

Going the Distance:

Identifying Barriers to Online Learning that Exist for Non-traditional Adult Learners

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**Abstract**

The increasingly rapid speed of technological change has undoubtedly impacted the field of education as may have left those who need education the most, further behind. Online education requires both teacher and learner to have a different skill set. Some of these skills are hard skills such as general computer use, and other skills are soft skills such as the ability to interact in an online learning environment. A review of the literature on the barriers to online learning, a student questionnaire, and a series of semi-structured interview questions, will provide the data. A content analysis of the data will reveal key findings such as the importance of social interaction between student and instructor and good course design. Using a social constructivism approach, this research paper afford participants the opportunity to construct narratives that connect the research to their life experiences. This will be done through one-to-one semi-structured interviews. Interview questions are designed using appreciative inquiry as a framework in an attempt to draw out the positive learning experiences my participants have undergone in their online learning experience. In order to retain students in an online learning environment, faculty and instructional designers, must understand the barriers students face, their desire to interact, all within the package of a well-designed course that allows for social interaction and provides clarity and ease of access.

### **Acknowledgements**

While my name appears as author of this research paper, there are so many other voices that contributed to the words on the page. It is the voices of my students, in their quest to better themselves through the pursuit of higher education, that I wish to thank for their trust in me as their guide in their educational journey. They are the research participants of this paper and it is for them that I strive every day to be a better educator.

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university, and my daughter Erin as you begin high school, I hope you will continue to learn for the rest of your lives.

This work is dedicated to my late mother, Lorraine Taylor, for passing on her love of reading and for showing me that no barrier is too high to overcome if you believe in yourself.

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## Chapter 1: Introduction

Education can change lives. I have seen it. My mother, suddenly widowed at 46 years of age and with nine children to support, had a grade six education. Not surprisingly, her family was poverty-stricken. She returned to school, attending night classes to get her high school equivalency. She did further night courses to gain skills and within three years she was gainfully employed as a teaching homemaker in the Newfoundland and Labrador provincial government's Department of Social Services. She was most definitely a non-traditional learner.

Today, there are still 15.7 percent of Newfoundlanders and Labradorians between the ages of 25 and 64 who do not have a high school diploma compared to 11.5 percent nationally. Our older citizens fare worse, with 23.75 percent of those between the ages of 55 and 64 who do not have a high school diploma (Government of Newfoundland and Labrador, 2016). Newfoundland and Labrador has the highest provincial rate of unemployment at 17.6 percent, while the national rate is just 5.7 percent (Government of Canada, 2019). "Given the high payoffs of post-secondary education to both individuals and society as a whole, it is important that we increase college opportunity for all who can benefit and also improve completion rates," (College Board, 2017). Online learning has made post-secondary education more accessible than ever before. In Newfoundland and Labrador there are two public educational institutions offering a combined total of more than 650 online courses.

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This paper will explore the barriers to accessing and succeeding in the online classroom, especially for non-traditional students. Much has been written about the barriers to online education, one article listed 64 ranging from administrative barriers reaching back to the pre-admissions process (Muilenburg and Berge, 2001). Through the literature review and through one-to-one interviews with non-traditional adult students, I will further explore the importance of understanding what barriers exist once students have entered their online classroom and how these may be overcome through two main areas – social interaction and good course design.

This paper will first present an extensive review of current literature about barriers to online learning that exist for non-traditional students. Next, I will describe the methodology which used a student questionnaire and semi-structured one-to-one interviews. The following chapter will report my findings, discussion, and finally, my conclusion.



## **Chapter 2: Literature Review**

### **Introduction**

We often read or hear about the rapid pace of technological change and we are encouraged to 'keep up'. For the non-traditional student, this is a daunting task. Traditional students are defined as those who have followed a direct, uninterrupted path from high school into post-secondary education (Servage, 2015). For the purpose of this literature review, nontraditional students will be defined as adults who are entering post-secondary education but not as a recent high school graduate and they may: work full time; have dependent children; have considerable financial strain; live in rural or remote locations; and adults with low writing literacy and low computer literacy.

To 'keep up' we are encouraged to stay in school, keep training, and continue our education. Because online education is often touted as the solution for keeping up, it's no wonder enrolment in online education, not only in Canada, but around the world is increasing rapidly. Growth in online education continues to exceed higher education growth rates and there is no sign of it slowing down (Allen & Seaman, 2008). This is especially true if colleges and universities view online delivery as a way to reduce costs. Caywood et al say "Universities see online delivery as a means to increase revenue by reaching more students across a wider geographical population and by reaching more students with non-traditional schedules" (as cited in Wake & Bunn, 2015, p. 40). Learners are requesting instruction via online formats for convenience, for the potential to provide individualized and personalized experiences, and for the possibility for quick feedback (Wake & Bunn, 2015).

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Online learning is credited as being flexible, affordable, and effective (Ilgaz & Gulbahar, 2017; Luo et al, 2011). Not in the eyes of everyone. I have been instructing online courses for more than a dozen years and I believe the experience can be intimidating and ineffective for adults who are non-traditional students. Students who struggle with writing skills and computer skills - even keyboarding skills- are at an immediate disadvantage in the online classroom.

The aim of this study is to identify the barriers to online learning that exist for nontraditional adult students. My literature review is guided by the following research questions:

**RQ1:** What are the barriers to online learning for non-traditional adults students?

**RQ2:** How can online courses/programs be improved to accommodate non-traditional adult students?

This paper will begin with an explanation of the literature review search methodology and the reasons for the inclusion and exclusion of literature. The paper will provide background information which will include a description of the theories of adult education, the evolution of online learning and its importance to our rural population. Once these broader facets have been discussed, the review will examine the literature written about the barriers faced by non-traditional students in an online learning environment and solutions to these barriers will be described. The paper will conclude by noting key findings and identifying gaps in the literature.

It is important to understand the barriers faced by adult students as we offer them online education to help them reach their career goals, educational aspirations, or self-actualization. We know that many post-secondary institutions are pushing the online learning model but without knowing its impact on adult learners, we may be setting these students up for

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failure. In January 2018, the Government of Newfoundland and Labrador announced \$40 million will be invested in expanding broadband internet service to rural NL. This money comes from federal, provincial and private funding (Cooke, 2018).

### **Methodology**

Sources were imported to RefWorks from the University of Alberta online library databases. The databases selected were Academic Search Complete, Education Research Complete, and ERIC.

The inclusion and exclusion criteria for the literature review of secondary sources will be as follows:

#### **Inclusion Criteria:**

Included studies must include one or more of the Library of Congress Subject Headings listed below.

Included studies must have been published in the last twenty years

Included studies can be either qualitative or quantitative in their scope

#### **Exclusion Criteria:**

Studies published in a language other than English

Studies published more than twenty years ago

Studies that are not peer reviewed

Review papers

The scope of the literature review included the following Library of Congress Subject Headings:

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Distance Education

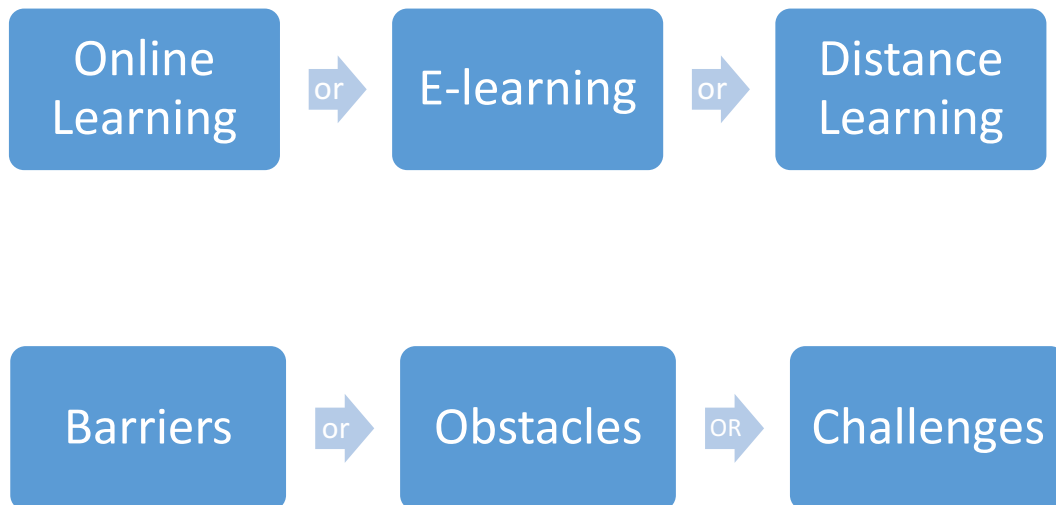
Distance Learning

Adult Education

The following keywords were also included in the search: online learning, e-learning, barriers, obstacles, and challenges.

### **Search String #1**

My initial search consisted of the following search strings. The search strings are connected by the Boolean Operator “and”. The searches were completed using the “all-text” field.



This search yielded 28,500 results (Academic Search Complete – 5,231; Education Research Complete 6,026; and ERIC 17,243).

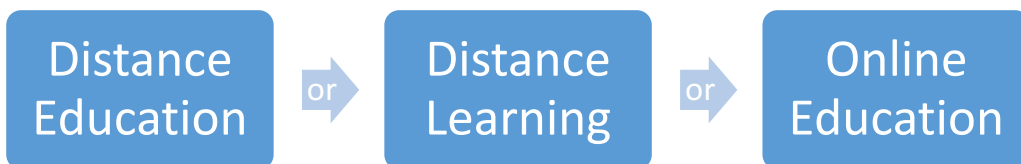
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Next, I limited the results to scholarly peer-reviewed journals: 17,293. I then limited the search to articles published in the last twenty years and got 17,171.

At this point, I decided to limit my search to those articles with the first part of search string in the “article title” field rather than “all text” field, resulting in 373 articles (Academic Search Complete – 86; Education Research Complete - 158; and ERIC - 129).

### Search String #2

My next search consisted of the following search strings. Please note the search strings are connected by the Boolean Operator “and”. The searches were done using the “all-text” field.



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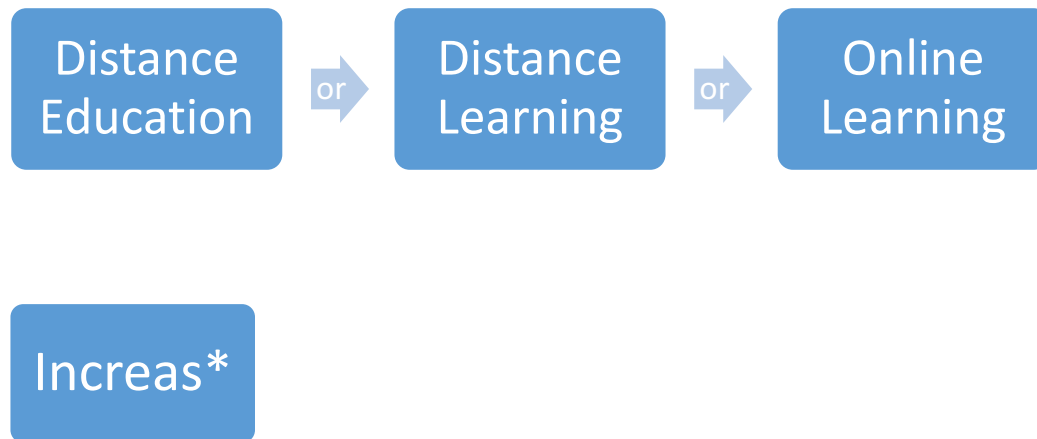
This search yielded 50,905 results (Academic Search Complete – 7,851; Education Research Complete 7,285; and ERIC 35,708).

I then limited the search results to those articles from scholarly peer-reviewed journals: 25,849. Next, I limited the search to articles published in the last twenty years and got 25,554. At this point, I decided to limit my search to those articles with the first part of search string in the “article title” field rather than “all text” field, resulting in 314 articles (Academic Search Complete – 72; Education Research Complete - 134; and ERIC - 108).

Records from the first two search strings (687 in total) were exported into Refworks and duplicated removed leaving 207 in total. These 207 articles were then screened, through an examination of the title and abstract, and classified according to their academic thoroughness, research methodology and their ability to speak to the research questions. Once this screening process was complete, 26 articles were deemed appropriate and are included in this literature review.

### **Search String #3**

At this point I decided to carry out a third search. The search strings are connected by the Boolean Operator “and”. The searches were completed using the “all-text” field:



The truncation \* locates any articles containing increase or increasing or increased. This search yielded 86, 658 articles (Academic Search Complete – 16,952; Education Research Complete 10, 403; and ERIC 59,156).

The following limits were then applied: scholarly articles, published in the last 20 years, academic journals and those articles published in English. This resulted in 37,119 articles. At this point, I decided to limit my search to those articles with the first part of search string in the “article title” field rather than “all text” field, resulting in 104 articles (Academic Search Complete – 29; Education Research Complete - 41; and ERIC - 34). Once duplicates were removed, I was left with 64 articles. These 64 articles were then screened, through an examination of the title and abstract, and classified according to their academic thoroughness, research methodology and their ability to speak to the research questions. Once this screening process was complete, we chose articles that were deemed appropriate and included them in this literature review.

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There were some resources used in this literature review which were “happened upon” during the search process. The first is a Government of Newfoundland and Labrador publication, two are relevant texts used in my graduate studies and finally, survey results were included from a personal survey I completed in 2018.

### **Background Discussion**

Adult education (andragogy) is distinct from the education of children. Malcolm Knowles is credited with developing the theory of andragogy in which he emphasizes that adults:

- (a) need to know why they need to learn something;
- (b) adults need to learn through experience;
- (c) adults take a problem-solving approach to learning; and
- (d) adults learn best when the topic is of immediate value (Knowles et al., 2005). Having a basic knowledge of Knowles’ theory is important to all adult educators including those who teach online.

In Jennifer Roger’s book, *Adult Learning*, she identifies the most essential principle of adult learning as “teaching is about learning” and that the task of a teacher of adults is to become a designer of learning (Rogers, 2007). She illustrates that when the learner is central to the project or project activity, he or she is more likely to learn, giving examples of the things we remember most from our childhood learning - a role in a play, an athletic feat, a topic we choose for research, or a debate we performed in.

She also notes that adults learn differently than children and suggests these reasons:



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1. Adults are anxious about learning, at least in the beginning.
2. Adults' memories of negative experiences from their past learning.
3. Adults are uncomfortable with a change in their existing beliefs; i.e. learning something new that contradicts their own beliefs.

These differences, when combined with low writing and computer literacy, may make learning even more difficult for learners in the online classroom, which relies heavily on written communications and computer use.

From reviewing the literature, we are better able to understand how adults learn and that barriers they face may prevent them from participating and succeeding in an educational setting. The literature points to many sources that tell us faculty must engage students in social interaction, provide opportunities for communicating that are more user-friendly, and a well-designed course have a major impact on student success. My study will focus on identifying barriers and improving success.

### **Online Learning**

According to Power (2011), distance education dates back at least to the mid-1800s when the University of London began offering correspondence education. Online learning is not to be confused with distance education. Online learning may provide the same opportunities but it is the new generation of distance education and it has several forms - blended, wholly online, and hybrid. Howlett, et al define online learning as “the use of electronic technology and media to deliver, support and enhance both learning and teaching and involves communication between learners and teachers utilising online content” (as cited in

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O'Doherty et al., 2018, p. 1). Online learning is thriving across Canada and the United States and new investments are being made to support its continued growth and development, particularly in Ontario and British Columbia (Contact North, 2012). In 2016-2017, 18 percent of all Canadian post-secondary students were taking at least one online credit course. Almost two thirds of institutions in Canada showed an increase in online enrolments between 2015-2016 and 2016-2017 (Canadian Digital Learning Research Association, 2019). In Newfoundland and Labrador, this is also true, where online learning has been identified as part of the current government's strategy to increase citizen's skills and eligibility into the workforce (Government of Newfoundland and Labrador, 2016).

### **Rural Population**

Attending an on-campus program is often a barrier to people living in rural communities because there is no physical presence of a public college or university. Simms and Greenwood (2017) in their report on the state of rural Canada, indicate that nearly 60 percent of the population of Newfoundland and Labrador are living in a rural area. They use the Organisation for Economic Co-operation and Development definition of urban versus rural, where urban must contain at least one small city with a population of 50,000 or more. This means that every community outside the Greater St. John's Area, is a rural community.

### **Barriers**

There are many barriers to online learning. One article listed 64 ranging from administrative barriers reaching back to the pre-admissions process (Mullenburg and Berge,

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2001). The literature states that social interaction is one of the main barriers to student success in the online classroom (Doherty, D. et al, 2018). Key components of social interaction in the online classroom include discussion postings and emails, both of which require students to have sufficient writing and computer skills (Mupinga, D. M. et al 2010). For these reasons this study will focus on writing and computer literacy.

### **Lack of Social Interaction**

A review of the research on interactions among teachers and students in the online classroom provides insights into the social aspects of online teaching and learning including the roles of both teacher and student (Wallace, 2003). Just as a diverse neighbourhood has its benefits so does the diverse online classroom. The article describes the importance of community-building in providing a safe and welcoming place for adults to learn because they are comfortable asking questions and seeking input from their peers. The paper also gives examples of how to overcome transactional distance which is present in all online courses. Transactional distance is defined as a function of dialogue and structure and that more dialogue between teacher and student means a smaller transactional distance; i.e. more engagement (Wallace, 2003).

Online classroom participation simply means *interaction*. The findings of this research study indicate that student-to-instructor interaction is most important. Unlike the face-to-face classroom, the online classroom has no opportunity to read body language from which a teacher can gauge the interest of participants and adjust his/her tone or presentation.

Personalized communication in the online classroom is critical to the engagement and retention of online students (Betts, 2009). In the article *Lost in translation*, Betts suggests

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faculty play a critical role in the student engagement and retention. Data collected from one study revealed that 12 percent of students who withdraw from their online course do so because of poor communication on behalf of the faculty (Betts, 2009).

Muilenburg and Berge (2005) in their report on student barriers to online learning they emphatically state “the single most important barrier to students learning online was a lack of social interaction” (p. 35). In Rao’s (2007) study, interview subjects noted they did not get enough time to talk to the instructor. In the study, participants said they enjoyed the opportunity to work in groups with their classmates using a virtual classroom; e.g. Elluminate *Live!* and reported they had learned from this format.

Rao & Giuli (2010) in their evaluation of a two-year online program in the Pacific Islands stated “the power of interacting and sharing information about the relevance of course content to their own island contexts was interesting and engaging to students” (p. 151) and students valued the online discussions with one another throughout the course. It was suggested one way to foster more interaction was to make synchronous sessions a formal part of the program. However, one of the benefits of online learning is the flexibility that comes from asynchronous learning. Yet, many studies have shown that one of the most effective methods of creating success and participation is synchronous learning. The instant feedback and the connection with others helps solve feelings of isolation often associated with online learning.

According to Wake & Bunn (2015), successful online courses take advantage of social, participatory, and constructive learning approaches. In courses where students are given the opportunity to collaborate with each other and are encouraged to apply their knowledge to real world situations we may create the same or an increased level of social connectedness as a face to-face class.

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### **Lack of Key Literacy Skills**

Literacy encompasses all the skills needed for work, learning, and life. The Government of Canada, along with other national and international agencies, have identified nine key literacy and essential skills that are used in almost every job and in our daily lives – these include writing and computer use (Government of Newfoundland and Labrador, 2018). These are among the same skills that are key to participating and succeeding in the online classroom. These skills are needed for discussion postings, email, real-time text chats. According to Stacey (1999), “group electronic discussion and sharing of resources gave them an environment for actively constructing new ideas and concepts and enabled them to learn effectively.” (as cited in Wilson & Stacey, 2004, p.34). Without the necessary literacy skills, one could not participate in such discussions.

Whether the online classroom provides learners with literacy training, a diploma, a degree, or occupational training, the more educated we are the more likely we are to be gainfully employed. “Over the past decade, research consistently demonstrated that individuals with higher literacy skills earn more income, work in higher skilled occupations, are less likely to be unemployed, experience shorter periods of unemployment, are more likely to find full-time work, and are more likely to receive further training” (Organization for Economic Cooperation and Development, 2005). Preparing for the online classroom can be as intimidating (and as necessary) as preparing for the changing workplace.

#### **1. Writing Literacy**

In their descriptive study, Wake & Bunn (2015), found that communication was a significant area of concern for those new to online learning. Faculty reported concerns about the

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candidates' abilities to write professional communication (e.g. email, discussion postings).

Unfortunately, the expectation of writing is quite high in online learning. (Mupinga, D.M. et al., 2010). Learners' abilities to compose accurate and acceptable writing for their assignments was also problematic due to many mechanical and grammatical errors (Wake & Bunn, 2015).

In Marcial et al (2015) using a descriptive study and survey method they identified the academic skills needed for successful online learning as language, writing, reading, communication, typing, and confidence. Lack of language skills scored as the highest barrier amongst the 44 respondents. It should be noted here that respondents were from various ethnicities and English was not their first language. A student's ability to compose acceptable writing assignments was often problematic due to mechanical and grammatical errors and some students are fearful of writing (Wake & Bunn, 2015, p. 44). Beyond assignments, being able to write well-structured sentences is essential in an online learning environment because writing may be the main form of communication between student and instructor and among students. A 2018 survey of 23 online instructors at College of the North Atlantic found:

- 100% ranked writing emails as the “most frequent” form of communication.
- 92% of instructors indicated their students post written messages to the discussion forums.
- 78% of instructors assigned a grade to students' written messages posted in the discussion forums (Taylor-Hulan, 2018)

## **2. Computer Literacy**

Regarding computer literacy, oftentimes we may assume that individuals who take online courses are highly computer literate (Fedynich, 2013, Safford & Stinton, 2016). In their paper,

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Safford and Stinton (2016) acknowledge that many adult, non-traditional students may use a range of digital and online technologies in their personal lives but this may not adequately prepare them for the use of technology for academic purposes. Unlike in an on-campus computer lab where every student uses the same software and hardware from the same internet connection, non-traditional students are in dissimilar environments with varied levels of computer literacy. “It’s a plain and simple fact. As hard as it is to imagine these days, there are individuals that are less than adequately prepared for a technology-rich learning environment.” (Ratliff, 2009).

Basic computer skills are necessary to organise, store, and retrieve information digitally as well as be able to read digital content and submit their work electronically (Stinton, et al., 2016).

Van Dijck (2014) in her chapter warns the reader that assessing levels of digital skills has often been performed in specific settings; i.e. classrooms. Using surveys is also unreliable because people generally report that they have higher skills than they actually possess. Van Dijck believes observational studies may give a more accurate description of the level of computer skills. The lack of operational internet skills are barriers to online learning. These skills include using toolbars, buttons, and menus; inputting data into forms; and opening and saving files. In the tests administered for her study, van Dijck found that aging and people from lower levels of education experienced the most difficulty with these operational internet skills. (van Dijck et al. 2014).

## **Solutions to Barriers**

### **Role of Faculty**

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One of the barriers to online learning is the lack of social interaction this may be overcome by faculty who fulfill their role in the online classroom. Faculty have an obligation to encourage and support social interaction so that students do not feel isolated. While interaction is the cornerstone of any learning experience, it takes time and a level of comfort. Interaction in an online classroom is influenced by institutional policy, the technology being used, the philosophy of the teacher, course content, and the context in which the course is being taken (Vrasidas & McIsaac, 1999, p. 23).

From an educational context, there are three types of interaction – learner to content; learner to teacher; and learner to learner. Faculty can provide an opportunity to empower students and enhance learning:

1. Provide feedback – information students receive about the correctness of their work.

Timely and encouraging feedback directly affects the student's satisfaction. Providing feedback is responsive; however, it should be genuine, timely, and positive – even when pointing out something that needs corrective action (Belew, 2014, pp. 1-2).

2. Be socially present - the degree to which a medium allows users to feel socially present.

This can be promoted with strategies such as posting online office hours, holding synchronous sessions such as chats or web-conferencing, and responding to all inquiries within a timely manner.

Wake & Bunn offer several recommendations to support students' writing: "(1) require identified candidates to work directly with the university's writing centre; (2) provide exemplar models to the students; (3) provide writing workshops; (4) make clear expectations to the students regarding the level of writing required" (p. 44).



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By providing opportunities for interaction we can overcome several barriers such as isolation and geography. Rao (2007) suggests that synchronous learning not only gives participants the opportunity to meet but also helps them receive technical support. This gives students the freedom to emulate the discussion that would take place in a traditional classroom.

“This mode allowed participants to discuss content with their peers and within their cultural contexts and report back to the instructor for immediate feedback” giving students the opportunity to be part of a learning community rather than working in isolation (no page number).

### **Course Design**

A well-designed course combines the students' experience with informal use of communications technology with the academic requirements. Some examples include incorporating a 'thumbs-up' feature if they're familiar with Facebook; use of personal email; video conferencing similar to Apple's FaceTime; as well as their familiarity with Google search and YouTube. Using these familiar technologies when designing an online course can address barriers related to low literacy and computer skills. We need to welcome them with the skills they have so they can leave with the skills they need.

Caywood et al state: “If a course is well designed, there may be no significant difference between traditional classroom and distance learning education in terms of student acquisition of content. However, poor course design is common and can impede student learning” (as cited in Wake & Bunn, 2015, p. 40).

Dallas Baptist University (DBU) in Texas has an online completion rate that has remained constant between 92% and 93% since 1998 (Moore et al., 2009). DBU's online course

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content is designed by qualified instructors in that discipline and the content is approved by the provost office. The university also has a team of instructional course developers who develop course features using a range of technologies from streaming media to threaded discussions.

Wang et al state that online courses should be designed with a focus on pedagogy, social, and technical perspectives. First, the online content and instructional activities should match the same offering in a classroom. Second, online and classroom students should have equivalent learning experiences. Third, online students should be able to interact with others in real time using technology-mediated communication (2017). As classroom instructors need to prepare their lesson plans and physical classrooms; the online instructor must be able to build and maintain an online environment that includes these three elements.

King & Doerfert stress that interaction does not simply occur, it must be “intentionally designed into the instructional program”; however, he cautions that the different technologies have their own benefits and constraints and designing a course to use these effectively is key (as cited in Berge, 1999, p. 5). For example, it is not enough to provide a technology that allows interaction if that interaction is not relevant or useful to learning.

According to Ellen D. Wagner (1998), when designing an online course, educators must consider the outcome they hope to achieve with each interaction. Typically, each interaction hopes to either change the student in some way or move the students toward an “action state of goal attainment.” (p.3).

“With some flexibility and willingness to appraise the needs of participants and to design courses accordingly, providers of distance learning can create a viable mechanism to provide educational opportunities” (Rao, 2007, no page number).

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Indeed, there have been many success stories regarding online learning. Lim (2001) in her predictive model of satisfaction for adult learners in a Web-based distance education course notes that the internet is part of our daily communications. This familiarity with the internet may increase computer efficacy which may result in a successful online learning experience.

### **Key Findings**

Much of the literature about online learning highlights its flexibility and unique limitations. However, research does not identify barriers to online learning that exist for those who cannot type or write well-structured sentences and paragraphs. This is important because online learning relies heavily upon writing and keying emails and messages. By considering the needs of learners with low writing and computer skills, we can create a more inclusive learning environment at any level.

Digital immigrants – those who did not grow up with the internet – must become adept at participating in online learning as more and more colleges, universities, and corporations are shifting toward this approach to learning, training, and development.

Recent Census data reports that Newfoundlanders and Labradorians are lagging behind in the following areas:

- 15.7 % of those aged 25-64 do not have high school certification compared to 11.5% nationally
- 8% of those aged 25-34 do not have high school certification which is about the same as the national average of 8.7 percent
- 17.2% of those aged 45-54 do not have high school certification

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- 23.75 of those aged 55-64 do not have high school certification (Government of Newfoundland and Labrador, 2016)

The literature indicates that lack of social interaction is the often-repeated barrier for students who study online. Even articles that focus on the role of faculty, and course design, all indicate that social interaction is key to success. While real time, or synchronous interaction is often beneficial in providing social interaction, it is also a hindrance if it impedes upon the flexibility of studying online.

Understanding that adults bring a lot to the classroom can be humbling for teachers of adults; however, it should be welcomed. Students should know their experiences are valuable and worthwhile to themselves, to their classmates, and to faculty.

Ultimately, this pilot study aims to identify barriers for learners with low writing and computer skills so that they may further their education from their own homes via online learning.

### **Conclusion**

Through my literature review, I have examined some of the most common and recurring themes that describe the barriers to online learning. Several themes emerged included social interaction, skills required, and course design. Social interaction included student-to-student interaction and instructor-to-student interaction. Literacy skills included computer and writing literacy skills. Identified solutions included the role of the instructor and good course design.

The literature discusses barriers that exist for the non-traditional student who is becoming more prevalent in the student population of many colleges and universities. There is

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very little in the literature that deals with how the lack of key literacy skills affect the confidence of the online learner impairing their success.

This literature review informed the approach to my capstone project, as I aimed to fill gaps in the literature by analyzing the data collected through interviews with human subjects. I will use a qualitative approach by completing one-on-one interviews and questionnaires of nontraditional adult learners who may face barriers to participation and success in the online learning environment. I will be asking questions to collect personal experiences and perceptions. I will then analyze the responses for common themes. Through this ethnographic research project, I hope to not only better inform myself, but also my colleagues in the online teaching and learning community so that we may best fulfill our roles in the education of adults.

### **Chapter 3: Research Design and Methodology**

#### **Introduction**

Many Newfoundlanders and Labradorians are unable to participate in the growing trend of online education. This is unfortunate because education is needed to join and participate in the today's workforce. Newfoundland and Labrador Laubach Literacy Council provides one-to-one tutoring to people living in areas of the province who have access to this service but those living in rural areas of the province cannot avail of this. Sixty percent of Newfoundland and Labrador residents live in a rural area. Those who have limited writing and computer skills are even more disadvantaged. Recent Census data reports that 15.7 % of Newfoundlanders and Labradorians aged 25-64 do not have high school certification compared to 11.5% nationally (Government of Newfoundland and Labrador, 2016).

This research paper aims to answer the research questions: What are the barriers to online learning for non-traditional students and how can online courses or programs be improved to accommodate these students?

As part of the research process, I provided a questionnaire to a group of adult students who have completed at least one semester of online learning in a program for which the entrance requirements are minimal. The questionnaire was designed to draw out the respondents who fit the definition of a non-traditional student – entering post-secondary education not directly from high school - and who have limited writing and/or computer skills. Participants who met the criteria provided their contact information as agreement to be interviewed. I conducted semi-structure, telephone interviews with these participants. Last, I conducted a content analysis to examine the findings from the data obtained from participants' responses.

## Design

In order to answer the research questions, this research paper used a qualitative method in a questionnaire that was administered to create a pool from which to select participants for semi-structured, one-on-one interviews. Participants were selected for these interviews if they fit the definition of a non-traditional student. The participants were enrolled in a college program with low entrance requirements – high school diploma or mature student status. Mature student status is defined by the College of the North Atlantic as "persons who do not meet the entrance requirements for admission into a full-time program, but who are at least 19 years of age at the time of submitting an application, and who have been out of school for at least one year". I then used a qualitative content analysis to examine my data.

The purpose of this research was to identify the barriers to online education that exist for non-traditional students who have limited writing and/or computer skills and to discover ways in which online learning can be improved to help students succeed in the online classroom. With about 60 percent of the population of Newfoundland and Labrador living in rural areas, access to post-secondary education is difficult. The obvious solution would be to study online; however, for those who have limited writing and/or computer skills, online learning is elusive. A qualitative approach, using semi-structured interviews to gather data, allows the researcher access to the participants to explore the "depth, detail and individual meaning" (Patton, 1990, p. 17). Furthermore, in her book, *Qualitative Researching*, Jennifer Mason (2002) highlights some of the strengths of qualitative interviews that are sometimes overlooked. She says that through a qualitative interview, the researcher is more able to understand: the texture and weave of everyday life of the participants; the understandings, experiences and imaginings of research

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participants; how social processes, institutions, discourses or relationships work; and the significance of the meanings that they generate. Ultimately, this phenomenological approach will lead to a better interpretation, and consequently a better understanding of the experiences, of the participants of the study. (Merrigan et. al, 2012).

Guided by the University of Alberta's policies and procedures for conducting research, I distributed the information and consent form (Appendix A) to potential participants. I provided them with my email address and personal telephone number so that they may contact me for any clarification or questions regarding the research before they consented to the questionnaire and/or agreed to participate in an interview. This was to ensure the participants' anonymity and confidentiality were protected.

Because obtaining ethics approval from the University of Alberta's Research Ethics Board (REB) does not automatically grant one permission to survey or interview participants at local institutions, and I was therefore required to apply for secondary ethics approval by the Interdisciplinary Committee on Ethics in Human Research (ICEHR) from Memorial University of Newfoundland (MUN). This approval was granted. Because the College of the North Atlantic does not have its own REB, I was required to apply for ICEHR through MUN. As a precautionary measure, I also received permission from the Associate Vice President of Applied Research & Innovation at the College of the North Atlantic, who supported this research.

### **Participants**

There are 35 potential participants in the target population whom I had planned to ask to voluntarily complete the questionnaire. This would be statistically significant since I had hoped that all 35 would participate. This target population can be defined by the characteristics listed



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below and would allow me to draw conclusions to determine the study population (Martinez-Mesa et al, 2014). Based on the responses from the questionnaire, I hoped to get a sample size of at between eight and ten participants to interview from my study population.

To describe the target population, individuals had to meet the following inclusion criteria:

1. Recently enrolled in an online course or program
2. The program of choice is offered both face-to-face and online
3. Willing to complete a questionnaire
4. The program of choice has a low entrance requirement

Results from the questionnaire would provide me with a study population of individuals whom I could interview based on the following criteria:

1. Self-identify as having low writing and/or low computer skills
2. Meet the definition of a non-traditional student

Using appreciative inquiry as a framework for the research paper, my interview questions were designed to draw out the positive learning experiences my participants had undergone. The aim is to “identify the strengths, motivations and passions that influenced” of the participants (Miles, 2018, p. 710).

Participant exclusion criteria for interview:

1. Entered post-secondary education directly from high school
2. Self-identified as having superior writing and/or computer skills

### **Setting**

The one-on-one telephone interviews were conducted at a time that was chosen by the participant and in which I would call them so that the subject would not incur any long distance telephone charges. I conducted interviews in my office with the door closed and free of any interruptions or background noise. All data collected from the interviews was collected by myself using a shorthand method of handwritten notes. These notes were later keyed into Microsoft Word to be used for analysis purpose.

This form of personal interviews is advantageous because:

- A rapport can be established between the interviewer and the participant;
- The participant is more likely to respond to all questions;
- Obtain more information through insightful questioning;
- Observe participants' cues such as laughter and sighs (Merrigan et al, 2012).

Personal interviews have the potential to produce anxiety (Watt & van den Berg, 1995 as cited in Merrigan et al, 2012). To help alleviate this, all participants were encouraged to choose their interview time. I considered conducting a focus group; however, I worried that individuals may not be as forthcoming about their writing and computer literacy levels in this setting. As well, some groups "may exert conformity pressure over individual responses" (Merrigan et al, 2012, p. 112).

### **Instrument**

The questionnaire results determined whom to interview. I used semi-structured, one-on-one interviews to gather data. According to Barriball (1994), semi-structured interviews are an excellent way to explore a subject's thoughts and opinions.

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Using open-ended questions, I hoped to uncover additional insights and interests raised by the participants. This approach is directly related to social constructivism because it allows participants to construct narratives that connect the research to their life experiences. Unlike in an observational setting, the context of open-ended questioning can delve into the past experiences of the participants' lives. Their experiences and beliefs are shaped by the context of their whole lives (Morgan, 1993). The often heard statement "I was never good at math" is an example of connecting one's life experiences with their perception of their current situation and may impact their expectations of themselves in the online classroom. I felt this data collection method is the best technique to ensure that each participant's point of view is heard and clarification gotten was gotten, if needed.

The interview questions were designed to gather information on what barriers to learning exists for individuals who are enrolled in online learning. The questions were free of academic jargon and written in plain language.

Some examples of questions in the interview are as follows:

Background:

1. What is your program of study?
2. Before you began your program of study, what was your highest level of education?
3. When writing assignments and papers, how would you classify yourself:

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- a. Great! I have no problem with sentence structure, grammar, or composing paragraphs.
- b. Good. I can write well-structured papers but usually have to proofread several times.
- c. Average. I can get through it but it takes me longer than others.
- d. I am not good at writing assignments or papers.

Main questions:

1. What do you see as an advantage of the online classroom?
2. What conditions would need to be created to improve your online learning experience?
3. Are there any courses that you feel would be best undertaken in an on-campus classroom?

The interviews produced data that was responsive to the research question and described to me the barriers that exist and how they may be overcome.

### **Procedures**

I conducted this study by taking the following steps:

- Obtained research ethics approval from University of Alberta
- Obtained secondary ethics approval from ICEHR via MUN
- Obtained permission from the College of the North Atlantic's Office of Applied Research and Innovation to conduct a questionnaire and interviews
- Developed a short presentation or description of the research paper to deliver to potential participants

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- To obtain the cooperation of participants, I:
  - Established rapport
  - Followed up procedures, if needed
  - Used jargon-free language
- Administered the instrument (interview)

One of my biggest concerns with conducting the interviews was that I feared I may insult potential participants by asking them to participate because of any limitation of their skills. The types of questions to be asked, concerns about confidentiality and anonymity needed to be thoroughly discussed with the participants (Newton, 2010). Framing was also key; i.e. I truly believe that I am asking participants to help us, as educators, become better at what we do.

### **Analysis**

I transcribed each of the interviews using Microsoft Word software. To analyze the transcribed data, I conducted a content analysis. I applied the techniques described by Saldana in *An Introduction to Codes and Coding*, in which a word or short phrase may capture the essence of the language-based data gathered from interviews. Coding is not an exact science but is an interpretive act and thus fits the interpretive paradigm. Coding is meant to summarize or condense the data, not reduce it, so it is important for the researcher to pay attention to themes and patterns as he or she analyzes the data. A good rule of thumb is to consider one's first impression when grouping data into these themes and patterns (Saldana, 2008). I had hoped that the themes and patterns that emerged will help to draw inferences about the barriers that

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exist for individuals taking online courses as well as the ways in which online learning may be improved.

To be credible, the research process “must be both valid and reliable which may be a challenge when a project is based on semi-structured interviews” (Barriball, K., 1994, p. 328).

“Interviewer friendliness, approach and manner towards respondents can help enormously with securing validity and reliability of the data.” (Barriball, 1994, p.332). This has been my approach.

Using personal interviews is advantageous, especially in situations where there may be a low response rate to the questionnaire, because it provides the researcher the opportunity to evaluate the validity of the responses. Non-verbal cues, even by telephone, such as sighs, laughter, and pauses, can help the researcher discover sensitive issues. This form of active listening was coined by Gordon (1975).

To further maintain the integrity of the research, written notes were transcribed immediately after each interview. This is how I attempted to ensure accuracy of the contents of each interview. Additionally, I let the participant decide the time and date (within a specific time frame) at their convenience to secure a positive response rate. With nearly 20 years working with adult students, I felt confident I would gain their trust and build a positive rapport.

### **Summary**

I conducted the research using a qualitative approach in which I targeted non-traditional adult students using semi-structured interview questions. The students were enrolled in an online program for which the entrance requirements were high school diploma or less. The research

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also aimed to hear the voices of the participants about how they feel online learning may be improved. This important because the number of educational programs being offered online is increasing with the fastest growth happening in Canada's colleges, where distance enrolments are up 60 percent in the past five years (2014). Through a questionnaire and telephone interviews, I conducted a content analysis to look for themes that helped me answer my research questions: What are the barriers to online learning for non-traditional students and how may these be overcome?

## **Chapter 4: Findings and Discussion**

### **Introduction**

The purpose of this study was to identify barriers to online education that exist for non-traditional adult students. This research paper will explore data collected from students who have been enrolled in an online course or program at College of the North Atlantic during the past academic year. This study also aims to identify ways in which online courses and programs may be improved to accommodate these students. Barriers that prevent non-traditional adult students from participating and succeeding in online education are described in an extensive literature review (see Chapter 2). In particular, the focus was on identifying students who had limited writing and computer skills as these skills were viewed as being very important to the participation and success of engaging in an online course or program.

These barriers helped me to formulate the questions for the student questionnaire as well as the questions for the semi-structured interview that would follow the questionnaire. I distributed the online anonymous questionnaire to students who have been enrolled in an online program for which the entrance requirements were a high school diploma.

The questionnaire was distributed to 12 students, of which, eight students completed the questionnaire, and six students agreed to be interviewed. Having distributed the questionnaire during the summer months, when these students were no longer enrolled in any online courses, was likely a contributing factor to the low number of participants. The questionnaire aimed to collect data about the barriers that existed for non-traditional students, and relied upon them self-identifying as having begun their program of study with limited computer and writing skills. All



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the questionnaire respondents were non-traditional students, which is defined as having entered post-secondary education not directly from high school. Of the eight who completed the questionnaire, only one identified as having limited writing skills while six identified as having limited computer skills when they began their online studies. Of the six that were interviewed, one identified as having limited writing skills and four identified as having limited computer skills.

Of the eight respondents who completed the questionnaire, I de-selected any student who did not meet the definition of a non-traditional student; i.e. did not enter post-secondary education directly from high school. This resulted in six meeting the criteria of a non-traditional student and all six agreed to be interviewed.

### **Data Analysis**

I captured the data from the interviews using handwritten notes taken with shorthand techniques. I applied an inductive coding method as I felt my research was more of an exploratory nature and required an “immersion in the details and specifics of the data to discover important patterns, themes, and inter-relationships” (Organizing Your Social Sciences Research Paper: Qualitative Methods, n.d.).

During initial coding I read through the participant’s responses to familiarize myself with the data, making detailed annotations in the margins of the text. Through analysis of the interview data, several patterns and themes emerged. I then conducted line-by-line coding in which I looked through the data with a closer eye ensuring the codes were more detailed.

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Next, I assigned the data categories, hoping to determine consistent and dominant themes for the data. I also kept an eye out for anything new that has not already been revealed to me during a review of the literature.

The following themes arose from the data collected from the five non-traditional students who were interviewed. I broke my findings into two main categories – barriers to online learning and improvements to online learning. Put broadly – barriers and improvements.

Through the application of a detailed coding process, whereby I coded line by line of text, two main categories emerged. These categories are – barriers to online learning for non-traditional students and improvements to online course design and delivery. Within the category of barriers, the following themes emerged and are listed in order of frequency reported:

- i. Lack of or minimal student-instructor communication
- ii. Lack of or minimal computer skills
- iii. Lack of or minimal student-student communication
- iv. Balancing studies and other responsibilities

Within the category of improvements to online learning, the following three themes emerged are these are also listed in order of frequency reported:

- i. Good course design
- ii. Instructor availability
- iii. Feedback on graded assessments

### **Further Barriers to Online Learning**

While the literature review identified many of the same barriers that would emerge in the data collected from the interviews, still new data surfaced during conversations with the respondents. The barriers, as identified by the respondents, are given here in order of frequency with lack of student-to-instructor communication being the most reported barrier among the respondents.

#### *(1) Lack of student-instructor communication*

When asked, all respondents expressed a strong desire for more frequent or timely communication with their instructors. One respondent said “A barrier for me is the instructors who don’t really get to interact with their students. There are some I was thinking ‘why are they doing it?’ they can’t even answer within a day”.

When asked what was considered timely communication, one respondent answered “You always had to send an email to your instructor plus you had to wait and if your instructor was like good for returning emails, then like fine, within a day you got a reply, but if you had an instructor who is not, there were like times that I waited three or four days.” Asked to define immediate feedback as it relates to contacting their instructors through email or discussion postings, all six respondents said they considered immediate feedback as having received a response from their instructor within one day. One respondent said “In a regular classroom, you could ask the instructor a question right there and then and get your answer right away. So, it’s kind of frustrating when you’re working on something and you have a question and you don’t get

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an answer right away. I just try to work on something else and hope I hear from her (instructor) the next day.”

As the literature stated, overcoming *transactional distance* needs to occur in the online classroom. *Transactional distance* is defined as a function of dialogue and structure and that more dialogue between teacher and student means a smaller transactional distance; i.e. more engagement (Wallace, 2003).

## **(2) Lack of computer skills**

The second most dominant theme that emerged was the students' lack of computer skills upon beginning their online course. One respondent reported that their lack of computer skills, specifically relating to file management, caused them much frustration when they submitted the wrong file for a final exam. While the respondent knew the material for the exam, basic file management was a limitation. “I had no issue with learning the accounting stuff; but, when it came to saving my work and uploading it to a dropbox, I was lost. I spent several hours and nearly pulled my hair out just looking for a file! So that's not part of accounting, it's like a skill not related to accounting but it sucks not to have that skill!”

Another respondent, who had limited computer skills said “I didn't know Word from Excel. To me it was like a foreign language. I feel the instructors assumed we all had some background in this stuff. I sure as heck didn't and it was total, absolute frustration. Enough to make you want to quit.”

Another respondent said that they felt bad for some of the classmates and pointed out that some were older and didn't have any prior experience with online learning. The respondent,

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though a non-traditional student, had done an online course before and did not feel as disadvantaged as others. When asked how they knew this about some of their classmates, they reported that many of them get to know each other outside the online classroom environment using social media tools such as Facebook Messenger's group chat feature.

### ***(3) Student-student communication difficulties***

Respondents identified the lack of face-to-face interaction a barrier to communicating with their fellow classmates. Several respondents expressed their frustration with doing group work online. For those in the office administration program, group work was a learning outcome and could not be avoided. One student pointed out that general course discussion postings are fine but if a mark is assigned, they don't want to be involved in group. "Yes, it's great for just an actual discussion but if it's a *graded* discussion, like for marks, I don't want to depend on others in a group setting. But I do like a topic when you put in your point of view and comment, I love that. I like seeing other people's perspectives."

Though only mentioned by two respondents, but interesting to note, is that students who were strong were often privately contacted by their classmates. One of them said "I got a lot of private messages from different students asking me to help them. Overwhelming. I didn't really mind but if I was doing something I didn't want to give them the answers. I wanted them to learn for themselves."

### ***(4) School-life balance***

An unexpected discovery was that flexibility, while often described as an advantage, can also be a disadvantage. As one respondent stated, once they were enrolled in an online learning course, fitting it in to their already busy schedule of child-rearing and a full-time job was

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difficult, “If you’re at home you got umpteen other things that you have to do because you are just adding on to all that you are already doing.”

### **Improvements to Online Learning**

Just as respondents had several barriers to discuss, they were also forthcoming with several ways to improve the online learning experience. In order of frequency of occurrence, following is a list of their improvements to online course content and delivery.

#### ***(1) Good course design***

Respondents reported that how a course is designed will help learning in the online classroom. While more suggestions were noted about course design, it is hard to determine if the idea is more important than instructor availability as they were both so frequently mentioned.

Respondents suggested these elements to improve course design:

(a) A detailed and complete schedule available from the very first day of access to the online classroom. One respondent described it like this “...a good detailed layout of when things need to be done because then I can plan. A good detailed outline right from the start is *OK, I can do this*. It gets you in the right mindset”. This plan or outline of the schedule should also be error-free. One respondent reported “I had one instructor (who) was right off the page. She had two or three things contradicting each other” adding that it took a long time for the instructor to fix these errors resulting in much confusion for the students.

(b) Course material can be presented in a variety of formats, such as podcasts, videos, slide shows, and screen shots for anything that required step-by-step instructions.

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(c) Access to a forum in which to communicate with their classmates in the absence of the instructor.

(d) Clear and accurate instructions, in particular to due dates and where to submit their assignments.

(e) Access to relevant supplementary reading materials in which students could avail of when or if needed to clarify the subject material. Several respondents said that things should be easy to find in their courses. All assignments should be in one place and all lecture notes should be clearly identified by date and topic, if possible. One respondent put it this way: “It can be like finding a needle in a haystack but worse, so much worse, because when you know you’ve seen it, it’s like the needle in that big haystack just keeps moving” (*laughs*).

***(f) Instructor availability***

While I had expected instructor interaction to be a key area in need of improvement, a more specific and dominant theme mentioned by all respondents was *availability* of the instructor. This included knowing when the instructor would be available for real-time conversation either by telephone, Skype, FaceTime, or live chat or webinar features available within the learning management system. One respondent said “Maybe the instructor could ask if we want to interact, like a live chat or even a conference call. Something like that would really help a lot.”

Almost as frequently mentioned, was knowing when the instructor would *not* be available. Simply stated by one respondent: “it’s frustrating waiting on an email when you’re stuck”. Another respondent said that without any real-time interaction with the instructor they “never got anything out of the course” that they couldn’t get from a textbook. This respondent credited meeting with other students via social media, such as Facebook Messenger, is where they learned

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the most. When probed, the respondent said “because you got your questions answered right away and if you didn’t understand the answer you could ask for immediate clarification”.

While all respondents defined immediate feedback as a written response within one calendar day, several respondents expressed frustration about not having access to the instructor, whether via email or otherwise, immediately preceding an assignment due date or an exam. One respondent reported that availability to the instructor before important assessments that “if they could have a group conference call so we can discuss the important points of what they (instructors) think would benefit us. Having it broken down where you could point out that this was kind of important” would be beneficial.

As well, the same respondent noted that even just being aware of when the instructor is not available would be a big help – “If (you) tell us you’re not going to be there for a weekend then I will email them my question and work on what I need to work on until they get back”. Added to this was another respondent’s suggestion that if an instructor is going to be absent, then they should communicate this absence to the entire class.

It is not enough to provide the technology (built-in chat rooms, conference calling features, etc.), it is important to use these tools effectively. The combination of good course design with instructor availability is line with what the literature indicated in Chapter 2. King and Doerfert stress that interaction does not simply occur, it must be “intentionally designed into the instructional program” (as cited in Berge, 1999, p. 5).

Unless these technical tools are used for social interaction, there is little opportunity for engagement. Lack of engagement may impact student retention. As the literature review indicated (Chapter 2), data collected from one study revealed that 12 percent of students who



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withdraw from their online course do so because of poor communication on behalf of faculty (Betts, 2009).

*(g) Feedback on assessments*

Whether it is electronically-generated instant feedback for an online quiz or real time interaction with the instructor, several respondents expressed the importance of timely and thorough feedback on graded assessments. One respondent gave this illustration – “Take accounting as an example, if I don’t know a debit from a credit that’s going to have a huge impact on me as I work through the material. If that’s not corrected early, I am going to keep making the same mistake until I get feedback that sets me straight.” Another respondent noted that more quizzes that are instantly graded can help, they added “it doesn’t always have to be the instructor telling me where I went wrong. Sometimes when you do a quiz if you got a little pop up that said it was wrong and to see page X, then I can figure it out from there”.

**Discussion**

Identifying the barriers that exist for non-traditional post-secondary students is important, and much has already been written about this topic. Also important is to listen to the voices of those impacted by these barriers so that educators, course designers, and other decision-makers may gain insight into how to improve the content and delivery of online courses and programs.

Most of the barriers to online learning for non-traditional students that were reported by the participants were similar to what was discovered in the literature review such as lack of social interaction and limited computer skills. Though only two questionnaire respondents reported low-writing skills, none of them talked about this during the interview. While the literature review revealed the lack of social interaction as a barrier, respondents in this study

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were specific about wanting more interaction with their instructor and brought forth specific details about how their instructors could provide this. There did not seem to be a strong desire for socially interacting with classmates. Surprisingly, classmate interaction was mentioned more as a hindrance than a requirement for online study as respondents mentioned that weaker students relied upon stronger ones for assistance and that group work was particularly cumbersome in an online setting. Another surprise was that the flexibility of studying online can also be a burden as many respondents reported they did not give up their jobs nor their child-rearing duties, thus studying was seen as an “add-on”.

Both student dependence and group work are fascinating topics for which further research could be done.

Respondents had very specific suggestions on how to improve the online learning experience. These include a well-designed course with all the details available, especially assessment due dates, from the very beginning. Interaction with the instructor could be built-in to a course through scheduled synchronous sessions provided using Skype, chat room, or teleconference. At the very least, good interaction is defined as an instructor responding to a student’s email within one calendar day. Knowing when the instructor is not available was also mentioned as highly important. Last, timely feedback on graded assessments was key in helping students continue on with their work and fixing their errors early so as to avoid making the same mistakes again.

I believe when a non-traditional student becomes involved in online learning, they do so for many reasons such as the flexibility and the financial savings of not having to re-locate to study. Many students continue to work to further reduce the financial strain of attending post-secondary education. Most of the respondents that I interviewed also had children. Being able to

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stay at home to study and raise children can be a deciding factor when choosing between online learning and on-campus learning – or even making the decision to study at all. Because of work and life commitments, students often do their school work outside of the regular day time hours and thus find themselves studying at night. This is in stark contrast to the instructor who works on a campus during regular business hours. It is no wonder students look to other students for help as their instructor may not be available to help them. Colleges and universities need to allow for flexibility for their instructors so that they may make themselves available, even if just once a week, to students outside regular business hours.

Participants emphasized that good course design is of utmost importance to the success of students in online learning. Reliance upon the instructor, and others, will be reduced if a student can find what they are looking for in a timely manner. It is also key to consider different learning styles. Many courses at the College of the North Atlantic are text-based with some static visuals. I think it would be exciting to include podcasts, instructor video recordings, supplementary reading materials, as well as regularly scheduled synchronous sessions.

A concern raised during the interviews was that strong students may become overwhelmed when several other students reached out to them for help. Further probing during the interview, revealed the subject's prior expertise in the course material made them an easy "target" for help. From my conversation with this respondent, they said that being in a class of nearly 70 students may have contributed to their sense of being overwhelmed.

The questionnaire and interviews were also done during the month of July. This is a limitation because very few students check their student email accounts or login to the learning management system during the summer. The questionnaire and the interviews did not draw out the lack of writing skills that I have witnessed as a barrier during my 14 years of online teaching.

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This may be because the pool of respondents was too small. It may also be because respondents are reluctant to identify this weakness. I think a writing sample should have been collected and assessed to determine level of writing skill.

### **Further Research**

One exciting area for further research may be to explore the inter-dependent relationships that form between students in an online educational setting and whether or not these are beneficial to the students. As well, more research could be done on how the flexibility afforded with online learning can also be a hindrance. As one respondent described herself “I’m like a stay-at-home mom with a full-time job. I put in so full-time hours on my courses but I’m still driving the kids to school, going to all their events, cooking their meals, and just being Johnny-on-the spot for everything. I don’t pull out of my driveway at 8 o’clock every morning and back in at 5 so it looks like I have all this free time. I don’t.”

## Chapter 5: Conclusion

In Canada, education is seen as the most desirable route to earning a decent living and to enhancing personal growth and happiness (Conference Board of Canada, 2013). For this reason, education for all people in the geographically diverse province of Newfoundland and Labrador, can be accessible through online access to college and university courses. However, just offering courses online does not automatically make them accessible. The online classroom can be an intimidating and overwhelming place to be, especially for non-traditional students.

Making education affordable and accessible to those who would otherwise not avail of it, is just one step in removing barriers to online education. Educators must also be aware that the once students are enrolled in an online classroom, we need to do more to ensure we retain them. In my opinion, having been an online student and an on-campus student in recent years, it is a lot easier to remove oneself from an online course than an on-campus course, especially if one feels anonymous in the online classroom. It is through social interaction, in particular on behalf of faculty, that students build and maintain a connection to their online classroom.

Another key issue is that students don't want to waste their time in the online classroom. As indicated, these students tend to already lead busy lives full of employment and family commitments. A well-designed course helps students fit their learning into their lives.

There are two areas of interest that I believe warrant further research. First, the idea of flexibility as a disadvantage to online learning when it is so often claimed as an advantage. This was raised by a respondent who noted that studying online is something that is added to an already hectic lifestyle. Second, student-to-student interactions can be a hindrance if a successful student is constantly sought out by their classmates to provide assistance to struggling

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students. This may be a result of limited accessibility to the course instructor, and if so, that connection should be explored as well.

In conclusion, online learning is rapidly changing the way we teach and learn. While online learning may remove barriers of geography and availability of course and programs, it also creates other barriers. Those barriers include lack of writing and computer literacy skills; lack of social interaction, in particular interaction with faculty; and making time for online study in addition to the other daily demands on adult learners. Noteworthy is that the lack of interaction with faculty may lead to increased pressure on top students becoming burdened with assisting their classmates. While it is important to provide technical training for online faculty it is critical to provide training that helps faculty understand the student perspective.

Online learning is well-embedded in the post-secondary landscape. We need to ensure that not only are students and faculty required to develop and apply their technical skills, we need also to build a learning community that relies upon supporting our students through social interaction with them. In my opinion, we, as faculty, are nothing without our students. We need to listen to our students. I hope that in some small way their voices have been heard through the process of my research.

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## Appendices

### Appendix A: Information Letter and Consent Form (Questionnaire)



#### *INFORMATION LETTER and CONSENT FORM*

**Study Title:** Going the Distance: Identifying Barriers to Online Learning that Exist for Adult Learners

**Researcher:**

Kelly Taylor-Hulan  
39 East Valley Road  
Corner Brook, NL A2H 2L2  
kellytaylorhulan@gmail.com  
(709) 639-7446

**Supervisor:**

Dr. Thomas Barker  
2-367 Enterprise Square, 10230 Jasper Avenue  
University of Alberta  
Edmonton, AB, T5J 4P6  
ttbarker@ualberta.ca  
(780) 492-7651

**Background:**

I'm currently a student at the University of Alberta in the Master of Arts in Communications and Technology (MACT) program. As part of my final project, and to help inform the online teaching community, I am looking to discover what barriers to online education exist for adults in Newfoundland and Labrador who live in rural areas and have limited writing and technical skills.

**Study Procedures:**

- This questionnaire should take about 15 minutes.
- This questionnaire will be offered in printed format for on-campus students and in electronic format for online students.
- All on-campus students enrolled in a program, which is also offered online, will be given the chance to complete the questionnaire.
- All online students enrolled in a program course, which is also offered on-campus, will be given the chance to complete the questionnaire.

**Benefits**

- You are being asked to participate in this questionnaire to inform about how we engage participants in online learning
- There will be no compensation for participation

**Risk**

- There are no known risks

**Voluntary Participation**

- You are under no obligation to participate in this study. The participation is completely voluntary
- You are not obligated to answer any specific questions even if participating in the study
- You can opt out of participating at any time without any sort of penalty by simply ceasing to complete the survey. Data from surveys that are not fully completed will not be used. Paper copies can and will be shredded. Partially completed surveys will not be saved anywhere. Online (electronic) surveys will be permanently deleted.
  - If you are completing a paper copy of this questionnaire, and do not volunteer to participate in the interviews, you will not be able to withdraw because your responses will be anonymous.
  - If you do volunteer to participate in the interviews, you will have to two weeks after the submission of the questionnaire, to withdraw from the study.

**Confidentiality & Anonymity**

- Questions have been carefully worded so that no one could be identified by their answers.
- In order to ensure that all information will remain confidential, please do not provide personal identifiers in any open-ended comment sections.
- Data will be kept confidential but will be accessible to the researcher and as well as course project supervisor.
- Data will be kept in a secure place (password protected) for a minimum of five years following completion of research project, and when appropriate destroyed in a way that ensures privacy and confidentiality.
- Printed surveys will be entered into the database and then the paper copies will be shredded immediately.
- Results will be kept on my private work laptop for a minimum of 5 years following completion of research project. Data kept on my laptop will be deleted permanently from the "Recycle Bin"

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- Any **printed copies** of the questionnaire completed will be destroyed as soon as the data has been entered in the Excel spreadsheet.
- The researcher will remove any personal identifiers from your responses to the survey before analyzing and using them.
- If you are completing the **online survey** using Desire2Learn, your anonymity and confidentiality of your responses is protected. Screenshots of the Desire2Learn survey feature are shown below to show how your anonymity is protected. Your responses will be confidential as they will be visible only to the researcher.
- Desire2Learn data are stored on the St. John's college server and are only accessible to the researcher.
- Responses will be deleted one week after you have completed the online survey.

New Survey ▾

Properties Restrictions Objectives Reports Setup

### General

Name \*

Category

no category ▾ ⓘ [\[add category\]](#)

Feedback

give instant feedback ⓘ

Anonymous

make results anonymous ⓘ

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**Information: Anonymous**

This option suppresses display of any user data in survey results. The responses to survey questions are available for all users, but the system does not report who made what response.

Once this option is selected, it is not reversible.

A survey cannot be made anonymous if it has any release conditions or if any release conditions are ever created using the survey as one of the conditions.

#### Further Information

- The plan for this study has been reviewed by a Research Ethics Board at the University of Alberta (REB ID number: Pro00087000). If you have questions about your rights or how research should be conducted, you can call (780) 492-2615. This office is independent of the researchers.
- This project has received secondary review and approval by Memorial University's Interdisciplinary Committee on Ethics in Human Research (ICEHR).
- If you are not satisfied with how this study is being conducted, you may report (anonymously if you so choose) any complaints to the MACT program at (780) 492-1538 or at [mact@ualberta.ca](mailto:mact@ualberta.ca) or discuss your concerns with Malcolm Boyd, City Manager, at (780) 672-4426 or [mboyd@camrose.ca](mailto:mboyd@camrose.ca).

**Consent Statement** - *By answering this questionnaire, you are agreeing to participate in the study.*

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above. By completing this survey, I am agreeing to these terms.



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## Appendix B: Information and Consent Form (Interview)



### *INFORMATION LETTER and CONSENT FORM*

**Study Title:** Going the Distance: Identifying Barriers to Online Learning that Exist for Adult Learners

**Researcher:**

Kelly Taylor-Hulan

39 East Valley Road

Corner Brook, NL A2H 2L2

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**Supervisor:**

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(780) 492-7651

**Background:**

I'm currently a student at the University of Alberta in the Master of Arts in Communications and Technology (MACT) program. As part of my final project, and to help inform the online teaching community, I am looking to discover what barriers to online education exist for adults in Newfoundland and Labrador who live in rural areas and have limited writing and technical skills.

**Study Procedures:**

- This interview should take about 30 minutes.
- Participants may choose to do the interview in-person or via the telephone.
- All on-campus students enrolled in a program, which is also offered online, will be given the chance to complete the interview.
- All online students enrolled in a program course, which is also offered on-campus, will be given the chance to complete the interview.

**Benefits**

- You are being asked to participate in this interview to inform about how we engage participants in online learning
- There will be no compensation for participation

**Risk**

- There are no known risks

**Voluntary Participation**

- You are under no obligation to participate in this study. The participation is completely voluntary
- You are not obligated to answer any specific questions even if participating in the study
- You can opt out of participating at any time without any sort of penalty by simply ceasing to complete the interview. Data from interviews that are not fully completed will not be used.

**Confidentiality & Anonymity**

- Questions have been carefully worded so that no one could be identified by their answers.
- In order to ensure that all information will remain confidential, please do not provide personal identifiers in any of your responses.
- Data will be kept confidential but will be accessible to the researcher and as well as course project supervisor.
- Data will be kept in a secure place (password protected) for a minimum of five years following completion of research project, and when appropriate destroyed in a way that ensures privacy and confidentiality.
- The researcher's handwritten notes will be entered into the database and then the paper copies will be shredded immediately.
- Results will be kept on my private work laptop for a minimum of 5 years following completion of research project. Data kept on my laptop will be deleted permanently from the "Recycle Bin"
- 
- The researcher will remove any personal identifiers from your responses to the interview before analyzing and using them.

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### **Further Information**

- The plan for this study has been reviewed by a Research Ethics Board at the University of Alberta (REB ID number: Pro00087000). If you have questions about your rights or how research should be conducted, you can call (780) 492-2615. This office is independent of the researchers.
- This project has received secondary review and approval by Memorial University's Interdisciplinary Committee on Ethics in Human Research (ICEHR).
- If you are not satisfied with how this study is being conducted, you may report (anonymously if you so choose) any complaints to the MACT program at (780) 492-1538 or at [mact@ualberta.ca](mailto:mact@ualberta.ca) or discuss your concerns with Malcolm Boyd, City Manager, at (780) 672-4426 or [mboyd@camrose.ca](mailto:mboyd@camrose.ca).

### **Consent Statement**

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above. By completing this interview, I am agreeing to these terms. As well, I have been provided a consent form to sign.

## Appendix C: Recruitment Document

### Presentation Script

My name is Kelly Taylor-Hulan. I am a graduate student at University of Alberta in the Master of Arts and Technology program. I am also an instructor at College of the North Atlantic where I have been teaching online for 14 years. Online teaching and learning is my passion.

I am working on my capstone project which aims to answer these questions:

1. What are the barriers to online learning that exist for adults in Newfoundland and Labrador, in particular those who have limited writing and computer skills?
2. How might these barriers be overcome?

To conduct questionnaires or interviews for my project, I have the approval of the University of Alberta's Research Ethics Board. I have a document for you which outlines this and whom to contact should you have any questions or concerns.

This study has two parts – a questionnaire and an interview. You may choose to participate in only the questionnaire. **The questionnaire will take about 15 minutes to complete.**

If you identify any barriers, and wish to participate in a follow-up interview, you can provide your email and/or phone number in the appropriate section of the questionnaire. The interview will take about 30 minutes to complete. I will have a consent form for you to sign before we do an interview.

There is no compensation for participating in this study. Participation in, or refusing to participate, will have no impact on your course work or grades in your courses at CNA.

I will now review the information letter and consent form with you.

I am available to answer any of your questions now or during the questionnaire.

Thank you.

### **Appendix D: Interview Guide**

1. What do you see as advantages or disadvantages of online learning?
2. Which conditions would need to be created to improve your participation and/or success in the online classroom?
3. Are there any courses in your program that you think would be especially difficult to take online/ easier in the classroom?
4. How would you describe your learning style? (audio/lectures, visual/video, hands-on, reading text, reading text with visuals, social/group)
5. When taking a course, which teaching methods do you prefer? (i.e. PowerPoint/lecture, group work, individual assignments, labs, textbook Q & A)
6. Describe what you like best about being in the online classroom.
7. How important is immediate feedback from your instructor?
8. How can your online education experience be improved?