the unique nature of online classroom interactivity, the importance of student support from sources within and outside the institution, and the potential for interference from non-study-related obligations. The research was conducted at Okanagan College (the College), a small urban community college offering undergraduate degrees.

The rationale for the proposed study was that online learning is so different from conventional classroom education that institutions need to make full, timely disclosure of this fact to students. Online learning differs from classroom learning in terms of the technical skills required; the nature of online interaction and the challenge of perceiving others as “real”; the pivotal role of online community and its effect on persistence; the student’s vulnerability to forces external to the institution; and the amount of self-direction required. The best time for students to receive this information may be at the pre-course stage (Scalese, 2001).

While there has been some research into the effects of on-campus orientation for new undergraduate students (Barefoot, 2004; Pascarella & Terenzini, 1991; Promnitz & Germain, 1996), there is a lack of research into the effect of pre-course counseling for online undergraduate students. This study was intended to respond to calls in the literature

for more empirical research to explore the institutional role in lowering the incidence of online student attrition (O'Donnell, Sloan & Mulholland, 2006).

Online courses offer unique challenges to students. If institutions could provide students with detailed information about the nature of online courses prior to enrolment, then perhaps more students would achieve success (McLoughlin & Marshall, 2000). As Bird & Morgan (2003) note, "the difficulty for most prospective [online] students is to anticipate and articulate these issues at pre-enrolment time in order to be prepared for entry" (p. 4). It was proposed that the institution can assist students at this crucial time by anticipating and articulating the unique nature of online courses in the form of a handbook.

#### Theoretical Framework for the Proposed Study

The theoretical framework for this study was eclectic, involving research from several different fields. This study was based on social psychologist Lewin's (1952) field theory, which focuses on the internal and external forces affecting a student's decision to persist. The study also examined Tinto's (1975) longitudinal model of dropout in conventional education, which not only provides a timeline for dropout decisions, but also concerns the interactions which are so crucial to a student's integration into the community. This was followed by a look at the critique of and modification of Tinto's theory by distance education specialists such as Bean and Metzner (1985) and Kember (1989). The study examined the interaction theories of Kearsley (1995) and Moore (1989), and finally, the Community of Inquiry model proposed by Garrison, Anderson and Archer (2001).

### Statement of the Problem

Students need to understand the uniqueness and importance of communication in the online learning environment prior to course commencement. With full institutional disclosure of the rewards and challenges of online learning, students may make informed decisions to enroll; to enroll with the understanding that various steps can be taken to encourage success; to delay enrollment until completion of remedial study; or not to enroll at all. In particular, students must be advised that online learning is a uniquely different experience from conventional classroom learning, both in terms of the influences of external support and pressures, and in terms of the nature of online interactivity. Online interaction is considered crucial to the building of community, which, in turn, encourages students to persist in their studies. There is evidence to suggest that thorough pre-course student orientation might help educate students to persist.

### Research Questions

The following research question was the main focus of this study:

1. Does a pre-course orientation handbook, emphasizing the importance of frequent online interaction with students and instructor, influence undergraduate student persistence in online courses? If so, how?

To address the potential that other factors might interfere with the effect of the handbook, the research also considered the following questions:

2. Does external support influence undergraduate student persistence in online courses?
3. Do the requirements of non-study related obligations influence undergraduate student persistence in online courses?

4. Does the student's perception of classroom community affect undergraduate student persistence in online courses?

#### Definition of Terms

The following terms were used in this study:

- asynchronous communication – dialogue that does not take place in real time, as in a web-conference (Cadieux, 2002).
- attrition - the decline in the number of students from the beginning to the end of the course (Berge & Huang, 2004).
- CMC – the abbreviation for computer-mediated communication, referring mainly to asynchronous web-boards or discussion forums, and e-mail (Barker, 1994).
- dropout - a student who has formally enrolled but who does not complete the course. The student may or may not inform the institution of his or her actions (Berg & Huang, 2004; DeRemer, 2002; Zajkowski, 1993).
- first-generation distance education – the earliest form of distance education, involving print, and, later, radio and television; having primarily one-way communication; interaction between faculty and student by mail and telephone; with the student generally isolated from faculty member and other students (Sherron & Boettcher, 1997).
- fourth-generation distance education – involves multiple technologies including the beginning of high-bandwidth transmission for individualized, customized and live video interactive learning as well as desktop videoconferencing; computer programs and resources packaged on discs; two-way interactive real-time capabilities of audio

and video; and full 30-frame-per-second digital video transmission with databases of content resources available via the internet (Sherron & Boettcher, 1997).

- new online student – a student who has taken only one or two online courses prior to enrolling in this study
- non-traditional student - student over the age of 24, with work and/or family commitments, and studying part-time (Allen, 1993; DeRemer, 2002). Online students have generally been viewed as non-traditional learners (Rovai, 2003) but this is changing as more traditional students enroll in online courses (Wallace, 1996).
- online learning, online courses, or online education - refers to third-generation distance education, in which courses are internet-supported so that students do not need to attend campus, using asynchronous electronic communication, such as e-mail and a web-board, for interaction between teacher and students (T. Anderson, 2004; Chambers, 2004; Sherron & Boettcher, 1997).
- persistence – the act of remaining enrolled in a course until it is over. In this study, persistence was defined as successful course completion, where students maintain meaningful engagement in the course and receive a final grade of C or higher (Castles, 2004; Dille & Mezack, 1991; Kemp, 2002; Sweet, 1986).
- pre-course phase - at the College in this study, this refers to the two-week period between course start date and final registration.
- retention – the measure of the percentage of students who earn a course credit based on the number who initially registered for the course (Ashby, 2004; Berge & Huang, 2004; Tresman, 2002).

- second-generation distance education – involves multiple technologies such as audiocassettes, television, videocassettes, fax and print but without computers; primarily one-way communication; interaction between faculty and students by telephone, fax, and mail; with the student generally still isolated from faculty and peers (Sherron & Boettcher, 1997).
- success, academic success or successful completion - indication that the student has met all requirements of a single course and has received a grade of C or higher (see persistence).
- synchronous communication – dialogue that occurs in real time, as in a face-to-face classroom (Cadieux, 2002).
- third-generation distance education – involves multiple technologies including computers and computer networking; two-way interactive capabilities enabling both synchronous and asynchronous communication; and technologies support the development of an online learning community (Sherron & Boettcher, 1997).
- traditional student - student between the age of 18-24 and studying full-time, usually on campus (Allen, 1993; DeRemer, 2002).

### Delimitations and Limitations

This study was confined to new distance education students at the College who were enrolled in academic courses online. Academic courses include University Transfer, Business Administration, Health, and Adult Basic Education courses (Distance Education, 2006-2007).

This study was limited by the assumption that students would reply honestly to the self-report questionnaire on such topics as the number of online courses they had already

taken; their perceptions of barriers to or support for online study; their perception of classroom community; and the demographic items. The results of the study may have been confounded by the fact that the courses were taught by different instructors having different abilities to encourage online community, and that the subject matter of some courses may have lent itself more easily than others to online interaction and community formation. Internal validity of the study may have been threatened by mortality, that is, by students dropping out prior to questionnaire administration, and by student maturation, when a natural developmental process is mistaken for the impact of the independent variable (handbook) on a dependent variable (persistence). It is also possible that the study results were affected by diffusion, which might have occurred if a student in the treatment group had shared the handbook with a student in the control group (Huck & Cormier, 1996). The study was limited by the size of the accessible population and the number of responders to the questionnaire. Finally, the study may have been limited by certain characteristics shared only by students attending the College, which would make it difficult to generalize the findings to other institutions.

### Summary

This section has examined the purpose of the study, which was to investigate whether a pre-course orientation handbook might influence student persistence in online courses. The rationale for the study was based on observation that online study differs in many ways from traditional classroom study, and that the best time for students to be apprised of this knowledge is at the pre-course stage. The study was based on an eclectic theoretical framework, drawing on research from social psychology, longitudinal dropout models from conventional and distance education, interaction theories, and theories of

community. One major research question was presented, concerning the potential effect of an orientation handbook on student persistence, followed by three supplementary questions concerning the role of both external influences and a student's sense of classroom community in online student persistence. Finally, a definition of terms has been presented, along with delimitations and limitations of the study.

## CHAPTER III

### REVIEW OF THE LITERATURE

The literature review begins with research illustrating how orientation for new online students positively influences student persistence. This is followed by the field theory of Kurt Lewin (1952) which illustrates the interaction of forces governing a students' decision to persist or to drop out. Next is a discussion of the widely-cited longitudinal dropout theory of Vincent Tinto (1975) and subsequent research to support or dispute his theory, particularly as it applies to distance and online education. Then the literature review focuses on the nature of interaction and its crucial role in online education as mediated through computer conferencing. This is followed by a survey of Garrison's Community of Inquiry (Garrison, Anderson, & Archer, 2001), which illustrates how interaction assists in community formation, and how the mediating variables of cognitive and social presence are similar to Tinto's concepts of academic and social integration.

#### Pre-course Orientation and Persistence

Several authors have attempted to draw a timeline of a student's journey through distance and online courses, in an attempt to uncover a pattern of dropout, and to match retention interventions to the dropout pattern (Lewis, 1995; Rekkedal & Qvist-Eriksen, 2004; Simpson, 2002). Simpson (2002) notes that the first "hole" through which students may "leak" is at the point between registration and course start date (p. 169), thus providing the institution with its first opportunity to prepare students for online education. This point on the timeline may be referred to as the pre-course phase. Kovacic and Green refer to this

period as “the Gap” (2004, p. 2). At the College, the pre-course phase is the two-week period between course start date and final registration, when tuition fees must be paid.

When institutions offer orientation to new students, it usually takes place during the pre-course phase. Research supports the high degree of value which new online students place on pre-course orientation. For example, in their study of 47 e-learning students at NKI, Rekkedal and Qvist-Ericksen (2004) noted that in the pre-course phase, students appreciated receiving thorough information on all aspects of the distance education course. In a survey of 224 undergraduate distance education students at the University of Victoria, the University of Manitoba, and Memorial University of Newfoundland, Potter (1998) discovered that the support services most highly valued by the students were the ones designed to get them through the pre-course orientation stage.

Pre-course orientation is the best time to help students make what is essentially a role adjustment, from face-to-face learner to online learner (Cleveland-Innes, Garrison & Kinsel, 2006). One major adjustment students must make is to understand the nature and importance of online interaction in order to combat the feeling of isolation that online students so often report (R. Brown, 2001; McVay, 2000, Torres-Gil et al., 2000). The online learning environment differs from the classroom in that all communication is technologically mediated and usually asynchronous. Not only does this mean that students need to become comfortable using computer hardware and software, but they also need to adapt to new patterns and frequency of communication (Willis, 1995). Students need to be overtly taught that “learning in the distance education environment cannot be passive” (Palloff & Pratt, 2000, p. 6). Students need to be encouraged to become active and creative in the learning

process, by logging on to the class website and participating regularly in discussion with instructors and peers.

Research also supports that thorough orientation for new online students may help them to persist. In an online undergraduate business course, Wojciechowski and Palmer (2005) note that after grade point average, student attendance at orientation had the strongest connection to success. In a study by Siquera and Lynch (1986) of students at the National Open University of Venezuela, the students' satisfaction with the Introductory Course was the greatest predictor of success. Only one study investigating the effects of a pre-course booklet on attrition in first-time online students has been found, involving 25 students at the Open Polytechnic of New Zealand (Zajkowski, 1993). Although the group receiving the booklet showed a higher retention rate than the non-treatment group, it was later discovered that the results had been confounded by the revelation that most of the students were, in fact, not first-time online students.

Pre-course orientation is a valued first step in the online student's journey through the institution, offering students the opportunity to prepare for online learning with the assistance of various institutional supports. It is also the best time to encourage students to take advantage of support outside the institution; to prepare students for external pressures which may interfere with their studies; and to acquaint them with the crucial role which online interaction will play in their academic success. Regular interaction with peers and tutors leads to social integration and a sense of belonging to a community, which positively influences persistence (Ivankova & Stick, 2005; Rovai, 2000). Belonging to a community of learners results in deeper learning and a sense of commitment to the institution, which also aids persistence (Cleveland-Innes & Emes, 2005; Rovai, 2002c).

### Lewin's Field Theory

The field theory of Kurt Lewin (1952) helps to illuminate the complexity of the forces which govern the student's decision either to persist or drop out. Lewin posited that behaviour (B) is a function of both the person (P) and his environment (E), expressed by the following equation:  $B = f(P,E)$ . In this equation, the person and the environment are interdependent, not independent, of one another. Further, in order to understand or predict behaviour, both the person and the environment, which Lewin referred to as the individual's "lifespace," must be viewed together (Baker, McNeil, & Siryk, 1985). Kennedy and Powell (1976) concur by noting that life circumstances combine with other factors (e.g. independence, organizational abilities, and social support) as predictors of persistence or withdrawal.

Lewin further proposed that the relationship of the individual to his lifespace is never static since different factors are continually entering the lifespace. These factors become forces which affect the individual and alter his trajectory toward a specific goal (Rosch, 2002). Lewin's analysis recognizes that there are two kinds of forces acting on the individual as he is trying to achieve a goal, namely, those that are positive or driving forces, pulling him toward a goal, and those which are negative, or restraining forces, pushing him away from the goal. Lewin refers to these positive and negative influences as the force's "valence" (Rosch, 2002).

In the light of Lewin's theory, studies attempting to isolate only the psychological characteristics of "successful" or "at risk" students have minimal predictive value. Research has been conducted on the following characteristics thought to predispose distance education students to withdrawal: motivational and perseverance attributes (Brindley & Jean-Louis,

1990); locus of control beliefs (Parker, 1999; Wagner, 1994); learning style (Dille & Meszack, 1991); and resilience (Kemp, 2002). Though these studies may purport to explain or predict a certain percentage of persistence, there is still the contribution to withdrawal of external factors to be considered.

It is important for online students to be aware of the forces which may support or hinder their persistence, as research indicates that these forces can be managed to a certain degree. For example, in their study of adults taking basic education courses, Comings, Parrella, and Soricone (2000) note that the strengthening or weakening of a force that can be manipulated might offset the effects of another force that cannot be influenced. In online education, this could mean that a highly-motivated student who desires education in order to attain better employment (a positive force) might strive to overcome a fear of computers (a negative force) by taking basic computer classes prior to enrolling online. Comings et al. (2000) recommend that orientation programs encourage students to plan strategies for persistence to help them manage these influential forces, and to continually revise these strategies as the forces change. In their study of distance education students at the University of Sydney, Morgan and Tam (1998) concur that the decision whether or not to persist can be affected by even a slight increase on the positive side of the experience, as a result of efforts expended by the institution and by personnel involved in supporting student learning.

The complex interaction between personal characteristics and the environment makes student dropout decisions appear “idiosyncratic” (Garland, 1993b, p.195). In their research on students in conventional education, Hodkinson and Bloomer (2001) note that students’ learning careers involve a complex balance between continuity and change, and

that when the context of a student's life changes, the relative importance of course value may also change. In arriving at the decision to withdraw from a course, the student must make a cost/benefit analysis in which it is felt that time spent studying provides fewer advantages than time spent pursuing employment, family or social activities (Kember, 1989).

Lewin's field theory provides a helpful basis for understanding the complex interaction of forces which affect online student persistence. The theory postulates that there are both positive and negative forces influencing the online student as he pursues his goal to complete a course. One of the purposes of pre-course orientation is to enlighten students about these forces, and to provide students with strategies to manipulate them.

#### Tinto's Longitudinal Model of Student Dropout

Spady (1970) devised a descriptive theory of dropout behaviour among traditional-age students at conventional college, based in part on Durkheim's (1961) theory of suicide. Durkheim theorized that a person is more likely to commit suicide when he is poorly integrated into religious, domestic and political society. Likewise, Spady theorized that students drop out of college when they are not fully integrated with the social system of the college.

Tinto (1975) utilized Spady's descriptive theory to build a longitudinal prescriptive theory of dropout which has been widely cited and tested. His schema for college dropout begins with the background characteristics of the student, which subsequently affect the student's integration with the academic and social systems of the institution, leading to a level of commitment to the institution. The student reacts to the experiences in those systems

by continual modification of his goals and institutional commitments, ultimately leading either to persistence or dropout (Cleveland-Innes, 1994).

Tinto (1975) explained academic integration in terms of grade performance, an extrinsic reward which is the most tangible form of reward in the academic system, and intellectual development, an intrinsic reward which is a crucial part of the student's personal and academic development. Tinto noted further that poor academic integration may result from either low grade performance or insufficient intellectual development.

Tinto (1975) described a student's social integration as occurring through association with a peer group, extracurricular activities, and interaction with college faculty and administrative staff. He noted that social integration refers to both levels of integration and to degrees of congruency between the student and his social environment. Tinto further noted that his model recognizes that it is the student's perception of social integration which affects persistence, that is, students who drop out perceive themselves as having less social interaction than do students who persist. Studies involving online students suggest that a student's perception of both the quality of online interaction and the subsequent formation of online community may affect the student's decision to persist or drop out of a course (Hiltz, Coppola, Rotter, Turoff, & Benbunan-Fich, 2000; Rovai, 2002c).

While Tinto's model was designed for traditional, on-campus students, the two basic concepts, namely academic and social integration, are still relevant to online students. Both online and classroom learning involve reading and writing, which the student must accomplish in order to fulfill course requirements. Furthermore, distance education provides academic rigour, as shown in Russell's (1999) extensive meta-study. With regard to social integration, however, the online student faces new challenges, such as learning to adjust to

CMC; to socialize in writing without benefit of body language; to adapt to asynchronous dialogue; and to make purposeful connections with instructors and peers. These strategies must be overtly taught to new online students in order for them to integrate socially (Krauth & Carbajal, 2000).

### Criticism and Modification of Tinto's Theory

With the increasing popularity of distance education, researchers have continued to test the applicability of Tinto's (1975) model to explain dropout among distance education students, who not only are considered to be non-traditional, but do not have any physical access to the campus, instructors, or fellow students. There is much literature which questions the model's applicability to distance education (Kovacic & Green, 2004; Taylor, 1986) and to online education (Rovai, 2003; Scalese, 2001). The major criticisms of Tinto's theory concern the student's social integration with the institution, and the influence on students of forces outside the institution.

In designing a conceptual model of undergraduate student attrition involving non-traditional students, Bean and Metzner (1985) argued that the social integration aspect of college life upon which Tinto's (1975) model rests so heavily is rarely a major factor in the attrition decisions of non-traditional students. Based on an extensive literature search, they proposed that non-traditional students are more heavily influenced by their environment outside of college, and less influenced by interaction at college with peers and faculty.

Bean and Metzner (1985) also noted that non-traditional students are strongly influenced by forces outside the institution, suggesting that external forces are more influential than academic variables for non-traditional students. They suggested that when academic variables are positive but environmental variables are poor, students should

withdraw, but when environmental support is strong and academic support is poor, students should persist. The “push” and “pull” between academic and environmental factors described here is similar to the forces in Lewin’s force field analysis. Bean and Metzner concluded their study by noting that there is room in the model for institutional interventions, such as orientation programs. One of the key components of an orientation program for new online students could be an exercise to assist students to be aware of these factors and their potential to influence their decision to persist or drop out of their studies.

Kember (1989) revised Tinto’s model in several ways, including the social integration portion of the model. He expanded social integration to include a student’s integration of distance education study with social obligations to friends, family members, and co-workers, noting that “the extent to which this integration is successful is crucial to the chances of completing a course” (1989, p. 294).

Tinto (1982; 1993) upgraded his model by adding student entry characteristics such as attributes, skills, commitments, and value orientations; by acknowledging the role that finances play in student decision-making; and by adding “student intentions” and “external commitments” to it. Pascarella, Terenzini, and Wolfle (1986) noted, however, that while there has been general testing of Tinto’s theory, “substantially less attention has been paid to identifying areas within the conceptual framework of the model where institutional interventions might significantly influence student persistence/withdrawal behaviour” (p. 156). Tinto’s model validates the need for schools to assume a proactive role in a student’s integration process (Rovai, 2003). The aim of this study is to test whether a pre-course handbook emphasizing the importance of online interaction and community has an effect on student persistence.

## Interaction

Interaction is a critical component of the educational process, whether conventional or online (Vygotsky, 1978). According to Wagner (1994), interaction is defined as “reciprocal events that require at least two objects and two actions” and that “interactions occur when these objects and events mutually influence one another” (p. 8). The significance of interaction in education is that it provides feedback to learners, which improves student achievement and attitudes toward learning (Fulford & Zhang, 1993; Kearsley, 1995). In addition to providing feedback, interaction leads to socialization, promotes meaningful learning, and aids the formation of learning communities (Cleveland-Innes & Emes, 2005; Lipman, 1991). Student satisfaction with quantity and quality of interaction is also associated with greater levels of persistence in distance education (Cookson, 1989; Gunawardena & Duphorne, 2000; Sweet, 1986).

Researchers have identified several different types of interaction. Kearsley (1995) and Moore (1989) discussed the three main types of interaction as student-student, student-teacher, and student-content. In a study involving students at the State University of New York, Swan (2002) concluded that these three types of interaction are closely linked to student perceptions of satisfaction and learning in online courses, to which T. Anderson (2004) adds three more, namely, teacher-teacher, teacher-content, and content-content. This study focuses on the first three types of interaction which Swan (2002) reports are the most closely associated with student perceptions of satisfaction and learning in online courses.

While Moore identifies the agents involved in interaction, he does not describe the desired outcomes of these interactions, which are, according to Wagner (1997), to “change

learners” and to “move learners toward an action state of goal attainment” (p. 21). In the case of online learning, the goal would be successful completion of a course or program.

Distance learning programs have been perceived as second-class versions of on-campus programs, in spite of studies showing that distance education student performance equals or even exceeds that of students in conventional programs (Russell, 1999). This perception may have its roots in the belief that when students are not on campus, their educational experience suffers from the lack of face-to-face discussion, informal activities, and inability to absorb the institutional ethos (Wagner, 1997). Supporting this view is the recurrent complaint from online students that they feel isolated (Östlund, 2005; Roblyer & Wiencke, 2003; Rovai, 2002c; Scalese, 2001). While it is true that opportunities for interaction with instructors and peers are rare with first and second generation distance learning technologies, based primarily on one-way communication and supplemented by the occasional telephone conversation or on-campus meeting, third and fourth generation technologies, involving computers and the internet, have greatly expanded the opportunity for interaction and brought the distance learning student out of isolation (Sherron & Boettcher, 1997). Garland (1993b) notes that online students need to be informed that while they are learning individually, they are not expected to learn independently, that is, without interaction with peers or faculty. This information could be provided to new online students prior to course commencement. Whether synchronous or asynchronous, increased interaction can improve the quality of the online learning experience and increase learner satisfaction (Jung, 2001).

Online technology is defined as “predominantly Internet-based delivery, with provision for interaction throughout the process” (Fahy, 2004, p. 137). This interaction may

take the form of e-mail, which can be sent to one or more recipients simultaneously, and is handy for submitting assignments. The other form of interaction which has revolutionized online learning is computer-mediated conferencing (CMC), sometimes referred to as online discussion forums, or web-conferencing (Barker, 1994; Bates & Poole, 2003; Hiltz et al., 2000).

CMC provides the flexibility of time and place which online students find attractive and motivating. As an asynchronous tool, CMC shifts the time and place of the interaction, allowing participants to post messages and read other messages at their own convenience (Cadieux, 2002). The time gap between reading and posting can encourage reflection and result in higher quality responses, in contrast to the spontaneous verbal communication required in conventional classrooms. In addition, online written communication provides a permanent record to which students may repeatedly refer in order to construct meaning in a systematic way, which contrasts with classroom discussion, which students would either have to remember or record manually (Garrison, 1988). This permanent record is in the form of threaded discussion, a format in which one student posts a comment related to a specific topic, other students respond to the comment, and the original commentator can then reply to these responses, creating a chain of conversation (Cadieux, 2002; Simpson, 2002). CMC is democratic, allowing all students to be heard and permitting participation by all, concealing gender, ethnicity, and disability (T. Anderson, 2004).

In addition to facilitating an active learning forum, CMC can assist in the development of interpersonal relationships. Research indicates that online students seek one another out for a wide range of social exchanges, both for information, and also for emotional support (Russo & Campbell, 2004). The development of impressions of others

online takes place in the same manner as in face-to-face classes, except the process is slower due to the asynchronous nature of the medium (Russo & Campbell, 2004; Tu & McIsaac, 2002). Shin (2003) notes that student involvement through interaction reduces the sense of psychological distance for remote students.

While providing rich opportunities for students and instructors to interact, CMC has its own “learning curve” which new online students may find initially frustrating. In order for students to succeed in online courses, they need thorough orientation to CMC (O’Donnell et al., 2006). It has been suggested that the medium may discriminate against students who do not express themselves well in writing, or those who have poor keyboarding skills (Cunningham-Atkins, Powell, Moore, Hobbs, & Sharpe, 2004). Gunawardena (1991) notes that people lacking these skills may develop communication anxiety.

A significant difference between CMC and face-to-face interaction is the absence of non-verbal cues for which compensatory behaviours, such as emoticons and new rules of behaviour (“netiquette”) may be used (Anderson, Rourke, Garrison, & Archer, 2001; Roblyer, 2003). In a study by Tu and McIsaac (2002), students reported their concern about the potential for misunderstanding one another in online postings. Students also reported being overwhelmed by the number of messages on the web board, and getting lost in the threaded discussions. One of the many responsibilities of the online instructor is to moderate and guide student discussion so that it helps students to achieve their learning goals.

Students who thrive on the social aspects of the classroom may find online learning frustrating, due to the slower response time of asynchronous communication, which may

make messages feel out of context (Russo & Campbell, 2004). It is also more difficult in an asynchronous network to establish one's presence online, or to perceive the presence of others (Garrison et al., 2000).

Finally, all the affordances of CMC are contingent upon course designers making meaningful and effective use of conferencing, and upon students actively participating in conferences (Cunningham-Atkins et al., 2000; Hiltz et al, 2000; Roblyer & Wiencke, 2003; Swan, 2002). Whether or not online participation is a graded component of the course, students must be taught to take initiative and log in regularly to the course website, to start discussions, and to read and respond to postings of others. This is because interactions provide the student with the motivation to persist in learning activities (Wagner, 1994). The successful online student is a “noisy learner” – one who is active and creative in the learning process (Nipper, 1989, p. 71). Students who find it difficult to ask questions in conventional classroom setting may find it similarly challenging to be proactive online (Cadieux 2002; Russo & Campbell, 2004). Nevertheless, research suggests that the quantity and quality of student online interaction positively affects student satisfaction with and persistence in online courses (Gunawardena & Duphorne, 2000; Weller, 2002).

### Community

The importance of interaction lies in its ability to enable the formation of online community (Paloff & Pratt, 2000). McMillan and Chavis (1986) define community as “...a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together” (p. 9). Community must be viewed in context, and one such setting is the classroom, whether conventional or online (Rovai, 2002a). Instead of defining

communities based on geographic space, as is the case in the conventional classroom, defining them according to shared interests allows for the idea of a virtual, online community. The concept of community is particularly important in online learning because research provides evidence that strong feelings of community may not only enhance student satisfaction, but may also increase persistence (Ashar & Skenes, 1993; Rovai 2002c).

One of the challenges to institutions offering online courses is to provide a means for interaction among students and instructors. In a conventional classroom, where students and faculty share a physical space, there are both formal and informal mechanisms allowing socialization to take place. Online, however, where students and instructors are physically separated, these opportunities for interaction must be purposefully designed and maintained through technology in order to foster a sense of community (Nicholson, 2005; Paloff & Pratt, 2000).

Whether in the classroom or online, a strong sense of community positively influences students in the following ways:

1. by providing constructivist and collaborative learning environments where knowledge is shared and meaning is co-created (T. Anderson, 2004; Harasim, 1989; Palloff & Pratt, 2000; Vygotsky, 1978);
2. by supporting students in the pursuit of their common goal of learning (Rovai, 2002b);
3. by providing students with an expanded world view, to allow students to recognize and accept differences between themselves and others, to identify with other competent performers, and to discover some of the limitations of their own knowledge (Moller, Huett, Holder, Young, Harvey, & Godshalk, 2005; Wilson, 2001);
4. by providing a support group (Tu & McIsaac, 2002);

5. by improving student self-concept and self-awareness (Gibson, 1998);
6. by encouraging deep learning (Kember et al., 1994; Rovai, 2002a); and
7. by increasing academic motivation (Oren, Mioduser & Nachmias, 2002).

With the interaction opportunities provided by computer technology, communities can form which transcend geographic barriers among students, allowing for enriched learning experiences. A helpful conceptual framework of online community, called the Community of Inquiry, has been devised by Garrison et al. (2000), based in part on research by Lipman (1991). Lipman described the community of inquiry as being “in one sense a learning together, and it is therefore an example of the value of shared experience. But in another sense it represents a magnification of the efficiency of the learning process, since students who thought that all learning had to be learning by oneself come to discover that they can also use and profit from the experience of others” (p. 240). The Community of Inquiry is composed of teachers and students, and assumes that learning occurs when the following three core elements intersect: cognitive presence, social presence, and teaching presence (Garrison et al., 2000).

The model capitalizes on the amount of interaction that CMC provides, challenging providers of online education “to link the properties of asynchronous online learning with the ability to create communities of inquiry” (Garrison, 2003, p. 2). CMC can fulfill its potential to support collaborative learning asynchronously and cost-effectively only if it includes the three essential components of a Community of Inquiry (Garrison et al., 2000). Cognitive presence, social presence, and teaching presence are significant to online learning in that they act as intervening variables between interaction and the building of community.

Cognitive presence. Garrison (2003) defines cognitive presence as “the process of both reflection and discourse in the initiation, construction and confirmation of meaningful learning outcomes” (p. 4). This definition is consistent with constructivist theories of conventional education (Cadieux, 2002; Roblyer, 2003). Garrison (2003) points out, however, that asynchronous online learning provides something that classroom instruction cannot provide, namely, collaborative experiences at the convenience of the student. The asynchronous nature of CMC allows students time for reflection and refinement of their postings and responses; gives students the opportunity to seek out connections between concepts and data; and to co-ordinate thesis, antithesis and synthesis, all of which are hallmarks of deep learning (Rosie, 2000). The attainment of a deeper level of understanding increases motivation which strengthens the community, thus creating a positive cycle.

A deep approach to learning also fosters the greatest learner independence (Cleveland-Innes & Emes, 2005). The self-directed student is self-disciplined; manages time well; sets task-specific learning goals and uses appropriate strategies to achieve those goals; monitors and evaluates his progress and adjusts learning strategies accordingly; is self-motivated and can overcome distractions; and seeks assistance when necessary (Ludwig-Hardman & Dunlap, 2003; Lynch & Dembo, 2004). According to Knowles (1980), adults are internally motivated to learn, and they are capable and willing to be self-directed in their learning.

Since asynchronous online learning requires students to be self-directed and to be responsible for their learning, online learning institutions might take for granted the self-directed nature of their students. McLoughlin and Marshall (2000), however, warn that it cannot be assumed that online learners possess self-directed skills, since these skills are not

intuitive and are rarely overtly taught. There is support in the literature for institutional interventions, both at orientation and throughout online courses, to inform students about the necessity for self-direction, and also to assist students in the early stages of a course by providing them with more structure (Atman, 1990; Grow, 1991; Ludwig-Hardman & Dunlap, 2003; McLoughlin & Marshall, 2000; Wagner, 1994). As Cleveland-Innes and Emes (2005) note, “understanding oneself as a learner is an important outcome of higher education in and of itself” (p. 259).

Social presence. Conrad (2002) notes that “online communities depend on a sense of, and practice of, social presence” (p. 4). Social presence, a second aspect of the Community of Inquiry, is “the ability of learners to project themselves socially and affectively” (Rourke, Anderson, Garrison & Archer, 1999, p. 2). Gunawardena and Zittle (1997) define social presence as “the degree to which a person is perceived as a ‘real person’ in mediated communication” (p. 9). The function of social presence is to support cognitive objectives such as critical thinking within a community, and to support affective objectives by making interaction with peers intrinsically motivating, leading to an increase in integration, and resulting in increased persistence (Tinto, 1975). For example, Gunawardena and Zittle (1997) conducted a study revealing that social presence contributed to more than 60% of online learners being satisfied with computer conferencing courses.

Teaching presence. A third component of the Community of Inquiry model is teaching presence, which has been separated from social presence because both teachers and students share responsibility for the creation of social environment, and because teachers have the primary role for facilitating online discourse (Rourke et al., 1999). It is defined as “the design, facilitation and direction of cognitive and social processes for the purpose of

realizing personally meaningful and educationally worthwhile learning outcomes” (Anderson et al., 2001, p 5). In addition to providing direct instruction, online courses require the instructor to act as a coach or facilitator providing the students with learning support (Oliver, 1999). The model highlights three categories of teaching presence which are design and organization; facilitating discourse; and direct instruction.

Research suggests that there is a relationship between the development of online community and the speed with which each student can ascend the “learning curve” at the start of the course. There is anecdotal evidence to suggest that students who communicate online regularly begin to form a community by Week 3 of a 14 week course (M. Orwick, personal communication, April 16, 2007). In her study to develop a theory about the process through which community forms in online classes, Brown (2001, p. 26-27) notes that before online students can focus on community engagement, they must “get up to speed” on the technology, pedagogy, and course content. She uses “time triangles” to illustrate how much longer it takes new online students to arrive at the community-building point compared to veteran online students. While the veteran students are able to “jump right into class and begin modeling the expected behaviour,” new students are dealing with the “triple whammy” of technology, course content, and collaborative/self-directed learning. The more time a new student spends at the bottom of the triangle, the less time he can spend learning and participating in community, therefore it is important for the institution to help students develop a sense of competence as quickly as possible (Cleveland-Innes et al., 2006).

In summary, the Community of Inquiry model provides a helpful mechanism to explain how different forms of interaction, through the mediating variables of cognitive

presence, social presence, and teaching presence, lead to community building. While it is not a retention model, it has been suggested that the concepts of cognitive and social presence in the Community of Inquiry model may correspond to the academic and social integration concepts in Tinto's model (Meyer, Bruwelheide, & Poulin, 2006). Whatever the model, the literature suggests that online students who feel they are part of a community are more likely to persist (Ashar & Skenes, 1993; Rovai, 2002c).

### Summary of the Literature

The literature review began with research supporting the importance of orientation for new online students because of its positive influence on student persistence. The review then examined the relevance of Lewin's (1952) field theory to online education, in which both personal and environmental forces act to support or hinder student persistence. Tinto's (1975) longitudinal model of student dropout, while widely debated, makes an important contribution to research in online education insofar as student integration is concerned. In spite of the structural differences between conventional education, which Tinto studied, and online education being considered in this study, Tinto's illustration of the importance of student interaction with peers, faculty, and staff, and its subsequent effect on integration into the institutional community, is supported by research. The literature review then continued with an examination of interaction, including the unique character it assumes in online learning and the role it plays in building online community. The review concluded with an exploration of Garrison's Community of Inquiry and how online community in general may support student persistence.

### Contribution of this Study to the Literature

This study has been designed to determine how a pre-course orientation handbook, emphasizing the importance of frequent online interaction with students and instructor, will influence undergraduate student persistence in online courses. Many studies suggest that orientation for new online students would increase persistence, but few provide practical suggestions for the content and medium of such orientation (Bird & Morgan, 2003; Bozarth, Chapman & LaMonica, 2004; Oren et al, 2002; & Wojciechowski & Palmer, 2005). Furthermore, when handbooks are provided to online students, they tend to be reference manuals consisting of contact information for institutional departments, technical advice for navigating the institutional website, and lists of other helpful websites. A survey of student handbooks provided by over 30 institutions offering online courses revealed that few addressed the unique nature of interaction in the online environment. It is hoped that the results of this study will lead to the development of specific institutional interventions at the pre-course phase which will inform students about the nature of online learning so that they can plan for success.

## CHAPTER IV

### RESEARCH PROCEDURES

Students need to understand the uniqueness and importance of communication in the online learning environment prior to course commencement. The purpose of this study was to investigate whether orientation for new online students presented in a pre-course handbook would impact student persistence, and if so, how. The handbook addressed issues pertinent to online study, namely, the unique nature of online classroom interactivity, the importance of student support from sources within and outside the college, and the potential for interference from non-study-related obligations.

The following research question was the main focus of this study:

1. Does a pre-course orientation handbook, emphasizing the importance of regular, thoughtful online interaction with students and instructor, influence undergraduate student persistence in online courses? If so, how?

To address the potential that other factors might interfere with the effect of the handbook, the research also considered the following questions:

2. Does external support influence undergraduate student persistence in online courses?
3. Do the requirements of non-study related obligations influence undergraduate student persistence in online courses?
4. Does the student's perception of classroom community affect undergraduate student persistence in online courses?

## Background to the Study

Okanagan College is a public, comprehensive, post-secondary educational institution that was established under the provisions of the British Columbia College and Institute Act (2004). Okanagan College offers a wide variety of career, continuing education, degree, developmental, trades and technologies, university transfer, and vocational programs (About Okanagan College, 2006). The most recent statistics (Okanagan College Student Demographics, 2006) indicate a total enrollment of 5,096 students, of whom 7% are enrolled in online courses. This study focuses on the 364 students enrolled in the 34 online courses in the Winter session of 2007 (January intake).

## Pilot Study

Pilot testing helps to establish the content validity of the treatment and the instruments, which, in this study, are the handbook and the questionnaires (Creswell, 2003). A pilot study also provides an opportunity to monitor both the ease with which students can read the instruments, as well as the ease of administration and scoring the questionnaire (Fink, 1995). Pilot study recruits were drawn from a similar group as the intended research subjects, namely, online academic students from the Fall 2006 session (Babbie, 1973; Fink, 1995). A target of at least 10 students was set to provide information regarding the instruments. A pilot group of 2 was engaged. Modifications were made as indicated, for clarity and ease of use.

Consent was obtained from instructors of Fall 2006 online academic courses to recruit pilot study volunteers from their classes. Recruitment notices were then posted on the course websites of consenting instructors. The entire pilot study took place online, with students being e-mailed the handbook, and responding to an e-mailed version of

Questionnaire 1. Pilot subjects answered 10 questions by e-mail. Data obtained by responses to questions was helpful with regard to time needed to read and complete the instruments. Based on comments received, revisions were made to the handbook in the form of adding more graphics. A far more significant finding, however, was the low response rate: the pilot study attracted only two volunteers.

Research suggests that, in general, response rates to online surveys are declining, possibly due to the number of requests individuals receive to complete surveys (Knapton & Myers, 2005; Sheehan, 2000; Szelényi, Bryant, & Lindholm, 2005). Studies investigating this phenomenon reveal several strategies to improve the response rate, including multiple reminders (Dommeyer, Baum, Hanna & Chapman, 2004; Knapton & Meyers, 2005, Norris & Conn, 2005; Sheehan, 2000); contact with subjects in more than one mode (Dillman, 2000); financial incentives (Dillman, 2000; Dommeyer et al., 2004; Knapton & Meyers, 2005; Sheehan, 2000; Szelényi et al., 2005); a grade incentive (Dommeyer, 2004); personalization of messages instead of mass e-mailings (Chesney, 2006; Heerwegh, Vanhove, Matthijs, & Loosveldt, 2005; Joinson & Reips, 2004); assuring the subject of anonymity (Couper, 2000; Dommeyer, 2004; Joinson & Reips, 2004); assuring the subject of the value of his response (Ballantyne, 2000); survey length (Chesney, 2006; Sheehan, 2000); issue salience (Chesney, 2006; Joinson & Reips, 2004; Sheehan, 2000); respondent pre-notification (Chesney, 2006; Sheehan, 2000); and the power of the researcher and his or her institutional affiliation (Joinson & Reips; Sheehan, 2000).

The problem with a low response rate is that it produces non-response bias, so that the results cannot be generalized to the entire population being studied (Knapton & Meyers,

2005). Non-response bias is a function of both the rate of non-response and of the differences between respondents and non-respondents (Couper, 2000).

In order to encourage the response rate to the study, it was decided to amend the data collection methodology by sending personal e-mails and reminders to subjects instead of group mailings. Ethics committee approval was sought and received for the following participant recruitment and reward process: providing a “token of appreciation” in the form of a \$5 Starbucks card for subjects who complete the survey; emphasizing to students that their responses are valuable; and informing subjects that the research project was officially supported by the College.

#### Research Population and Sample

The research population consisted of all students studying online at the College, including academic, technical, and special interest courses. The primary sampling unit, however, was limited to students studying only academic courses online, namely, courses in the University Transfer, Business Administration, Health, and Adult Basic Education programs (Distance Education 2006-2007). These courses have more rigorous entry requirements than the technical and special interest courses. In addition, this group of students is more homogeneous, thus helping to reduce sampling error (Babbie, 1973).

In spite of efforts to obtain a random sample, the majority of the students in the sample were from the Business Administration department. Therefore the sample was not random, and the results of this study cannot be generalized to the population (Neuman, 2006).

Using student I.D. numbers, students in the sample were systematically assigned to either the treatment group (odd I.D. number) or the control group (even I.D. number).

## Research Methodology

The research design used a mixed-methods procedure called sequential exploratory design in which quantitative data collection was followed by qualitative data collection, and then both types of data were integrated (Creswell, 2003). First, quantitative data were collected using a quasi-experimental design, incorporating a specially-designed handbook and a self-administered web questionnaire. Quasi-experimental designs allow researchers to test for causal relationships when the sample cannot be randomly selected (Neuman, 2006). Next, qualitative data were collected from willing participants by telephone interview (see Appendix N for script). Finally, the two analyses were interpreted together in the Conclusions and Implications section below (Couper, 2000; Creswell, 2003; Fink, 1995; Mauch & Park 2003).

Specific research procedures are listed in Table 1 below.

## Instrumentation and Documentation

One treatment and one instrument were used in this study, namely, a handbook (Appendix A) and a questionnaire (Appendix B). Four documents, consisting of letters of invitation and consent forms, were also used (Appendices C-F).

Handbook. The purpose of the handbook, “Introduction to Online Learning,” was to introduce students to the experience of online learning. The information contained in the handbook was based on research literature as well as a survey of over 30 websites of institutions in North America offering online undergraduate courses. The handbook designed for this study supplemented the Okanagan College Distance Education Student

Table 1

*Specific Research Procedures*

Nov./06	Handbook design
"	Questionnaire design
"	Write letters of invitation to instructors and students
"	Write consent forms for instructors and students
Jun./06	Acceptance of proposal by thesis committee
"	Approval by Athabasca University Research Ethics Board
Nov./06	Approval by Okanagan College Research Ethics Board
"	Pilot study
Dec./06	E-mailing letters of invitation and consent forms to instructors
Jan./07	E-mail of recruitment ad for posting on course websites
Jan. 8-	
Feb.	E-mailing letters of invitation and consent to inquiring students
"	Posting of recruitment ad to WebCT "Announcement" section
"	Reminders to students to return signed consent form (max. 2 per student)
"	Thank you and referral to website for appropriate survey
"	Reminders to students to complete survey (max. 2 per student)
"	Thank you and reminder to submit grade at conclusion of course
Apr./07	Receipt of transcripts
"	Telephone interviews, where permitted
"	Collation and tabulation of data
"	Analysis of data
May./07	To students: Thank you notes, \$5 Starbucks card, summary of research, and handbook to control group
"	To instructors: Thank you notes and summary of research

Handbook, which provides students with the following: a calendar of important dates; rules and regulations; information on using the WebCT platform; a list of resources; and a set of forms. All online students receive this handbook upon registration.

Designing orientation for new online students is challenging because students cannot physically attend a seminar. Online students may be receptive to an interactive computer-based orientation, but these are expensive to design. Therefore it was decided to provide subjects with an e-mailed handbook.

The rationale for using an e-mailed handbook for orientation was multi-faceted. First of all, requiring attendance at a face-to-face session would be unworkable for students living far from campus. Second, since the study subjects were registered in at least one online course, where internet access is a condition of registration, it was assumed that they were computer literate. Third, it is cheaper to e-mail documents than to use the postal service. Fourth, the students still had the option of printing the handbook, which, while shifting the cost of paper and ink from the institution to the student, also permitted the material to be used in a portable, durable form for the students to personalize with annotations (Bates & Poole, 2003; O'Rourke, 2000; Willis, 1995).

The handbook for this study addressed specific topics which are supported by research as being fundamental to online student success as follows: the importance of regular computer-assisted interaction with classmates and the instructor (Fulford & Zhang, 1993; Kearsley, 1995); the motivating effect of the online learning community which is formed by regular interaction; the positive influence of support from family and friends (Asbee & Simpson, 1998); the importance of setting goals and managing time (Atman, 1990; Simpson, 2000); and ways to become a self-directed learner (Ludwig-Hardman & Dunlap, 2003). In addition, there was a brief discussion of the value of each student's input (B. Anderson, 2004); the need to conquer one's fear of participating (Garland, 1993b); and proper internet etiquette (Barnes, 2000).

The format of the 2000-word handbook was 23 pages, single-spaced, and presented in a large typeface which was easy to read on the screen (Times New Roman 20), with half the sections in point form (Rowntree, 1994). The handbook included some colour graphics and inspirational quotations for interest, as well as two worksheets for students to complete. The handbook was written in a conversational style, addressing the reader directly (Commonwealth of Learning, 1999; Rowntree, 1994). It had a Flesch Reading Ease score of 55.5 and a Flesch-Kincaid grade level of 9.2 (Flesch-Kincaid, 2006). These metrics indicated that the reading level of the handbook material fell between that of Reader's Digest and TIME Magazine, allowing the students to comprehend it easily (Flesch-Kincaid, 2006).

Questionnaire. Quantitative data were collected using a web-based questionnaire. The questionnaire was cross-sectional, that is, a snapshot of the students' perspective at the time of questionnaire administration. Timing was determined based on the following criteria: it had to be early enough to intercept the maturation effect, in which students learn how to cope online from sources other than the handbook, but late enough so that students would have some experience interacting with the class. It was decided to begin corresponding with students at the beginning of Week 1 of the course, and the questionnaires were completed by the end of Week 4. Data regarding the student's status as a successful completer (completing the course with a grade of C or higher) or a dropout was determined by examination of college records voluntarily provided by the subjects.

With the generous assistance of College staff, two questionnaires were mounted on the WebCT platform which is used to support all College courses. Questionnaire 1 was for students with odd student ID numbers, who comprised the treatment group, and included a

section testing whether or not the student had read the handbook. Questionnaire 2 was for students with even student ID numbers who had not received the handbook, and therefore did not contain the section about the handbook. The questionnaires were designed for the website in accordance with Dillman's tailored design survey method (Dillman, 2000).

During the pilot study, students responded to an e-mailed version of Questionnaire 1, since technical problems delayed the transfer of the questionnaires to the College's WebCT platform. Later testing by the College's Educational Technology Co-ordinator, posing as a student, confirmed that the web questionnaire was accessible and easy to complete and submit. Once the study was underway and subjects were completing the web questionnaires, subjects were asked to report technical problems to the researcher, however, no problems were reported.

The questionnaire was composed of five sections: 1) 10 questions regarding student handbook engagement (treatment group only); 2) 12 scaled questions regarding student sense of barriers to and support for online study; 3) 20 scaled questions regarding student sense of classroom community; 4) three open-ended questions regarding student online experience; and 5) demographic information. Students were advised to complete every question on the survey in order to facilitate full analysis.

1. *Handbook engagement questions.* The section testing the student's degree of handbook engagement was written specifically for this study. To encourage construct validity, the questions were based on Smith and Ragan's (1999) guidelines for designing assessment items for declarative knowledge, and contained 10 multiple-choice questions. The questions tested handbook comprehension, and the answers were taken directly from the handbook. Since the object of these questions was to ensure that the student had read the handbook,

students were encouraged to refer to the handbook as they answered the questions. A score of one was assigned to a correct answer, and a score of zero for a wrong answer. The higher the score, the higher the student's degree of engagement with the handbook, with a total possible score of 10. The questionnaires of students receiving a score of six or less were to be set aside, for it would be concluded that the students had not engaged sufficiently with the handbook. The rationale for this cutoff was based on Athabasca University's undergraduate grading scale indicating 70% as the lowest B grade awarded (Alpha Undergraduate, 2003).

2. *Sense of barriers to and support for study.* The sections pertaining to student perceptions of barriers to and support for online study were also designed especially for this study, and were scored using a Likert-type scale. There were 12 questions, six addressing a student's sense of support for study (questions 1, 2, 4, 6, 9, & 10), and six addressing a student's perception of barriers to study (questions 3, 5, 7, 8, 11, & 12). The questions about these two topics were intermixed so as to avoid a response set due to grouping of questions on a similar theme (Rovai, 2002b; Trochim, 2000). Furthermore, the questions addressing a student's sense of support for study were positively worded, and the questions addressing a student's perception of barriers to study were negatively worded. Positively-worded questions addressing support were scored as follows: *strongly agree* = 4, *agree* = 3, *neutral* = 2, *disagree* = 1, *strongly disagree* = 0. Negatively-worded items addressing barriers were reverse-scored, so that the most favourable choice was always assigned a value of four. The maximum score was 48, with the higher scores reflecting a student's sense of a high degree of support for study and a sense of few barriers.

To assist with content validity in this section, the questions were based on research which attempts to identify the most important supports for online students, as well as the most common reasons students provide for dropping out. Table 2 shows how the 12 questions were grouped into the following four subscales: 1. support from friends and family; 2. time management; 3. course choice; and 4. student affective characteristics.

1. Support from friends and family. Students need to understand the potential for fears to grow out of proportion when they are studying in isolation (Bird & Morgan, 2003; Scalese, 2001), and that, prior to course commencement, students should make an inventory of all their support systems, especially those external to the institution (Castles, 2004; Dearnley, 2003). One of the most important sources of support for online students outside of the college is family and friends (Berge, 2007; Simpson, 2002). This aspect of support was addressed by questions 1, 8, and 12.

2. Time management. The most common reason students give for dropping out is “not enough time” (Ashby, 2004; Kember, 1989; Mason, 2001; Packham et al., 2004; Rekkedal, Qvist-Eriksen, Keegan, Suilleabháin, Fritsch, Ströhlein, & Nardi 2003; Simpson, 2003; Woodley, 2004). Often this is a superficial response given to preserve self-esteem, when the real issue is that of time management (Cookson, 1990; Garland, 1993a; Kennedy & Powell, 1976; Morgan & Tam, 1999). Time management was addressed by questions 3, 5, and 11, which dealt respectively with student procrastination, student ability to organize time, and student ability to prioritize tasks. It is also possible that in the pre-enrollment phase, students have not thoroughly understood the time commitment which online education demands.

Table 2

*Questions from Sense of Barriers and Supports Scale*

Question	Subscale
1. I feel that my friends understand when I have to study instead of spending time with them.	
8. I feel that my family is reluctant to discuss my studies with me.	Support from friends and family
12. I find it hard to explain clearly to myself, my friends, and my family my reasons for taking this course.	
3. I sometimes put off course work that I know needs to be done.	Time management
5. Other commitments keep getting in the way of my studies.	
11. I find it difficult to stick to a regular study schedule.	
7. I find the course content more difficult than I expected.	Course choice
10. I feel this course is exactly what I expected based on the description in the brochure and website.	
2. I feel that taking this course will help me to achieve my learning goals.	
4. I feel comfortable accessing the support services available to me at Okanagan College.	Affective characteristics
6. I am willing to stay on task even when it seems very difficult.	
9. I am willing to take responsibility for getting whatever help I need for my studies.	

3. Course choice. Another common reason for dropout is that students choose the wrong course, which is a major factor in early withdrawal from both conventional education and distance education (Bennett, 2003; Bird & Morgan, 2003; Simpson, 2004a; Yorke, 2004). Research by Ashby (2003) on student retention at the OUUK indicated that wrong

course choice was commonly cited by students as a reason for drop-out. In a study at the Hellenic Open University, 47% of dropout was attributed to erroneous course choice (Pierrakeas, Xenos & Panagiotakopoulos, 2004). Reasons why a student might feel a course is not suitable include a misleading course description; the content perceived as not being interesting; the course academic level perceived as too high; poor academic advising; and the student not taking advantage of advising or not following advice given (McGivney, 2004; Simpson, 2004a). This barrier to retention was addressed by questions 7 and 10.

4. *Affective characteristics.* The affective characteristics of students can act as either barriers to or supports for persistence. Several affective characteristics have been identified as contributing to persistence, such as motivation (Berge, 2007; Chyung, 2001); locus of control (Parker, 1999); goal orientation (Atman, 1990; Kember, 1989; Metzner & Bean, 1987); adult pride manifested by refusal to ask for help (Garland, 1993b); resilience to situational factors (Kemp, 2002); and academic self-concept (Gibson, 1998). The purpose of most studies of personal factors affecting success in distance education has been to create a profile of the successful distance education learner, to target students “at risk” for dropping out, and then to follow up with special intervention. Another approach to identifying “at risk” students is to assume that personal characteristics can be developed as part of the general learning experience (Gibson, 1998; Ludwig-Hardman & Dunlap, 2003; Powell, Conway & Ross, 1990). In this questionnaire, questions 2, 4, 6, and 9 respectively addressed goal-setting, adult pride, motivation, and locus of control.

3. *Sense of classroom community.* The 20-item section of the questionnaire addressing student sense of classroom community reproduced Rovai’s (2002b) Classroom Community Scale (with permission). As shown in Table 3, half the questions measured student feelings

of connectedness to the class (the connectedness subscale – odd-numbered questions), and the other half related to student feelings regarding the use of interaction within the classroom community to construct understanding (the learning subscale – even-numbered questions). It was scored using a Likert-type scale in the same way as the previous section on student perception of barriers and supports to study. The maximum score was 80, with higher scores indicating that a student was experiencing a strong sense of classroom community

4. *Open-ended questions.* These questions asked the student to name the support services they used, to document the ways in which these services were helpful, and to list other types of support they could have used, providing qualitative data.

5. *Demographic information.* All students were asked to provide some demographic information, including gender and age.

Letters of invitation to instructors and students. Instructors were e-mailed letters inviting them to permit their students to be involved in the study and to ask them to post a recruitment ad on their course websites. If they needed assistance to do this, the services of the College Educational Technology Coordinator were made available. The purpose of the research was described as well as the nature of the students' participation. Instructors were informed that their participation was voluntary, and that, should they agree to participate, they could withdraw their consent at any time. Instructors were also assured that their confidentiality would be protected. They were assured that the participation of their students was voluntary and that student responses would be kept confidential. The instructors were informed of the importance of their contribution to ongoing research, how

much the researcher would appreciate their participation, and that they would receive a summary of the research at the conclusion of the study.

Table 3

*Questions from Sense of Classroom Community Scale*

Question	Subscale
1. I feel that students in this course care about each other.	Connectedness
3. I feel connected to others in this course.	
5. I do not feel a spirit of community.	
7. I feel that this course is like a family.	
9. I feel isolated in this course.	
11. I trust others in this course.	
13. I feel that I can rely on others in this course.	
15. I feel that members of this course depend on me.	
17. I feel uncertain about others in this course.	
19. I feel confident that others will support me.	Interaction
2. I feel that I am encouraged to ask questions.	
4. I feel that it is hard to get help when I have a question.	
6. I feel that I receive timely feedback.	
8. I feel uneasy exposing gaps in my understanding.	
10. I feel reluctant to speak openly.	
12. I feel that this course results in only modest learning.	
14. I feel that other students do not help me learn.	
16. I feel that I am given ample opportunities to learn.	
18. I feel that my educational needs are not being met.	
20. I feel that this course does not promote a desire to learn.	

Students of consenting instructors were sent similar letters inviting them to participate in the research project, and advising them of the time commitment involved. Students were assured of the confidentiality of their responses, particularly that participation or non-participation would not affect their course grades.

Consent forms for instructor and student participation. Along with the letters of invitation, both instructors and students were e-mailed consent forms outlining their rights.

They were asked to choose whether or not they wished to participate by placing an X in front of the appropriate statement, on the understanding that an X would substitute for their signature in an e-mailed document.

Students were separated into treatment and non-treatment groups on the basis of the student ID number gathered at the end of the consent form. Students with odd-numbered IDs were e-mailed a handbook and then provided with a URL link to Questionnaire 1. Students with even-numbered IDs were provided with a URL link to Questionnaire 2.

Follow-up telephone interview questions. After the courses ended, students who indicated on the consent form that they agreed to be interviewed were contacted by telephone. The rationale for conducting an interview by phone rather than by e-mail was as follows: 1) if the subject did not understand the question, the interviewer could immediately clarify it, resulting in more accurate responses (Babbie, 1973); 2) research involving students who have dropped out of online courses has shown that subjects may be more forthcoming about the factors affecting dropout if the interview is live (Garland, 1993a).

It was acknowledged that the process of interviewing non-completing students about the reasons for non-completion could be a sensitive matter requiring the subject to be forewarned about the question.

### Summary

This chapter outlined the research procedures for this mixed-methods study, including the research method, involving a self-administered web-based cross-sectional questionnaire. Background information on the study was provided, along with the results of the pilot study. Following a brief outline of specific procedures, information was provided

regarding the population, and the sample, which was selected by stratified, systematic sampling. The three documents to be used in the study, namely, a handbook and two separate questionnaires, were described. This was followed by descriptions of recruitment and participation documents, namely letters of invitation and consent forms to both faculty and students. This section concluded with an overview of the follow-up telephone interviews.

## CHAPTER V

### FINDINGS

#### The Plan of the Study

The purpose of this study was to investigate whether orientation for new online students presented in a pre-course handbook would impact student persistence, and if so, how.

#### Procedures

A total of 364 students enrolled in 34 academic undergraduate online courses in the Winter 2007 (January intake) were invited to participate in the study. Most instructors posted a recruitment notice on their class websites, or asked the College Educational Technology Coordinator to do so. Three instructors representing 86 students did not post the ad. A recruitment announcement was posted for all students to see when logging in to WebCT.

A total of 15 students agreed to participate in the study. Seven students were in the treatment group and eight students were in the control group. The respondents (n=15) were systematically assigned to either the control or the treatment group, based on even or odd student ID number, with the treatment group receiving a handbook entitled "Introduction to Online Learning." Although every effort was made to recruit students from all four disciplines in the academic online courses (Business Administration, Communications, Hospitality, and Sociology), students in the sample were enrolled primarily in Business Administration courses (81%), with the remainder of the course enrollments in Sociology

(19%). The sample in this study, therefore, must be considered a non-probability sample rather than a random sample.

Both groups completed an online questionnaire about their perceptions of barriers to and supports for online study, as well as their perceptions of online community. Data regarding the subjects' successful persistence in the course (a minimum grade of C) or withdrawal from the course were collected, revealing that all persisting students received a grade of C or higher, and that two students from the treatment group dropped out. This dropout rate of 13% exceeds the dropout rate for all online students in the Winter 2007 (January intake) which was 9.3% (M. Esson, personal communication, July 19, 2007). Telephone interviews were conducted with the nine consenting subjects to collect qualitative information about institutional support for students studying online.

Table 4

*Course Completion Rate by Groups*

Group	Completers	Dropouts
Treatment group (handbook)	5	2
Control group (no handbook)	8	0
Total (n=15)	13	2

Quantitative Data

Descriptive statistics. Fifteen students participated in the study, with seven in the treatment group and eight in the control group. The small sample size (n=15) raises the concern of non-response bias (Creswell, 2003). Questions must be asked regarding the nature of the students who did not respond, therefore, demographics of the sample and the sampling frame were compared using SPSS software.

#### Comparison of sample and sampling frame.

Age – The average ages of the sample and the sampling frame were similar, with sample students averaging 25 years of age, and college distance education students averaging 27 years of age. Both sets of statistics recorded age data by categories, therefore it can be reported that in both groups, the ages of the students ranged from under 22 to over 40.

Gender – The most recent statistics for the College (Fall 2006) indicate that in distance education enrollments, 75% of the students are female while 25% are male (Okanagan College Student Demographics, 2006). The study sample showed a more extreme split, with 87% female and 13% male students.

#### Sample: Comparison of treatment and control groups.

Age – The average age of both the treatment and control groups was in the age 26-30 category.

Maturation effect – In order to limit the study to subjects who were new to online learning, the questionnaire asked students to indicate the number of online distance education courses they had previously taken, with the plan to eliminate from the study any subjects who had taken more than two previous online courses. Follow-up e-mails were sent to clarify subjects' understanding that the questionnaire was referring only to courses where students and instructors can have discussions in an asynchronous online forum. No participants had taken more than two courses. As a result, no questionnaires were eliminated from the study.

Handbook comprehension - All the subjects in the treatment group received scores of 70% or higher on the portion of the questionnaire addressing handbook comprehension, meaning that all could be included in the study.

Bias – While the sample was similar to the population in terms of age and gender, the high representation from students in the Business Administration program indicated that the results of this study may not be generalizable to the rest of the online student population (Huck, 2000).

Non-parametric statistics. Non-parametric statistics are used to answer the four research questions. In addition, comparison was made between the treatment and non-treatment groups and their scores on the questionnaire.

Internal reliability of questionnaire. Cronbach's alpha was used to estimate the reliability of the questionnaire items (Trochim, 2006). This test is suitable for Likert-type questions (Huck, 2000). For the Sense of Barriers to and Supports for Study section of the questionnaire (12 questions), Cronbach's alpha was .703, which is considered acceptable (George & Mallery, 2000). For the Sense of Classroom Community section of the questionnaire (20 items), Cronbach's alpha was .84, which is considered good (George & Mallery, 2000). This section of the questionnaire was taken from Rovai (2002b) where an alpha of .93 was achieved with a sample of 375 volunteers.

Questionnaire scores.

The Total Barriers & Supports scores are presented in Table 5.

Table 5

*Means and Standard Deviations for All Questionnaire Subscales*

Sample (n=15)		
	M	SD
Total Barriers & Supports (max. 48)	28.93	5.69
Family (max. 12)	8.60	1.89
Time (max. 12)	4.47	2.23
Choice (max 8)	4.40	1.88
Character (max. 16)	11.47	2.20
Total Community (max. 80)	41.13	9.52
Connection (max. 40)	16.67	4.82
Interaction (max. 40)	24.47	6.22

If students had perceived a great deal of support and few barriers to study, they would have received a maximum score of 48. If, however, students had perceived that the forces supporting study were equivalent to the barriers to study, they would have received a score of 24. The sample mean score is 28.93, just tipping the balance in favour of support for study. The Total Community score shows a mean of 41.13 out of a possible total of 80, indicating that the sample group did not experience very much online community.

Table 6 shows the scores of all subjects (n=15), divided by treatment and control groups, on the two questionnaire sections, Sense of Barriers to & Support for Online Study, and Sense of Classroom Community, along with their respective subscales. Comparison of the means of the Total Barriers & Supports scores showed little difference between the two groups, with the treatment group reporting slightly more support from friends and family.

Table 6

*Means and Standard Deviations for All Questionnaire Subscales by Group*

	Control Group (n=8)		Treatment Group (n=7)	
	M	SD	M	SD
Total Barriers & Supports (max. 48)	27.71	6.47	30.00	5.10
Family (max. 12)	7.57	2.07	9.50	1.20
Time (max. 12)	4.86	2.48	4.13	2.10
Choice (max. 8)	4.29	1.98	4.50	1.93
Character (max. 16)	11.00	2.71	11.88	1.73
Total Community (max. 80)	40.29	10.92	41.88	8.82
Connection (max. 40)	16.57	6.19	16.75	3.69
Interaction (max. 40)	23.71	5.56	25.13	7.06

Comparison of the means of the Total Sense of Classroom Community scores reveals that neither group felt a sense of online community.

Means indicate that all students encountered time-related barriers while studying online, including procrastinating, co-ordinating study with other commitments, and maintaining a regular study schedule. Students in both groups also found that their courses were not what they expected based on information in the brochure, and that the course content was more difficult than they expected. Both time issues and course choice issues are common sources of frustration for online students.

For both groups, the lowest scores, indicating the least support or the greatest number of barriers, occurred in the Sense of Classroom Community Scores as shown in Table 6. This finding is illuminated by the qualitative data below.

Since the data collected were non-parametric, the Mann-Whitney rank-sum *U* test was used in place of a *t*-test to see if the differences between the means of the treatment and control groups were significant (George & Mallery, 2000). As shown in Table 6, the two groups differed significantly on only one variable, namely, support from family and friends. Otherwise, the groups were similar in their responses to the questionnaire. This means that there was no inherent difference between the two groups to explain why the dropout rate was higher in the treatment group.

Table 7

*Difference between Group Means*

Test Variable	Treatment Group Mean	Control Group Mean	Mann-Whitney rank-sum U Test	Sig. (2-tailed)
Total barriers & supports	7.00	8.88	21.000	0.416
Support from family & friends	5.57	10.13	11.000	0.045*
Time management	8.64	7.44	23.500	0.597
Course choice	7.71	8.25	26.000	0.814
Affective characteristics	7.43	8.50	24.000	0.635
Total Sense of Classroom Community	7.64	8.31	25.500	0.772
Connectedness	7.79	8.19	26.500	0.861
Interaction	7.00	8.88	21.000	0.415

\* Significant at the level  $p < .05$

Explanation for dropout. The two students who dropped out were from the group who received the handbook. Since it is unlikely that they dropped out because of the handbook, it might be suspected that the handbook had very little effect on the students.

### Qualitative Data

This mixed-methods study used the sequential explanatory strategy, in which the gathering and analysis of quantitative data was followed by the gathering and analysis of qualitative data. Finally, the two analyses were interpreted together (Creswell, 2003).

Qualitative data were gathered from open-ended questions and comments on the questionnaire, as well as from telephone interviews. Nine of the 15 subjects permitted follow-up interviews, two from the treatment group and seven from the control group. The two students who dropped out had initially agreed to be interviewed, but later revoked their consent. While their input would have been valuable to this study, their evasiveness supports Willging and Johnson's (2004) contention that "tracking dropout students is a very difficult task" (p. 13).

Handbook. The two interviewed students who received the handbook claimed that they did not remember much about it. This supports the suggestion noted above that the handbook had little impact on the students.

Online participation. One striking observation is the students' low level of participation in online forums. Although WebCT supports asynchronous online forums, online interaction was required in only three of the fifteen courses (20%) represented by the study subjects. Therefore, only one student went online regularly because it was a course

requirement, and another student reported that some students initiated their own online study group even though it was not a course requirement. The rest of the students reported that they did not participate online at all.

Student perceptions of supports for and barriers to online study. In the questionnaire and telephone interview, students were asked about the kinds of support they received from the College, from sources outside the College, and about additional kinds of support they could have used, as summarized in Table 8.

Table 8

*Students' Preferred Forms of Support for Online Study*

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<u>Form of support</u>	<u>Frequency Noted</u>
Interaction with instructor	7
Interaction with other students	4
The Learning Centre	2
Disability services	2
Library support	2
Fellow employees	2
Course advisor	1
Technical support	1
Financial aid	1
Parents	1

---

Eleven of the 23 comments indicated that students' favourite form of support is interaction with the instructor and classmates. Students also accessed many of the support services provided by the College, including the Learning Centre, disability services, library support, course advisor, technical support and financial aid. The two forms of support mentioned by students which were external to the College were fellow employees and parents.

Telephone interviews. The richest source of data in this study came from the telephone interviews. Students were able to corroborate, or amend, information provided in the questionnaire, which was particularly helpful in determining how many previous online courses (third-generation distance education), as opposed to first- or second-generation distance education courses students had taken. Students were also free to comment on topics not introduced by the questionnaire or the researcher.

Another benefit of the telephone interview is the "body language," or in this case, "tones of voice" and vocabulary which students used in the interview (Paloff & Pratt, 2000, p. 35). The way in which some students spoke gave richer meaning to the answers they gave on the questionnaire, and further questioning revealed subtle nuances that were not evident on the questionnaire. This qualitative method of ethnography, which "penetrates facades to represent and elucidate cultural knowledge," helped to emphasize the value students placed on various forms of support while studying online (Garland, 1993a).

Of the nine students interviewed, three provided rich descriptions of their online experience. One student answered in a direct and business-like tone, even though she was not in a hurry to end the interview. She claimed that in taking the course, she fully expected to be studying "on her own," and that she had not used any form of support, nor did she

require it. She remarked, “You do what you have to do.” Her manner indicated that she was determined to complete the course (she did) and that she was confident she could do it. Her approach to studying online adds credence to the student recruitment approach that advocates discouraging students from studying online who lack the personal attributes to succeed (Dupin-Bryant, 2004). This particular student had the self-motivation and serious attitude to study to meet her online learning goals.

Another student expressed regret that her course lacked an online forum for interaction with her peers. She had made this comment in the open-ended questions at the end of the questionnaire, but on the telephone it was evident from her tone of voice that she was genuinely disappointed that the course design did not include an online forum. Her desire for dialogue with her instructor and colleagues illustrates our “human yearning for a sense of belonging, kinship, and connection to a greater purpose” (Paloff & Pratt, 2000, p. 25).

A third student was able to complete his course because the College provided disability funding for him to receive private tutoring for six hours per week. While he had to find the tutor himself, it was obvious from his voice that he was very grateful for this assistance and would not have been able to complete the course without it. His experience is an example of the way that online education opens doors for students who would otherwise not be able to engage in undergraduate study.

### Summary

This study failed to establish a relationship between the orientation handbook and student persistence, or between answers on the two questionnaire scales and student persistence.

However, in comparing the treatment and control groups on the basis of the answers to the questionnaire items, it was found that both groups encountered time-related barriers, perceptions that their courses were not what they expected, and difficulty with course content. Statistical analysis indicated that there was no inherent difference between the two groups to explain why the dropout rate was higher in the treatment group. The data also revealed that the subjects represented a variety of ages, work commitments, family obligations, and physical abilities, and did not form a homogeneous, "typical" group. The most interesting observation, however, was that for both groups, the lowest scores on the questionnaire occurred in the Sense of Classroom Community section, a phenomenon explained by the fact that few courses required online interaction. This finding was supported by qualitative data indicating that students' preferred form of support was interaction with instructors and fellow students. Finally, telephone interviews allowed students to elaborate on their questionnaire responses.

## CHAPTER VI

### CONCLUSIONS AND IMPLICATIONS

The following research question was the main focus of this study:

1. Does a pre-course orientation handbook, emphasizing the importance of frequent online interaction with students and instructor, influence undergraduate student persistence in online courses? If so, how?

To address the potential that other factors might interfere with the effect of the handbook, the research also considered the following questions:

2. Does external support influence undergraduate student persistence in online courses?
3. Do the requirements of non-study related obligations influence undergraduate student persistence in online courses?
4. Does the student's perception of classroom community affect undergraduate student persistence in online courses?

#### Conclusions Based on the Findings

The strength of the study is in the qualitative data and its ability to shed light on the quantitative results, particularly the telephone interviews which revealed richer descriptions of the student experience which the questionnaire could not accommodate. When some of the open-ended questions from the questionnaire were repeated in the telephone interview, students were more forthcoming and detailed in their responses.

The results of this study do not make it possible to answer the four research questions, however, the data are consistent with some of the literature on which this study is based, as well as providing information about the following: 1) the complexity of

the dropout phenomenon; 2) students' preferred form of institutional support; 3) defining "online course;" and 4) the demographics of online students.

Complexity of dropout. This study confirms that student dropout is a complex phenomenon because students' lives are complex. Mean scores from the questionnaire indicate that all students encountered time-related barriers while studying online, including procrastinating, co-ordinating study with other commitments, and maintaining a regular study schedule. This finding suggests that if there is any way the institution can assist students to integrate online learning into their lives, it should continue to conduct research on institutional support.

Students' preferred form of institutional support. Students noted that their preferred form of support was through interaction, primarily with instructors and but also with peers. As Stephen Brookfield notes, "The number one complaint from online learners is the low level of instructor responsiveness" (2007, p. 1999). Based on this observation, it is suggested that orientation information be presented and modeled by the instructor in the context of a course so that students can readily put it into practice. In turn, institutions would have to recognize this extra burden and provide appropriate support for instructors.

Definition of "online course." At the College, only 20% of the distance education courses labeled "online course – internet access required" actually involve asynchronous Web-based discussion forums, either as part of the grade requirement, or as a tool for group collaboration. The same statistic is true for the courses taken by the study sample. It is clear that an institutional definition of "online course" needs to be formulated before it can be communicated to prospective students in an orientation package. Ally (2004) defines online learning as "the use of the Internet to access learning materials; to interact with the content,

instructor, and other learners; and to obtain support during the learning process, in order to acquire knowledge, to construct personal meaning, and to grow from the learning experience” (p. 5). In larger institutions, such as Athabasca University, the definition of “online-ed-ness” can be more complicated, involving several different typologies (Defining online courses, 2004, p. 1). The conclusion to be made from this finding is *caveat emptor* for potential students: not all courses advertised as being “online” take full advantage of computer and internet technology as a platform for interactivity.

Demographics of online students. The study sample and sampling frame demographics indicate that online students at the College can no longer, as a group, be considered “non-traditional” due to the large age range they represent and the mix of on-campus and online courses in which they enroll. It can also be assumed that members of such an heterogeneous group would differ with regard to employment, degree of mobility, marital status, and family responsibilities. This conclusion is supported by Wallace’s (1996) study which challenged the assumption that distance education students are primarily part-time adult learners, and that employment is a barrier to study only for adult students.

#### Implications for Theory Building

The data from this study confirm Lewin’s (1952) field theory, reinforcing the concept that the student’s experience in online learning is affected by factors both within and outside the institution.

The students in this study persisted in their courses in spite of the lack of social and institutional integration. According to Tinto’s revised (1982) model, this is due to the students’ relatively high level of academic integration, as well as intervening variables such as the students’ psychological attributes, level of goal commitment, external obligations, and

financial situations. This study also confirms Bean and Metzner's (1985) finding that forces outside the institution have more influence on online students than forces within the institution.

This study attempts to explore the link between interaction and community. The questionnaire results, follow-up interviews, and College records revealed that very few courses required online interaction, either as part of the grade or as part of a group project. The questionnaire also indicated that both groups exhibited low scores on the Sense of Classroom Community scale. It is possible, therefore, that the lack of online interaction hindered the establishment of online community, but establishment of community was not a necessary condition of successful course completion in this study.

#### Limitations of the Study

The study has several weaknesses which limit the generalizability of the findings. These include the following: 1) the nature of the sample; 2) the low response rate; 3) the reliability of self-report; 4) the mixed definition of "online;" 5) the elusiveness of dropouts; and 6) the limitations of the handbook for orientation.

Nature of the sample. The study sample and the sampling frame (all online students from one semester) were very similar in terms of age and gender split, however, due to the small size and non-random nature of the study sample, it is not possible to generalize the study findings to the sampling frame, or to online populations in other undergraduate institutions.

The sample was biased toward students in the Business Administration program. It is possible, therefore, that the high level of persistence in the sample can be explained by certain character traits shared by this group of students, such as being efficient, motivated,

organized, high-achieving, business-oriented, and career-oriented. These same traits might also encourage students to volunteer for a study, and to successfully complete an online course (Garland, 1993b).

Low response rate. Only 15 students of a potential 364 students (4.2%) participated in the study, in spite of various efforts to encourage participation, such as endorsement of the research by the College; recruitment notices sent to individual instructors and posted in the “announcements” section of the WebCT log-in site; offers of technical support to instructors; follow-up e-mails to both instructors and students, and a token of appreciation.

This research study might have had fewer limitations had it originated within the College itself. The response rate might have been higher if the researcher had possessed greater “sender power” or authority at the College. Although the College endorsed the researcher and the study among the online instructors, the online students might have awarded more “sender power” to a higher authority such as the president of the College (Joinson & Reips, 2004). Finally, a College employee might have had access to proprietary data about student attrition which is otherwise inaccessible to outsiders

Another factor influencing the response rate was the lack of instructor support. Three instructors, teaching 86 students, did not want to post the recruitment ad to their course websites even with an offer of assistance from the College Education Technology Co-ordinator.

A third factor is the relative lack of control which the institution has over online students as compared to classroom students. In a face-to-face learning situation, with the instructor’s consent, the researcher can administer a survey to a captive audience of students in one ten-minute interval and then collect the surveys, counting on a certain amount of peer

pressure to boost the response rate. In the online environment, however, students participate in the survey if and when they want, and drop out of the survey at any point.

A fourth factor which may have interfered with the response rate was that the College library was conducting an online survey simultaneously, which may have contributed to “survey overload” unforeseen by the researcher.

Reliability of self-report. When data are collected by self-report, there is always the possibility of error, whether accidental or deliberate. For example, the follow-up telephone interviews revealed several mistakes in the online questionnaire responses. Had the research been conducted internally by the College itself, then there would have been greater access to proprietary data and a lesser need to rely on self-report.

The mixed definition of “online.” The researcher assumed that the distance education courses listed in the syllabus as “online course – internet access required” would include mandatory interaction using CMC. Of the 34 online courses, only seven required online interaction either as part of the grade or as part of a group project. The definition of online course has not been standardized among institutions, which has implications for both researchers and potential students.

Elusiveness of dropouts. The two students who dropped out of their courses also withdrew their consent to follow-up telephone interviews. It was therefore not possible to obtain data from the two participants who could have shed the most light on the difficulties of online study. One of the two students who did not persist sent a comment by e-mail, as follows: “[Course name] should not be attempted through distance education, as it is too hard and you need more instruction and help.” This student had one of the four lowest

scores on the Sense of Barriers and Supports scale and had the lowest score on the Sense of Classroom Community scale.

Lack of experimental controls. In field research, it is difficult to isolate the “signal” of the independent variable from the “noise” generated by intervening variables. This study acknowledged the potential for interference from intervening variables by attempting to measure the most common, student-reported influences (both barriers to and supports for online study, and students’ sense of classroom community). It was impossible for the researcher to control for the fact that the 34 courses were taught by 16 different instructors with differing abilities to encourage course community, or for the fact that some course subjects may better lend themselves to online discussion than others. As it turned out, very few courses involved online discussion at all.

Limitations of the handbook. The study failed to establish a link between the handbook and student persistence. This may be partly due to the small sample which was not randomly selected. In addition, the premise of the handbook, that students would need to learn how to interact with one another online, was not borne out during the students’ experience. The handbook, therefore, was insufficient to affect students.

Had the courses required online interaction, it is still possible that the students might not have found the handbook useful. This is because most of the handbook recipients reported in their follow-up interviews that they could not recall the handbook contents. While the handbook format was chosen for its efficiency and low cost, the results of this study indicate that a handbook for orientation is ineffective, perhaps due to its passive nature, or perhaps because it does not offer enough encouragement to new online students. Based on this study’s findings that students’ preferred form of support is interaction with the

instructor, it seems logical that online instructors should be responsible for mentoring new online students.

### Implications and Recommendations for Professional Practice

There are many studies which advocate orientation for new online students in order to increase persistence, but with no practical suggestions as to what form such orientation should take (Bird & Morgan, 2003; Bozarth et al., 2004; Oren et al., 2002; & Wojciechowski & Palmer, 2005).

Other studies do make specific recommendations, such as a special online orientation course (Nash, 2005; O'Donnell et al., 2006), and video-based orientations (Torres-Gil et al., 2000). These suggestions involve a self-help “package” of orientation material, similar to that of the handbook but using different media, delivered prior to course commencement. While these formats may be more attractive to online learners, they contradict the research which demonstrates that learning is best accomplished in a social situation (Bates & Poole, 2003) and may be as ineffective as the handbook because they do not provide students with an immediate application for their newfound knowledge.

More appealing pedagogically are suggestions that incorporate orientation into the course itself, such as the modular implementation of an orientation program throughout the semester (Brescia, Miller, Ibrahima & Murry, 2004; Ludwig-Hardman & Dunlap, 2003); timely feedback from instructor to student (Dennen, Darabi, & Smith, 2007); improved instructional design including development of dynamic learning communities (Cleveland-Innes et al., 2007; Ivankova & Stick, 2005); and a co-ordinated effort from all institutional departments to student orientation (Chambers, 2004; Rekkedal & Qvist-Ericksen, 2004).

While all the above suggestions could help students, there are several reasons why

the online instructor should play a key role in student orientation. Firstly, the advantage of “building in” orientation to each course is that all students would be exposed to it. As Simpson (2003) notes, “any retention activity that is offered to students and not compulsory will be experienced only by students who choose to take up the offer” and may not be experienced by those who really need it (p. 118). Secondly, by experiencing orientation as they are discussing course content online, students would be able to practise their newfound knowledge immediately. “For many learners, role models for learning the required and expected activities are not present until one is already engaged in an online course” (Cleveland-Innes et al., 2007, p. 4). Such “learning by doing” would better facilitate the student’s role adjustment than if the same information were to be offered in a separate package, such as an online tutorial or handbook. Finally, as indicated in this study, students highly value interaction with their teachers (Bozarth, et al., 2004). Students would therefore be receptive to information and suggestions they receive from their instructors.

Placing the burden of orientation onto the instructor could be very effective, but also costly for the following reasons: 1) instructional designers would be required to embed interactivity in online courses; 2) instructors would need to spend more time modeling online behaviour, moderating discussions, encouraging critical thinking skills, and answering student e-mails, and might not have sufficient time to conduct research or participate in administration (Bates & Poole, 2003); 3) institutions might have to hire more instructors in order to handle the extra workload that accompanies online teaching (Rumble, 2001); and 4) institutions would need to train new online instructors as well as provide ongoing faculty development (Spector, 2005). This is because classroom teachers need to make a role adjustment to become online teachers. As noted by Brookfield, “...although a

case can be made that the dynamics of online teaching are not intrinsically different from those of the face-to-face classroom, there are contextual features that need to be born in mind ...” (2006, p. 193).

Since there is no consensus as to the nature of orientation for new online students, institutions need first of all to synthesize their own definitions of “online course” in order to accurately convey the nature of the courses to students. Secondly, institutions need to conduct their own studies into the medium to be used for orientation as well as the content to be included, bearing in mind both students’ shared desire for social interaction, as well as the demographics and extra-curricular responsibilities unique to their own online student body.

Regardless of the format, orientation for new online students should become standard practice for online education providers. Online instructors should be trained and continually supported by the institution in their efforts to help students adjust to their new role as online learners (Cleveland-Innes et al., 2007). It is possible for the quality of online learning to equal or even exceed that of conventional education, as long as students understand the importance of online interactivity for knowledge construction, for deep learning, and for the satisfaction of participating in a learning community.

One way to move toward the provision of online student orientation and online faculty support is to establish institutional principles of good practice. The Western Co-operative for Educational Telecommunication (WCET, 1995) and the Institute for Higher Education Policy (IHEP, 2000) include, among other things, the following benchmarks for internet-based education:

### Recruitment and advising.

- Accepted students have the background, knowledge, and technical skills needed to undertake the program. (WCET, p.2).
- Advertising, recruiting, and admissions materials clearly and accurately represent the program and the services available. (WCET, p.2).
- Before starting an online program, students are advised about the program to determine 1. if they possess the self-motivation and commitment to learn at a distance, and 2. if they have access to the minimal technology required by the course design. (IHEP, p.3).

### Interactivity.

- The program provides for appropriate real-time or delayed interaction between faculty and students and among students. (WCET, p.1).
- Student interaction with faculty and other students is an essential characteristic and is facilitated through a variety of ways, including voice-mail and/or e-mail. (IHEP, p.2).
- Feedback to student assignments and questions is constructive and provided in a timely manner. (IHEP, p.2).

### Support for online faculty.

- Qualified faculty provide appropriate oversight of the program electronically offered. (WCET, p.1).
- The program provides faculty support services specifically related to teaching via an electronic system. (WCET, p.2).

- The program provides training for faculty who teach via the use of technology. (WCET, p.2).
- Faculty members are assisted in the transition from classroom teaching to online instruction and are assessed during the process. (IHEP, p.3).
- Instructor training and assistance, including peer mentoring, continues through the progression of the online course. (IHEP, p.3).

Setting institutional benchmarks does not guarantee that they will be attained, however, they provide specific goals and evaluation criteria to benefit all institutions, including the College.

Attention to recruitment and advising, interactivity, and support for online faculty would greatly improve the quality of the online courses offered at the College. While College students are encouraged, but not required, to complete a short survey addressing the suitability to the demands of online learning, and are advised about the minimal technical requirements for courses, they could benefit from additional counseling about the role adjustment needed for online learning.

The College online courses are already offered on WebCT, a platform which enables asynchronous online interaction. To make the College courses truly “online,” all the courses would have to be redesigned to take full advantage of WebCT, so that online interaction with the instructor and among students would become a central feature. Such a major revision would result in a more satisfactory learning experience for the students.

Increased interactivity would also increase the workload of online instructors. The College would have to commit to providing appropriate technical support, as well as training and support for teaching in an online environment.

### Recommendations for Further Research

Further research, both quantitative and qualitative, is needed in the area of orientation for new online students. Some questions requiring further investigation are as follows:

1. Is there a correlation between orientation for online students and their persistence in courses?
2. What is the best format for provision of orientation to new online students?
3. What do new online students need to know and when do they need to know it?
4. What is the instructor's role in providing orientation to new online students?
5. Do students value online community?
6. Is there a relationship between the existence of online community and the persistence of online students?
7. How can institutions offering online courses provide support to online students to help them persist?

### Recommendations for Changing Research Methodology

Effort should be made to obtain more qualitative data, as it is a rich source of information about human behaviour and experience (Bogdan & Biklen, 1998). If institutions wish to improve persistence among online students, then they must approach the online students themselves in order to target those elements which could increase satisfaction for online students. These include, but are not limited to, guaranteed turnaround times for e-mail feedback to students from various institutional departments; instructional design that makes the best use of computer and internet; and faculty who are trained and supported in moderating online courses.

Quantitative research methodology in distance education needs to be strengthened, according to a meta-analysis of 232 studies conducted by Bernard, Abrami, Lou and Borokhovski (2004). The findings indicate that the research is of poor quality, for reasons such as lack of experimental control; lack of random selection of sample; lack of random assignment of subjects to treatment groups; poorly designed dependent measures lacking reliability and validity; and failure to report essential aspects about study design. The study notes that methodological aspects of design are important in that they can affect research outcomes.

Conducting research online presents unique challenges such as low response rates, poor communication, high sample mortality, and difficulty in instituting experimental controls (Couper, 2000). Improvements in research methods are suggested, such as better survey design taking full advantage of the Web; using research to create better measures and then pilot testing them; instituting better control for selection bias; equilibrating groups on controllable factors; and selecting courses for research which are similar in length to the courses for which the results are to be generalized (Bernard et al., 2004; Couper, 2000).

### Summary

The demand for online education continues to grow as students of all ages pursue higher education while maintaining commitments to careers and families. Online education is not for the faint of heart: too many extra-curricular commitments and too few external support systems can jeopardize a student's success (Simpson, 2002). While the institution cannot control the outside forces governing the online student, it does have the power and the obligation to provide thorough orientation to new online students, thereby improving the online educational experience and increasing persistence (McLoughlin & Marshall, 2000).

Central to the orientation process is the concept that online interaction is a uniquely different experience from conventional classroom interaction (Gunawardena, 1991; Willis, 1995).

Potential online students require institutional assistance to adjust to the new role of online learner (Cleveland-Innes et al., 2007).

Research indicates that the pre-course phase of a student's journey is the most opportune time for an institution to provide the support services necessary for the student's transition to distance education (Rekkedal & Qvist-Ericksen, 2004). While the institution cannot affect students' life circumstances, there is evidence to suggest that the institution can help students to understand their personal attributes; to anticipate the challenges of distance education; to provide institutional services to bridge knowledge and skill gaps; and to provide emotional support and counseling. In providing these services during the pre-course phase, the institution can make a major contribution to student satisfaction and persistence.

To be a successful online learner, the student needs to be proactive and unafraid to "reach out" to classmates and instructors through web-based discussion forums (Palloff & Pratt, 2000). Continuous "reaching out" with the support of experienced instructors leads to the building of online community, which, in turn, encourages students to persist in their studies. Otto Peters, professor emeritus of FernUniversität in Hagen, Germany, sums up the importance of interaction, as follows:

If we take distance education seriously and understand it to be something more than the mere distribution and reading of study materials, we must provide sufficient opportunities for dialogues [sic]. ... Furthermore, if we consider the great extent to which the development of scientific thinking depends on its genesis and practice in

dialogues with teachers and other students, and how intensively speech, thought and action require each other, we are strengthened in this belief. If, on the other hand, learning in dialogues is neglected, or even done without completely, studies not only lack an important dimension for qualifications in academic professions, but also depth and ... humanity as well. (1998, p. 39).

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**APPENDIX A**

**HANDBOOK**

# **Introduction**

**to**

# **Online Learning**

# Introduction to Online Learning

Welcome to online learning at Okanagan College. Online learning is different from conventional classroom-based learning in that it allows you to complete courses at a place and pace that suits your lifestyle. And instead of talking face-to-face in “real time” with your instructor and fellow students, you will be communicating through e-mail and web-board postings. This kind of communication is called “asynchronous” because the messages you send at your convenience can be read and replied to at a later time at someone else’s convenience.

First-time online learners may experience some initial challenges, such as becoming accustomed to computer communication and focusing on studies in the midst of distraction from family, friends, and work. The information presented in this booklet is intended to assist you to adjust to your new role as an online learner. The following topics are discussed: the importance of computer conferencing; internet etiquette (“netiquette”); support from family and friends; setting goals; time management; and how to become a self-directed learner.

# **Computer Conferencing: Interaction and Community**

## **You are not alone!**

Online learning means that you are not learning alone. In fact, online learning offers a great advantage over face-to-face classes where the instructor might not have time to talk to every student, and you might not be able to talk to all your classmates. Online learning lets you communicate with your instructor and your fellow students using a computer with an internet connection. While this communication will not be in “real time,” it nevertheless provides you with a rich and vital link to your instructor and to the others in your class.

Most of the time online communication is asynchronous. Research supports that the quality of web-supported discussion can exceed that of classroom discussion because the participants have time to carefully craft their responses instead of putting up their hands and answering spontaneously.

It is technically possible for you to pass your online course simply by doing the mandatory reading, perusing the web-board occasionally without making a

posting (“lurking”), and completing assignments on time. But you will learn so much more about the course subject, and about yourself, if you participate regularly in web discussion. You will also have a more enjoyable and rewarding experience.

*“It is good to rub and polish our brain against that of others.”*

*- Montaigne*

## **Participation is motivating**

Participating in class discussion forums and sending e-mails to your instructor or individual classmates is the key to keeping you motivated and interested in the class. Research supports the view that students who reach out and communicate regularly have a richer learning experience, feel less isolated and more as though they are part of a community, and are therefore more likely to finish the course and do well.

Participation is the key to success in online learning. Write the following reminders into your schedule:

- Log in to your class website daily.

- Read the postings and print out one question or comment to think about.
- Using your course materials and your own experience, compose a thoughtful reply and post it.

## **Become part of a community**

While your instructor will help to build a classroom community online, you can contribute by keeping up with the readings, posting your own responses, reading the responses of others, and replying thoughtfully to them. You will be pleasantly surprised by the variety of people you meet and the experiences they share. Your classmates will become an important resource for information and support, just as you will become a welcome contributor to the discussion.

### **Fear factor**



Conquer your fear of asking questions. Without the benefit of “body language,” your instructor cannot see the quizzical look on your face and will assume you understand the instructions. And in a virtual classroom, nobody can give you a dirty look for what

they think is a dumb question. In the end, the answer to your question may help your classmates, too.

Do not be afraid to express your own opinions and back them up. The diversity of online students provides a diversity of opinion, and respectful academic debate is an inevitable aspect of the learning process. Just as you have a lot to offer your class, you also have something to gain from exposure to views and backgrounds different from your own.

## **Your input is valuable**

Online participation in class discussion is important enough for some instructors to include it as part of your final grade. Whether or not you are marked for your participation, you must interact with your classmates in order to get the full value from your online course. You may never meet your classmates in person, and the course may last only a few weeks, but the effort is still worth it. Your input is welcome and valuable.



# Internet Etiquette (“Netiquette”)

According to the Oxford English Dictionary, etiquette is “the conventional rules of personal behaviour in polite society.” There are some rules for posting messages on the internet, as follows:

- Keep your message short, organized, and to the point.
- If you have trouble with spelling, compose your reply in a word processing program and then paste it to the discussion board.
- Use a meaningful, unique subject line (instead of “Rats” put “The negative effects of Paxil on rats”)
- Capitalizing whole words that are not titles is seen as SHOUTING and is not nice.
- Be professional and careful in what you say about others. The online environment may feel anonymous, but there are real people reading your messages. While you should feel free to exchange ideas, it is impossible to guarantee that some of the discussion forum will never become available to outsiders. “Speak” with these cautions in mind.

- Acknowledge the content of the message you are responding to; this builds the web of meaning and makes other authors feel included.
- Some self-disclosure is necessary, but don't get too personal too fast.
- Be careful when using sarcasm and humour. Without face-to-face communication, some people may be offended by what you intended as a joke. Some people like to use "emoticons" for expression. For example, "smile" is expressed as :-)
- Reread your response before you post it, especially if the subject is an emotional one.

# Support for and Barriers to Study

While OU provides many forms of assistance, including feedback from your instructor and fellow students, most students find that support from their family and friends is invaluable. You will need to make some changes in order to fit study into your life, and it is important that you talk to those around you so they will understand the kinds of adjustments you need to make. You may wish to discuss the following:

- The reasons why you want to study.
- That you need to have computer and internet access every day.
- That you need a private space in which to think, read, and write.
- That you may become anxious around assignment due dates.
- That you might want to discuss with them some of the things you are learning.
- That there may be times when you feel overwhelmed and you will need some encouragement.

Support might also come from a boss, co-workers, a mentor, or an experienced online student.

Students often encounter barriers to studying online. Apart from unexpected catastrophes, pressures from family, friends, and work have the potential to interfere with studying, as well as technical difficulties with computer and internet. Additional obstacles include poor reading and writing skills, unfamiliarity with researching on the internet, and the fear of asking for help.

*“Obstacles are those frightful things you see when you take your eyes off your goal.” - Henry Ford*

Force Field Analysis is a useful technique for looking at all the forces for and against your plan to succeed in your course. By carrying out the analysis you can plan to strengthen the forces supporting you, and reduce the forces against you. To carry out a force field analysis, follow these steps:

- List all forces for study in one column, and all forces against study in another column.
- Assign a score to each force, from 1 (weak) to 5 (strong).
- Add up each column and compare totals

Here you have three choices:

- To reduce the strength of the forces opposing a project, or
- To increase the forces supporting a project, or
- To do both.

# Force Field Analysis Worksheet

List supports and barriers to online study. Assign each support or barrier a number from 1 to 5, where 1 indicates a weak force and 5 indicates a strong force. Total each column and compare scores.

<b>Supports for Online Study</b>	<b>Score</b>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
	<b>TOTAL</b> _____

# Force Field Analysis Worksheet

**Barriers to Online Study**

**Score**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**TOTAL** \_\_\_\_\_

If the support column total is larger than the barriers column total, great! You can still work at minimizing the effect of the items in the barriers column.

If the barriers column total is equal to or larger than the support column total, you will have to plan ways to reduce the barriers and increase your support.

Examples:

1. Increasing supports. Make sure you are aware of all the student services available to you at OU.



2. Reducing barriers. If you are nervous because it has been a long time since you wrote an essay, plan to get help from OU or other sources.

---

*“A goal without a plan is just a wish.”  
- Antoine de Saint-Exupéry*

## **Set Goals**



If you set goals, you will have a clearer picture of what you need to do in order to meet these goals, and thus have a deeper motivation to study. Whether your goals are short term (“Read unit 3”) or long-term (“Earn Business Studies Certificate”), they should meet the following criteria:

- Be specific, so you know exactly what you need to do. Instead of “Study math,” your goal should be “Read chapter 6 in the math text and review study guide.”
- Be measurable, so you have tangible evidence of completion. This requires some activity on your part, so in addition to the above goal, you might add “complete problem set at the end of chapter 6 and check answers.”
- Be realistic in terms of both what you can reasonably accomplish and what other commitments you might have.
- Be flexible, so that if you have a sick child, you can reassess and revise your goal if necessary.
- Be set and controlled by yourself and no-one else.

Remember to reward yourself each time you complete a goal.

See the Okanagan College website for a Powerpoint presentation on Educational Goals, for downloadable worksheets on general decision-making, and “to drop or not to drop a course.”

<http://www.okanagan.bc.ca/Page10268.aspx>



*“The bad news is time flies. The good news is you’re the pilot.”*

*- Michael Altshuler*

## **Time Management**

Successful online students budget their time according to their priorities to ensure that they spend it effectively. Online learning gives you the flexibility to study at the time that is best for you without having to spend time commuting to campus. You will probably spend between 10 and 15 hours per week studying for each online course you take, so it is important to schedule that time into your weekly routine. After identifying your goals, take the following steps:

- Analyze how you are spending your time now, including time spent exercising, working, relaxing,

sleeping, and caring for others. Also look for wasted time.

- Match your time use with your priorities. For example, do you study when your energy levels are high?
- Draw up a schedule to spend quality time on your priorities. Make it realistic and stick to it.

Time savers:

- Learn to say “no” to things that will crowd your schedule.
- Begin right away; avoid procrastinating.
- Break major tasks down into smaller, manageable chunks.
- Complete tasks in order of priority.
- Take breaks and do some physical activity.
- Finish one task before you start another one.

- Avoid interruptions, but be prepared to be flexible when they occur.
- Study during your prime working time.
- Organize your workspace and keep it that way.
- Eliminate or delegate tasks which are not important.
- Books and articles are portable. Have some with you at all times so you can make use of time spent waiting for the doctor, etc.
- Ask for help as soon as you feel you need it.

## Where Does the Time Go?



It may seem like there aren't enough hours in the week to get everything done. That may be true, or it may be that you are not using your time as efficiently as possible. To assess where your time goes, complete the inventory below. Be as honest with yourself as you can. After you have responded to all the questions, you'll have an opportunity to see how many hours remain during the week for online study.

# Weekly Time Inventory

	# of Hrs. per Day	X	# of Days per Week	=	# of Hrs. per Week
How many hours do you sleep in each 24 hour period?	_____	X	_____	=	_____

How many hours a day do you engage in grooming activities?	_____	X	_____	=	_____
--	-------	---	-------	---	-------

How many hours a day do you spend on meals, including preparation and clean-up?	_____	X	_____	=	_____
---	-------	---	-------	---	-------

How many hours per day do you spend doing chores and errands?	_____	X	_____	=	_____
---	-------	---	-------	---	-------

How many hours do you spend each week doing regular activities, such as sports, working out, clubs, church, volunteering?	_____
---	-------

How many hours per week do you work at a job?	_____
---	-------

How many hours per week do you spend socializing and relaxing (going out, watching TV, going to parties, hobbies?)	_____
--	-------

TOTAL number of hours per week engaged in activities	_____
--	-------

There are 168 hours in a week. Subtract the above total from 168 to find the number of hours you have each week for online study.



Online courses require at least as much time as on campus courses. Generally, each online course requires between 10 and 15 hours per week of study, including reading, engaging in online communication, and completing assignments. Furthermore, these hours need to be when you are the most alert and efficient, and can study without interruption.

*“Great works are performed not by strength but by perseverance.”*

*- Samuel Johnson*

## **How to Become a Self-Directed Learner**

The further you advance in college and continuing education, the more responsibility you will need to take for your own learning. You will begin to define and prioritize what you need to know, how you will learn it, and how you will measure your progress. Outside direction and assessments of your learning will

continue to be a part of your education, but these will serve more to guide you in your exploration of knowledge.

To be a successful online learner, you need to be a self-directed learner. Characteristics of a self-directed learner are as follows:

- **Self-discipline.** In a traditional classroom, you interact in person with your instructor and peers at a certain time and place each week. This interaction and schedule help to keep you on track. In an online learning environment, however, it is easy to procrastinate and let other activities take priority. Also, online courses often last only a few weeks, so that once you fall behind, it is difficult to catch up. So being self-disciplined means motivating yourself to pay regular attention to your work.
- **Being an active learner.** Instead of sitting in a classroom listening to a lecture, you are now an online student, gathering information from many different media, including text, still images, audio, video, and online discussion. Therefore, you will need to become more actively involved with these materials, integrating them in a way that makes sense to you. Unlike a lecture, you will be able to access and review these materials as often as you need to.

Critically evaluate the information you receive. Question everything, particularly if it doesn't make sense to you. Chances are, if it is challenging to you, it is also challenging to someone else in your class. Talk about it!

- **Time management.** As discussed above.
- **Ability to develop a plan for completing work.** This includes setting goals, making a schedule, and sticking to it.
- **Assuming responsibility for your own learning.** This includes understanding the course expectations, monitoring your own progress, and adjusting your learning strategies as necessary.



If you don't feel you are a self-directed learner, then you can learn to be one as you develop the skills to study online. Please remember that being self-directed does NOT mean that you have to study all by yourself in cyberspace! Your classmates and instructor

are a few keyboard strokes away, and they want to hear from you.

Self-direction is a set of portable skills that you can apply to any learning situation, such as job training, industrial safety courses, firearms acquisition certificate, small boat operation, fitness instructor training, continuing education courses, or any subject you wish to pursue on your own. Learning how to learn is a central goal of a post-secondary education, no matter what the subject is.

## Sources:

- Athabasca University: <http://cde.athabascau.ca/students/online.htm>
- Athabasca University, from “Am I Ready for Athabasca University? Commitment” [http://www.athabascau.ca/cgi-bin/make\\_form.pl?templatefile=studserv/ssg.tmpl](http://www.athabascau.ca/cgi-bin/make_form.pl?templatefile=studserv/ssg.tmpl)
- Chemeketa College Online:  
[http://learning.chemeketa.edu/orient/mod3/mod3\\_comm.cfm?CFID=74525&CFTOKEN=f846dcfaa9bb5735-6F0137A9-2B32-A738-C01108BE08F9DEA8](http://learning.chemeketa.edu/orient/mod3/mod3_comm.cfm?CFID=74525&CFTOKEN=f846dcfaa9bb5735-6F0137A9-2B32-A738-C01108BE08F9DEA8)
- Indiana University:  
[http://ittraining.iu.edu/workshops/deguide/de\\_student\\_primer.pdf](http://ittraining.iu.edu/workshops/deguide/de_student_primer.pdf)
- Ludwig-Hardman, S. & Dunlap, J. (2003). Learner support services for online students: Scaffolding for success. *International Review of Research in Open and Distance Learning*, 4(1). Retrieved May 21, 2005, from <http://www.irrodl.org/content/v4.1/dunlap.html>
- Lynch, R. & Dembo, M. (2004). The relationship between self-regulation and online learning in a blended learning context. *International Review of Research in Open and Distance Learning*, 5(2). Retrieved January 26, 2006, from <http://www.irrodl.org/content/v5.2/lynch-dembo.html>
- Mind Tools Website  
[http://www.mindtools.com/pages/article/newTED\\_06.htm](http://www.mindtools.com/pages/article/newTED_06.htm)
- Open University of the United Kingdom (OUUK):  
<http://www.open.ac.uk/family/pages/home-enquirers.htm>
- Oregon State University: <http://success.oregonstate.edu/time.html> and <http://success.oregonstate.edu/Goal-Setting.html>
- Penn State Online:  
<https://courses.worldcampus.psu.edu/public/wc101/index2.shtml>
- Rio Salado College: [http://www.rio.maricopa.edu/distance\\_learning/](http://www.rio.maricopa.edu/distance_learning/)

- Thompson Rivers University:  
<http://www.openlearning.tru.ca/services/resources/distance.html>
- University of Nebraska at Omaha:  
<http://mycampus.unomaha.edu/guide.php>
- University of Victoria:  
<http://www.coun.uvic.ca/learn/program/hndouts/smartgoals.html>
- Virginia Tech: <http://www.ucc.vt.edu/stdysk/TMInteractive.html>
- York University:  
[http://www.yorku.ca/gcareers/study%20skills/dealing\\_with\\_procrastination.htm](http://www.yorku.ca/gcareers/study%20skills/dealing_with_procrastination.htm)

## APPENDIX B QUESTIONNAIRE

### Handbook Engagement

Directions: Below, you will see 10 questions regarding information in the handbook “Introduction to Online Learning” which you received when you registered for this course. There is one correct answer to each question. Please place an X in front of the correct answer. **It is important to complete every question, otherwise full analysis is not possible.**

1. When computer communication is called “asynchronous” it means that  
 a. people must be online at the same time in order to chat.  
 b. people can read and post messages at different times, at their own convenience.  
 c. communication takes place in “real time.”
  
2. Studying online means studying by yourself.  
 a. TRUE  
 b. FALSE
  
3. The key to success in online learning is  
 a. completing your assignments on time.  
 b. reading course materials quickly and efficiently.  
 c. participating regularly in online discussion.
  
4. Development of online community is the responsibility of  
 a. the instructor and the students.  
 b. the students.  
 c. the college administration.
  
5. The term “netiquette” refers to  
 a. polite behaviour in online communication.  
 b. using a spell-checker before posting questions or responses.  
 c. surfing the Web efficiently.

6. One of the most important forms of student support outside the college is
- a. support from co-workers.
  - b. support from a professional association.
  - c. support from family and friends.
7. Which one of the following is NOT a criterion for an achievable goal?
- a. A goal should be measurable, so you have tangible evidence of its completion.
  - b. A goal should be specific, so you know exactly what to do
  - c. A goal should be absolutely inflexible and unchangeable.
8. In managing one's study time, which of the following is NOT recommended as a time saver?
- a. Combine smaller tasks into large chunks.
  - b. Complete tasks in order of priority.
  - c. Study during your prime working time.
9. Which one of the following does NOT describe a self-directed learner?
- a. A self-directed learner is self-disciplined.
  - b. A self-directed learner takes responsibility for his/her own learning.
  - c. A self-directed learner is highly intelligent.
10. It is impossible to become a self-directed learner if you are not born that way.
- a. TRUE
  - b. FALSE

### **Sense of Barriers to and Support for Online Study**

Directions: Below, you will see a series of statements concerning a specific course or program you are presently taking or have recently completed. Read each statement carefully and place an X in the parentheses ( ) to the right of the statement that comes closest to indicating how you feel about the course or program. There are no correct or incorrect responses. If you neither agree nor disagree with a statement or are uncertain, place an X in the neutral (N) area. Do not spend too much time on any one statement, but give the response that seems to describe how you feel. **It is important to complete every question, otherwise full analysis is not possible.**

	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
1. I feel that my friends understand when I have to study instead of spending time with them.	( )	( )	( )	( )	( )
2. I feel that taking this course will help me to achieve my learning goals.	( )	( )	( )	( )	( )
3. I sometimes put off course work that I know needs to be done.	( )	( )	( )	( )	( )
4. I feel comfortable accessing the support services available to me at Okanagan College.	( )	( )	( )	( )	( )
5. Other commitments keep getting in the way of my studies.	( )	( )	( )	( )	( )
6. I am willing to stay on task even when it seems very difficult.	( )	( )	( )	( )	( )
7. I find the course content more difficult than I expected.	( )	( )	( )	( )	( )
8. I feel that my family is reluctant to discuss my studies with me.	( )	( )	( )	( )	( )
9. I am willing to take responsibility for getting whatever help I need for my studies.	( )	( )	( )	( )	( )
10. I feel this course is exactly what I expected based on the description in the brochure and website.	( )	( )	( )	( )	( )

	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
11. I find it difficult to stick to a regular study schedule.	( )	( )	( )	( )	( )
12. I find it hard to explain clearly to myself, my friends, and my family my reasons for taking this course.	( )	( )	( )	( )	( )

### **Classroom Community Scale**

Directions: Below, you will see a series of statements concerning a specific course or program you are presently taking or have recently completed. Read each statement carefully and place an X in the parentheses ( ) to the right of the statement that comes closest to indicating how you feel about the course or program. There are no correct or incorrect responses. If you neither agree nor disagree with a statement or are uncertain, place an X in the neutral (N) area. Do not spend too much time on any one statement, but give the response that seems to describe how you feel. **It is important to complete every question, otherwise full analysis is not possible.**

	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
1. I feel that students in this course care about each other.	( )	( )	( )	( )	( )
2. I feel that I am encouraged to ask questions.	( )	( )	( )	( )	( )
3. I feel connected to others in this course.	( )	( )	( )	( )	( )
4. I feel that it is hard to get help when I have a question.	( )	( )	( )	( )	( )

5. I do not feel a spirit of community.	( )	( )	( )	( )	( )
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
6. I feel that I receive timely feedback.	( )	( )	( )	( )	( )
7. I feel that this course is like a family.	( )	( )	( )	( )	( )
8. I feel uneasy exposing gaps in my understanding.	( )	( )	( )	( )	( )
9. I feel isolated in this course.	( )	( )	( )	( )	( )
10. I feel reluctant to speak openly.	( )	( )	( )	( )	( )
11. I trust others in this course.	( )	( )	( )	( )	( )
12. I feel that this course results in only modest learning.	( )	( )	( )	( )	( )
13. I feel that I can rely on others in this course.	( )	( )	( )	( )	( )
14. I feel that other students do not help me learn.	( )	( )	( )	( )	( )
15. I feel that members of this course depend on me.	( )	( )	( )	( )	( )
16. I feel that I am given ample opportunities to learn.	( )	( )	( )	( )	( )
17. I feel uncertain about others in this course.	( )	( )	( )	( )	( )
18. I feel that my educational needs are not being met.	( )	( )	( )	( )	( )
19. I feel confident that others will support me.	( )	( )	( )	( )	( )

20. I feel that this course does not promote a desire to learn.

( ) ( ) ( ) ( ) ( )

Source: Rovai, A.P. (2002b). Development of an instrument to measure classroom community. *Internet and Higher Education*, 5, 197-211. Retrieved February 6, 2006, from Elsevier Science Direct Journal Database.

1. Which support services at Okanagan College did you use? \_\_\_\_\_

\_\_\_\_\_

2. In what ways were these services helpful to you? \_\_\_\_\_

\_\_\_\_\_

3. What other support could you have used? \_\_\_\_\_

\_\_\_\_\_

**Demographic Data**

Student ID number (for tracking purposes only): \_\_\_\_\_

Course name and number: \_\_\_\_\_

Gender (circle one): M F

Age range: 22 or less ( ) 23-25 ( ) 26-30 ( ) 31-35 ( ) 36-40 ( ) 40 or over ( )

Number of online courses you have already taken at OC  
or at other colleges (not including this course) \_\_\_\_\_

## **APPENDIX C**

### **LETTER OF INITIAL CONTACT TO INSTRUCTORS**

Dear Okanagan College Instructor,

My name is Kathryn Lockhart and I am a student in the Master of Distance Education program at Athabasca University. I am currently working on the thesis component of my degree in conjunction with the Extension Services Department at Okanagan College.

#### **Purpose of the study**

The purpose of my research is to investigate how orientation for new online students presented in a pre-course handbook (independent variable) will influence, or fail to influence, student persistence in a course (dependent variable). The handbook, "Introduction to Online Learning," addresses issues pertinent to online study, such as the unique nature of online classroom interactivity and its role in forming a supportive community, the importance of student support from sources within and outside the college, and the potential for interference from non-study-related obligations. The handbook is in addition to the standard Distance Education Student Handbook provided by Okanagan College to all online students.

#### **Request for your participation**

I am inviting you to participate in my research by permitting me to survey the students in your online Winter 2007 course(s). While you are not required to grant such permission, your assistance with this research would be very much appreciated. The nature of your participation would include granting me permission to invite your students to be subjects in my research, and to post a link to my research website on your course website.

#### **Research design**

The research is experimental, utilizing a self-administered survey with responses quantified using a Likert-type scale. The study is cross-sectional, administered at a single point in time. Qualitative data would be gathered from open-ended questions at the end of the questionnaire and, with prior consent, from telephone interviews of selected students.

#### **Research procedures**

Two instruments, a handbook and a questionnaire, have been designed and pilot-tested for the study. During registration for Winter 2007 online academic courses, students would be assigned to either the treatment or control group, based on even or odd

student ID numbers (systematic sampling). Handbooks would be distributed to the treatment group only.

Should you permit me to invite your students to participate, I would then e-mail them letters and consent forms. Students would be advised that they would be assigned to either a treatment group or a control group, but would not be told which group they would be in. They would also be advised that, when the course is over, they are to ask the Okanagan College Registrar's office to forward to me a transcript, complete with course grade. The Registrar's office has kindly agreed to waive the fee for this service.

Upon receipt of consent forms, students would be directed to a website to complete a questionnaire. Time commitment for participating students would be 15 minutes to read the handbook (treatment group only), 15 minutes to complete the questionnaire and, if allowed, 10 minutes for a phone interview, for a total maximum time commitment of 40 minutes. Students who had given prior consent to a telephone interview would then be contacted.

Okanagan College subscribes to the ethical conduct of research and to the protection at all times of the interests, comfort, and safety of study subjects. The information provided in this letter and attached consent form is being given to you so that you may understand the procedures, risks, and benefits associated with this research.

#### Potential risks and benefits

By participating in this research, you would be making an important contribution to the nature of institutional support for online education. At the conclusion of the study, you would receive a summary of the results. It is not anticipated that you would experience any discomforts or risks by participating.

#### Confidentiality

Instructors and students would not be identified by name in any reports of the completed study. The identities of both instructors and students would be kept strictly confidential. Students would be identified using student ID numbers, and should names of instructors or students appear in connection with e-mail addresses, they would immediately be erased. Students would be advised that their instructors will not have access to their individual responses. Data will be accessible only by the Principal Investigator and the Graduate Student Researcher. Paper documents will be kept in a locked filing cabinet for 7 years and then shredded at the termination of the project. The web-based questionnaire will use encryption software. Questionnaire data will be stored on the

Graduate Student Researcher's computer, which is equipped with regularly-updated security software, and will be erased from the computer at the termination of the project.

**Voluntary nature of participation**

Your participation, or lack thereof, is voluntary, and you may withdraw from the study at any time without penalty.

All participating instructors and students would receive a thank-you letter and a summary of the research results, and students in the control group would be sent a handbook. In late spring of 2007, it is anticipated that these research findings will be presented at a conference, followed by publication in a scholarly journal.

Whether or not you agree to participate in this research, please read, sign, and return the attached consent form. Thank you.

Sincerely,

Kathryn E. Lockhart  
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[martic@athabascau.ca](mailto:martic@athabascau.ca)

## **APPENDIX D**

### **LETTER OF INITIAL CONTACT TO STUDENTS**

Dear Okanagan College Student,

My name is Kathryn Lockhart and I am a student in the Master of Distance Education program at Athabasca University. I am currently working on the thesis component of my degree in conjunction with the Extension Services Department at Okanagan College.

#### Purpose of the study

The purpose of my research is to investigate how orientation for new online students presented in a pre-course handbook will influence, or fail to influence, student persistence in a course. The handbook, "Introduction to Online Learning," addresses issues pertinent to online study, such as the unique nature of online classroom interactivity and its role in forming a supportive community, the importance of student support from sources within and outside the college, and the potential for interference from non-study-related obligations. The handbook is in addition to the standard Distance Education Student Handbook provided by Okanagan College to all online students.

#### Request for your participation

I am inviting you to participate in my research by answering a questionnaire and possibly participating in a short phone interview. You would be assigned to either a treatment group or a control group, but you would not be told which group you are in until the course is over. While you are not required to participate, your assistance with this research would very much be appreciated.

**As a token of appreciation, participating subjects would receive a \$5 Starbucks gift card at the conclusion of the study.**

#### Research design

The research is experimental, utilizing a self-administered survey with responses quantified using a Likert-type scale. The study is cross-sectional, administered at a single point in time. Qualitative data would be gathered from open-ended questions at the end of the questionnaire and, with prior consent, from telephone interviews of selected students.

## Research procedures

Upon receipt of a signed consent form, you would be directed to a website to complete a questionnaire. Your time commitment would be 5 minutes to read and respond to a letter of invitation and consent form, 10 minutes to complete the questionnaire, and, should you permit, 5 minutes for a phone interview, for a total maximum participation time of 20 minutes. **Should you wish to receive a \$5 Starbucks gift card, there is a space on the last page of the questionnaire for you to provide a mailing address.**

When the course is over, you would be asked to contact the Okanagan College Registrar's office and have them forward to me a copy of your transcript, complete with course grade. The Registrar's office has kindly agreed to waive the fee for this service. If you provided prior consent to a telephone interview, you would then be contacted.

Okanagan College subscribes to the ethical conduct of research and to the protection at all times of the interests, comfort, and safety of study subjects. The information provided in this letter and attached consent form is being given to you so that you may understand the procedures, risks, and benefits associated with this research

## Potential risks and benefits

By participating in this research, you would be making an important contribution to the nature of institutional support for online education. At the conclusion of the study, you would receive a summary of the results. It is not anticipated that you would experience any discomforts or risks by participating in this research.

## Confidentiality

You will not be identified by name in any reports of the completed study. Your identity will be kept strictly confidential, using your student ID number, and should your name appear in connection with your e-mail address, it will immediately be erased. . Your instructor will not have access to your individual responses. Furthermore, your individual responses will be held confidential. Data will be accessible only by the Principal Investigator and the Graduate Student Researcher. Paper documents will be kept in a locked filing cabinet for 7 years and then shredded at the termination of the project. The web-based questionnaire will use encryption software. Questionnaire data will be stored on the Graduate Student Researcher's computer, which is equipped with regularly-updated security software, and will be erased from the computer at the termination of the project.

## Voluntary nature of participation

Your participation, or lack thereof, is voluntary and will in no way affect your course grade. You may withdraw from the study at any time without penalty.

At the conclusion of the study, all participating students and instructors would receive a thank-you letter and a summary of the research results. In late spring of 2007, it is anticipated that these research findings will be presented at a conference, followed by publication in a scholarly journal.

Whether or not you agree to participate in this research, please read, sign, and return the attached consent form. Thank you.

Sincerely,

Kathryn E. Lockhart  
Master of Distance Education (cand.), Athabasca University  
1202 Graham Road  
Kelowna, BC V1X 1J7  
250-861-6184  
[kathrynlockhart@shaw.ca](mailto:kathrynlockhart@shaw.ca)

Dr. Martha Cleveland-Innes, PhD, Thesis Supervisor  
Centre for Distance Education  
Athabasca University  
1 University Drive  
Athabasca, Alberta T9S 3A3  
1-800-788-9041 (ext. 6426)  
[martic@athabascau.ca](mailto:martic@athabascau.ca)

## **APPENDIX E**

### **INFORMED CONSENT FORM FOR INSTRUCTORS**

The Effect of a Pre-course Orientation Handbook on Student Persistence  
in Undergraduate Online Courses

Principal Investigator: Dr. Martha Cleveland Innes, PhD, Centre for Distance Education,  
Athabasca University, telephone 1-800-788-9041 (ext. 6426) e-mail:  
[martic@athabascau.ca](mailto:martic@athabascau.ca)

Okanagan College Staff/Dept: Ms. Charlotte Kushner, Director, Continuing Studies,  
Okanagan College, (250) 862-5458 1-800-836-5499 (Toll free within BC)  
[ckushner@okanagan.bc.ca](mailto:ckushner@okanagan.bc.ca)

Graduate Student Researcher: Kathryn Lockhart, telephone 1-250-861-6184, e-mail  
[kathrynlockhart@shaw.ca](mailto:kathrynlockhart@shaw.ca)

You hereby consent to participate in research for the above-noted graduate thesis, which is expected to further understanding of the role which pre-course orientation plays in student persistence in online courses.

This project has been reviewed and granted a certificate of approval by the Research Ethics Boards of both Athabasca University and Okanagan College to conduct research among students in Okanagan College online academic classes. This project is also being supported by a grant from Athabasca University.

- You voluntarily agree to allow your students to participate in this research.
- You understand that you may refuse to allow your students to participate or to withdraw your participation in this project at any time without consequence.
- Your participation in this project is in no way related to your employment contract or your status as an Okanagan College instructor.
- You understand that your identity and any identifying information obtained will be kept confidential.
- You agree to post a link to the researcher's website on your own course website.

If you have any questions about the project, you may address them to the Graduate Student Researcher at 250-861-6184.

If any new information becomes available during the course of this study that may affect your willingness to continue participating, you will be advised by the Principal Investigator, Dr. Martha Cleveland-Innes, at 1-800-788-9041 ext. 6426.

If you have any complaints about the project, you may contact the Principal Investigator.

If you have any concerns about your rights as a research subject, you may contact the Chair of the Research Ethics Board through the Okanagan College Office of Research Services, phone number (250) 762-5445 (local 4491).

Your signature on this form indicates that you understand the information provided regarding this research project including all procedures and the personal risks involved.

(Please place an X in front of the appropriate response, on the understanding that an X serves as a substitute for your signature.)

I consent to allow my students to participate in this research project.

or

I do not consent to allow my students to participate in this research project.

Date: \_\_\_\_\_

Please return this consent form by e-mail to [kathrynlockhart@shaw.ca](mailto:kathrynlockhart@shaw.ca)  
Receipt of this form will be acknowledged by e-mail.

Please keep a copy of this signed consent form on your computer.

## **APPENDIX F**

### **INFORMED CONSENT FORM FOR STUDENTS**

The Effect of a Pre-course Orientation Handbook on Student Persistence  
in Undergraduate Online Courses

Principal Investigator: Dr. Martha Cleveland Innes, PhD, Centre for Distance Education,  
Athabasca University, telephone 1-800-788-9041 (ext. 6426) e-mail:  
[martic@athabascau.ca](mailto:martic@athabascau.ca)

Okanagan College Staff/Dept: Ms. Charlotte Kushner, Director, Continuing Studies,  
Okanagan College, (250) 862-5458 1-800-836-5499 (Toll free within BC)  
[ckushner@okanagan.bc.ca](mailto:ckushner@okanagan.bc.ca)

Graduate Student Researcher: Kathryn Lockhart, telephone 1-250-861-6184, e-mail  
[kathrynlockhart@shaw.ca](mailto:kathrynlockhart@shaw.ca)

You hereby consent to participate in research for the above-noted graduate thesis, which is expected to further understanding of the role which pre-course orientation plays in student persistence in online courses.

This project has been reviewed and granted a certificate of approval by the Research Ethics Boards of both Athabasca University and Okanagan College to conduct research among students in Okanagan College online academic classes. This project is also being supported by a grant from Athabasca University.

- You voluntarily agree to participate in this research.
- You understand that you may withdraw your participation in this project at any time without consequence.
- Your participation in this project will not affect your grade in this course or your status as a student at Okanagan College.
- You understand that your instructor will not see your individual response.
- You understand that your identity and any identifying information obtained will be kept confidential.
- You agree, when the course is over, to contact the Okanagan College Registrar's office to have them forward a copy of your transcript, with course final grade, to the Graduate Student Researcher, at no cost to you.

If you have any questions about the project, you may address them to the Graduate Student Researcher at 250-861-6184.

If any new information becomes available during the course of this study that may affect your willingness to continue participating, you will be advised by the Principal Investigator, Dr. Martha Cleveland-Innes, at 1-800-788-9041 ext. 6426.

If you have any complaints about the project, you may contact the Principal Investigator.

If you have any concerns about your rights as a research subject, you may contact the Chair of the Research Ethics Board through the Okanagan College Office of Research Services, phone number (250) 762-5445 (local 4491).

Your signature on this form indicates that you understand the information provided regarding this research project including all procedures and the personal risks involved.

(Please place an X in front of the appropriate response, on the understanding that an X serves as a substitute for your signature.)

I consent to participate in this research project, including a follow-up interview at this phone number: \_\_\_\_\_.

Student ID number: \_\_\_\_\_

or

I consent to participate in this research project but NOT to a follow-up interview.

Student ID number: \_\_\_\_\_

or

I do not consent to participate in this research project.

Date: \_\_\_\_\_

Please return this consent form by e-mail to [kathrynlockhart@shaw.ca](mailto:kathrynlockhart@shaw.ca)  
Receipt of this form will be acknowledged by e-mail.

Please keep a copy of this form on your computer.

## APPENDIX G

### PILOT STUDY

Oct. 25, 2006

From Marni Esson to Fall 2006 online academic instructors

Hi Everyone,

I am forwarding the message below from a Masters student the Distance Education department is working with. We fully support her research and we hope that you will be interested in participating.

Thanks,  
Marni

My name is Kathryn Lockhart and I am conducting research for my Masters thesis at Athabasca University. The purpose of my research is to investigate how orientation for new online students presented in a pre-course handbook will influence, or fail to influence, student persistence in a course. The handbook addresses issues pertinent to online study, such as the unique nature of online classroom interactivity and its role in forming a supportive community, the importance of student support from sources within and outside the college, and the potential for interference from non-study-related obligations. I have received provisional approval from the Okanagan College Research Ethics Board to survey distance education students taking academic courses.

There would be no remuneration, however, you would be assisting research into the design and implementation of effective institutional support for new online students. If you are interested in participating, please contact Kathryn Lockhart at [kathrynlockhart@shaw.ca](mailto:kathrynlockhart@shaw.ca)

#### **Recruitment Advertisement**

##### Volunteers Wanted

Volunteers are wanted to pilot test two survey instruments for a graduate student's research project. Eligible volunteers must be enrolled in an online academic course at Okanagan College (University Transfer, Business Administration, Health, English as a Second Language, and Adult Basic Education courses only). Pilot testing would be done by e-mail.

Participation would require the following:

- |  |                   |
|--|-------------------|
| 1. Reading a short handbook (sent to you by e-mail)  | 15 minutes        |
| 2. Completing a questionnaire (sent to you by e-mail)  | 15 minutes        |
| 3. Answering 10 questions about the design and content of the handbook and questionnaire and e-mailing the responses | <u>15 minutes</u> |
| Approximate total time involvement   | 45 minutes        |

There would be no remuneration, however, you would be assisting research into the design and implementation of effective institutional support for new online students. If you are interested in participating, please contact Kathryn Lockhart at [kathrynlockhart@shaw.ca](mailto:kathrynlockhart@shaw.ca)

### **Directions for Students Participating in Pilot Study**

Please read the handbook attached to this e-mail. Then please open the attached questionnaire and complete it according to the instructions. Finally, please answer the following questions and e-mail the responses to me.

#### Questions

##### Handbook:

1. How long did it take you to read the handbook?
2. Is the language of the handbook easy to understand?
3. Is the typeface (font) easy to read?
4. Is the layout (page size, paragraph lengths, subject headings, spacing, pictures, quotations) interesting?

##### Questionnaire:

1. How long did it take you to complete the questionnaire?
2. Are instructions for completing the questionnaire clearly written?
3. Are the questions easy to understand?
4. Did you experience any technical difficulty while completing the questionnaire on the website?
5. Did you have any difficulty changing (or “correcting”) your answers?
6. Do you have any suggestions regarding the clarification of instructions or improvements in format?

Thank you for assisting me in my research.

**APPENDIX H**  
**RECRUITMENT AD**

**Free Coffee**

A graduate student requests 20 minutes of your time to participate in a research project concerning support for online students. Coincidentally, 20 minutes is just the amount of time you need to fully savor a grande extra-hot latte, which will be provided to you – absolutely free – if you participate in this study.

The research would be conducted online in the comfort of your own home. When the study is over, you would receive a summary of the research results as well as a token of appreciation in the form of a \$5 Starbucks gift card. But most of all, you would feel good all over knowing that, in just 20 minutes, you had made an important and valuable contribution to social science research.

Participation would involve the following:

- |  |                  |
|--|------------------|
| 1. Reading an e-mail letter and indicating your consent<br>on a form to be e-mailed back to the researcher | 5 minutes        |
| 2. Completing a questionnaire on a website   | 10 minutes       |
| 3. Optional short phone interview  | <u>5 minutes</u> |
| Maximum total time involvement   | 20 minutes       |

If you are interested in participating, please contact the researcher, Kathryn Lockhart, at [kathrynlockhart@shaw.ca](mailto:kathrynlockhart@shaw.ca) This research project has been approved by the Okanagan College Research Ethics Board and is endorsed by the Continuing Education Department.

## **APPENDIX I**

### **INITIAL E-MAIL TO INQUIRING STUDENTS**

Thank you for your interest in my research project. Attached is a document containing a letter of invitation with the details of my project, along with a consent form. All research will be conducted online. If you wish to participate, please indicate your consent on the last page of the document and e-mail the document back to me. Please include your student ID number for tracking purposes.

## **APPENDIX J**

### **REMINDER E-MAIL TO STUDENTS**

Thanks again for your willingness to participate in my research project. Please skim through the attached invitation and consent form, check the correct box at the end, add your student ID, and send it back to me. I know you are busy with your courses.

## **APPENDIX K**

### **E-MAIL REFERRING STUDENTS TO QUESTIONNAIRE**

Odd student ID # - handbook – questionnaire 1

Thank you for your willingness to participate in my research project. If you have any questions about the following instructions, please e-mail me.

Attached is a handbook entitled “Introduction to Online Learning.” Please read it, either on the computer or as a printed document. It should take you about 10 minutes to read, in addition to the 20 minutes advertised for the study. I hope that this extra time requirement does not inconvenience you. Please do not discuss the handbook or share it with other students until your course is over, when all online students will receive this handbook.

When you have read the handbook, please go to

[http://olc-new.okanagan.bc.ca/webct/ticket/ticketLogin?action=print\\_login&request\\_uri=/webct/homearea/homearea?](http://olc-new.okanagan.bc.ca/webct/ticket/ticketLogin?action=print_login&request_uri=/webct/homearea/homearea?)

Type in your WebCT ID and password and log in.

Your list of courses should appear. Scroll down to Default Terms at the bottom of the page and click on Distance Education Survey.

Click on the DE Questionnaire “pencil” icon and complete the survey according to the instructions.

The questionnaire will contain some questions about the handbook, so feel free to consult it while you answer them. Thank you.

Even student ID # - no handbook – questionnaire 2

Thank you for your willingness to participate in my research project. If you have any questions about the following instructions, please e-mail me.

Please go to

[http://olc-new.okanagan.bc.ca/webct/ticket/ticketLogin?action=print\\_login&request\\_uri=/webct/homearea/homearea?](http://olc-new.okanagan.bc.ca/webct/ticket/ticketLogin?action=print_login&request_uri=/webct/homearea/homearea?)

Type in your WebCT ID and password and log in.

Your list of courses should appear. Scroll down to Default Terms at the bottom of the page and click on Distance Education Survey.

Click on the DE Questionnaire “pencil” icon and complete the survey according to the instructions.

Thank you.

**APPENDIX L**  
**REMINDER TO STUDENTS TO COMPLETE QUESTIONNAIRE**

Thanks again for your willingness to participate in my research project. I know you are busy with your courses, but please don't forget to go to

[http://olc-new.okanagan.bc.ca/webct/ticket/ticketLogin?action=print\\_login&request\\_uri=/webct/homearea/homearea?](http://olc-new.okanagan.bc.ca/webct/ticket/ticketLogin?action=print_login&request_uri=/webct/homearea/homearea?)

and complete the survey.

**APPENDIX M**  
**E-MAIL THANKING STUDENTS FOR COMPLETING QUESTIONNAIRE**

Thank you for completing the distance education questionnaire. I will be contacting you again at the end of April about your course grade, which is an important part of my study.

I appreciate your contribution to my research.

## APPENDIX N

### TELEPHONE INTERVIEW QUESTIONS

Interviews with consenting students are to be conducted once the course is over and completion/non-completion data have been collected by the Registrar's office.

Script for students who completed their courses:

Hello. My name is Kathryn Lockhart and I am calling to confirm that I have received the questionnaire which you completed for my research project. Thank you for taking the time.

I note from your consent form that you have indicated your consent to this telephone interview. Do you still wish to be interviewed for 5-10 minutes? (If no, thank participant and hang up. If yes, continue.)

In this brief interview, I will ask you to clarify or elaborate on your responses to the open-ended questions on the questionnaire. I also wish to discuss the kinds of supports you received to help you complete your course.

1. Clarification of questionnaire responses, if any required
2. What kinds of support did you receive for the course within the College?
3. What kinds of support did you receive for the course outside the College?
4. What additional forms of support could you have used to help you complete the course?

If also handbook recipient:

5. Which information in the handbook was helpful to you? Not helpful? What other information should have been included?

Thank you very much for participating in my research project. I will be sending you a summary of the research results soon.

Script for students who withdrew from courses:

Hello. My name is Kathryn Lockhart and I am calling to confirm that I have received the questionnaire which you completed for my research project. Thank you for taking the time. I note from your consent form that you have indicated your consent to this telephone interview. Do you still wish to be interviewed for 5-10 minutes? (If no, thank participant and hang up. If yes, continue.)

In this brief interview, I will ask you to clarify or elaborate on your responses to the open-ended questions on the questionnaire. I also wish to discuss the kinds of supports you received during your online studies. Finally, I would like to know the reasons why you were unable to complete the course. Please be aware that you do not have to answer these questions. You may choose to terminate the interview now, or to answer only selected questions. (Wait for response. If student wishes to terminate the interview, thank them and hang up. If they wish to continue, then do so.)

1. Clarification of questionnaire responses, if any required
2. What kinds of support did you receive for the course within the College?
3. What kinds of support did you receive for the course outside the College?
4. What was the main reason why you could not complete the course?
5. What were the other reasons (if any) why you could not complete the course?
6. What additional forms of support could you have used to help you complete the course?

If also handbook recipient:

7. Which information in the handbook was helpful to you? Not helpful? What other information should have been included?

Thank you very much for participating in my research project. I will be sending you a summary of the research results soon.

## **APPENDIX O**

### **LETTER OF APPRECIATION TO STUDENTS**

Dear Students,

Thank you for participating in my research project. Enclosed is a summary of the research results and a token of appreciation for your contribution.

## **APPENDIX P**

### **LETTER OF APPRECIATION TO INSTRUCTORS**

Dear Instructors,

Thank you for assisting me with my research project. Attached is a summary of the research results.