Accessibility Online:
Post-secondary e-Learning Opportunities and Challenges
A Case Study of Lethbridge College

By

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Submitted to the Faculty of Extension

University of Alberta

In partial fulfillment of the requirements for the degree of

Master of Arts in Communications and Technology

September 15, 2008

Acknowledgements

This paper is dedicated to my son, Jarin; I miss you, will always love you and look forward to seeing you in the next life. I also want to thank the rest of my children for supporting me and putting up with an absent father at most times. I look forward to a well-deserved rest and some good old-fashioned family fun. Above all, thanks to my wife who shored me up when things were difficult. Now it's your turn, I love you!

I would like to acknowledge my supervisor, Dr. Stanley Varnhagen, for his guidance and kindness, thank you. I would also like to thank Dr. Fay Fletcher, Ethics Advisor and Dr. Marco Adria, Program Director (MACT), Faculty of Extension.

Special thanks to my cohort and the cohesiveness that we achieved as a group in the online environment; keep hissing everyone! I would specifically like to acknowledge a dear friend and study partner Liz Benoit and the many long hours spent hashing over assignments, working on countless projects, and just challenging each other to go beyond the spinning of wheels. Thanks for keeping me sane through the hardest moments.

Thank you to all the participants in this study and Lethbridge College for consenting to this case study; specifically, The Centre for Teaching, Learning & Innovation, the Educational Enhancement Team, and Disabilities Services. I hope this study can help make our college one of a kind and a leader in online accessibility. Special thanks to my past and present employers for the flexibility they allowed for me to meet the MACT spring institute obligations.

Disclaimer

The following case study was prepared by Clayton Snyder for the partial fulfillment of a

Masters of Arts in Communication Technology degree. The following conclusions and

recommendations are not the stated views of Lethbridge College or its employees.

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Abstract

This paper focuses on the development of online classes and how they measure up for those with accessibility issues. The case study looks at southern Alberta's Lethbridge College and asks what the state of online accessibility at Lethbridge College is and can it be improved? This study comes at a crucial time for Lethbridge College because they are looking to online learning opportunities to expand student enrolment. The study offers recommendations to a situation that is, at present, unintentionally overlooked at Lethbrige College. This case study involved interviewing 13 participants, each with a stake in online learning excellence. The research shows the need for action and recommends steps to be taken to assimilate accessibility into existing standards and policies. These steps could enable the college to comply with the current government standards and integrate them into online course development systems. Hopefully, this will enable equal service for all students with accessibility issues.

Introduction

Background

Lethbridge College (LC), located in Lethbridge, Alberta, was established in 1957. LC was the first community college in Canada. It also has two satellite campuses in Southern Alberta: one in Taber and the other in Fort McLeod. In accordance with the Post-secondary Learning Act of Alberta, LC is run by a Board of Governors and led by the college president. LC employs over 1000 people and enrolls more than 6500 students yearly (Lethbridge College, 2006).

Lethbridge College is a vital part of Lethbridge and the surrounding Southern Alberta communities. It provides an economic, social, recreational, and cultural focus for the area. The college has an excellent reputation for aligning itself with industry, community, and government. One of the college's goals for 2005-2010 is to increase these strategic alliances and to develop stronger ties with other post secondary institutions (McMillan & Edwards, 2006).

Lethbridge Community College became Lethbridge College in 2007 in an effort to increase its catchments area and become a national and international college through increased recruitment and online learning opportunities. The College still retains a strong community focus.

Online History

Lethbridge College has been involved in many facets of educational delivery other than the traditional face-to-face classroom. Its first off-campus distance course was

offered in 1980 through correspondence. This traditional distance method is still used, but more current models of deployment are preferred. The creation of courses for this original style of delivery has dropped considerably. The three more popular modes of online delivery are Web enhanced, blended and fully online. The Web enhanced mode uses the Internet to augment face-to-face instruction. A blended course (hybrid) has part of the class conducted online and the remainder in a face-to-face classroom. Last is a fully online course. These courses are taught completely online and do not require the student to attend the campus. (Virtual University Design and Technology, 2005) While there are significant differences in all three, they are in essence a degree of use within the context of online integration and delivery.

Lethbridge College is responding like most institutions to the popularity and flexibility of online learning. Table 1 shows the statistics of the amount of Internet use and active Internet users in Canada. This has become a noticeable market for any educational institution.

Table 1

Nation	Population	Internet Users	% Internet Users	Active Users	% Active Users
Canada	32.81 million	20.45 million	62%	8.8 million	27%
United States	295.73 million	185.55 million	62%	142.70 million	48%
United Kingdom	60.44 million	33.11 million	55%	23.58 million	39%

(Global Internet Users, 2005)

Lethbridge College started posting existing content online around 2003 and with the implementation of WebCT[1] at about the same time, there was a small number of instructors utilizing this option. That is not to say that other instructors were not using WebCT, but they were probably not using it to its full potential. For example, it was common for instructors to use WebCT as a class tool for grades and assignment

descriptions only, or as a mere storage place for general course information. It's the authors' impression that for the first few years at LC, WebCT was a holding place where students could review the course outline and check their grades.

As time moved forward, the acceptance of WebCT grew among the staff and the opportunities for widening its use grew as well. This complemented one of the colleges end statements to provide flexible learning pathways. WebCT became the focus of attention for broadening delivery and opening the college to the arena of online learning by creating a portal between the student and the teacher that could be accessed at any time. WebCT became the obvious tool of delivery for fully online courses.

Students also started accepting the benefits of WebCT and soon there was a subtle demand or an expectation that a consistent use be established among faculty. While the decision to use WebCT remained optional, faculty reported that students were expecting the service (Karen Harker, Personal Communications, 2007). Support for faculty was available on campus through a department called The Centre for Teaching and Learning. It was limited in service, as it only offered technical training in the use of WebCT and no pedagogical considerations.

The college was experiencing overall low enrollment as the Alberta economy boomed. Therefore, adding an option allowing students to work fulltime and continue their studies was one way to increase college enrollment.

> Alberta's hot economy is driving demand for workers regardless of
> their educational level. The strong relationship between education
> and the likelihood of being employed prevailed in all provinces in
> both 1990 and 2006. Alberta had the highest employment rate in
> both 1990 and 2006, 67.6% and 70.8% respectively. Employment

for persons with less than a postsecondary education grew by 17.3% in Alberta (Chawla, 2008 pp.28 & 29).

As noted above by Statistics Canada, fewer students were attending post secondary institutions and LC was no different from the rest of the educational industry.

Present Course Development

At present, Lethbridge College follows a set procedure to develop new or existing courses into web-based courses; all the program managers submit a complete list of courses or programs they want developed for online learning. It is usually anticipated that the courses will be delivered fully online or in blended format. Usually development is assigned to the present instructor who, as the subject matter expert (SME), works with an instructional designer (ID) and others to modify the course and make it educationally sound for the online learning environment.

Choices and Resources

When a course is developed, the first decision is to determine if it will be offered as an enhanced, blended, or fully online course. A best practice among the development team is to develop courses for fully online learning. By taking the development to this level, courses can still be used for blended or Web enhanced learning, but the opposite is not true. Courses that are developed as fully online are backwards compatible and can be used as either enhanced or blended delivery. Courses that are designed with less than fully online access are limited and require more resources and funding to continue development if the decision to deliver them fully online is made at a later date. Time and money can be saved if the course is fully developed from the beginning.

Educational Enhancement Team

Lethbridge College supports a Centre for Teaching Learning and Innovation, which in turn houses the Educational Enhancement Team (EET). EET carries a staff that includes fulltime curriculum consultants, instructional designers, multimedia specialists, and formatters. All of these positions are in place to assist faculty in designing and implementing quality online programs using the latest technologies.

As a relatively new department at LC, EET is supporting academic initiatives across campus primarily in the following areas:

- Encouraging, developing, and supporting the scholarship of teaching and learning
- Developing course materials for face-to-face and distance delivery
- Integrating technology effectively
- Developing and maintaining program curriculum
- Coordinating and facilitating professional development opportunities

Most courses designed for online learning go through this development team and their processes. This is not policy, but the majority of courses follow this route. In spite of the advantages of using a professional team, there are instructors who independently use WebCT and build what they would define as an online, blended or Web enhanced course. It is quite beneficial to both the instructors and the courses to use the services provided by EET.

During this project, the author was one of the instructional designers with the Educational Enhancement Team. Instructional designers play a significant role in course development, as do all the team members. Their role involves working with the SME to create and arrange content and integrate technology in the most appropriate way to

increase the students' learning. Instructional designers interact with the media specialists and formatters on a daily basis, guiding and providing feedback on course completion.

Defining Disabilities and Accessibility

Accessibility

When policy setters and researchers discuss web accessibility issues, they tend to fall into two camps: one that broadly includes all possible accessibility difficulties, and the more exclusive view of accessibility pertaining to those with physical, mental and/or learning disabilities. Mike Cherim from accessities.org remarks on the first perspective.

> I cannot view a web disability as solely being a physical or mental inability. I'm compelled to also include users with slow connections, old monitors, legacy equipment, and anything that puts a barrier between the user and the content they seek, not just poor eyesight or blindness, corrupt motor skills, or dyslexia, to name but a few (Cherim, 2006, para. 4).

The second camp holds a more traditional definition. By doing so, they claim they are ensuring that people with disabilities are not discriminated against. The scope of this study will remain in this traditional definition, but the author is aware of the greater issues accessibility encounters. This paper recognizes this point and validates the importance of taking measures to make web and courseware more broadly accessible. This should be done for the appropriate reasons and not for the spin-off benefits. Cherim warns about this and gives an example.

A well-structured document enables people using assistive technology to better understand and navigate the document; a well-structured document also enables search engines to better categorize and index the page. That doesn't mean that accessibility is about improving search engine rankings, even though it's highly likely that following accessibility advice will improve search engine rankings; that is just a side-effect, rather than the primary intention (Cherim, 2006, para. 11).

The following are two Web accessibility definitions

- The principle that all web users should have access to information available on the Internet. (Dolson, 2008).
- Refers to the practice of making pages on the Internet accessible to all users, especially those with disabilities. (Cvrk, 2008).

Disability Services assists students who attend on campus courses, this paper will look at online course accessibility and complements the work being done through Disabilities Services. Therefore, this research leans towards those with physical and mental disabilities or other learning barriers. The pressing issues are compliance and adaptation and will be studied in this paper.

Disabilities

A recent study by Microsoft showed that among adult computer users in the United States one in four has a vision difficulty, one in four has a dexterity difficulty, and one in five has a hearing difficulty. The Microsoft survey also found that 16% of users have a cognitive difficulty or impairment, and few 3% have a speech difficulty or impairment (Microsoft Presspass, 2004). The following is an attempt to list the many

disabilities, accessibility issues and barriers that exist for the learner, regardless of whether the course is online or face-to-face.

- Hearing loss and deafness
- Intellectual disabilities
- Learning disabilities
- Mental illnesses
- Physical disabilities
- Speech and language disorders
- Vision loss and blindness
- Financial barriers
- Technology constraints

Without defining these in depth and expanding on each, it is vital that an institution such as LC be aware of the growing number of people with accessibility issues; even if the students themselves are unaware of their own difficulties. The last two of this list fall out of scope of this research as they are not physical, mental or learning disabilities. There may be a need in the immediate future to review this and broaden the colleges' definition of accessibility, thereby including the last two and other barriers.

Disabilities Services

The college has set up an on-campus support service to assist current and prospective students who have learning and/or physical disabilities. This department has both a Disabilities Counsellor and a Learning Strategist/Assistive Technology Specialist. For the students with accessibility issues on campus, the department offers the following supports:

- Assistance with admission and registration
- Assistance in applying for disability-related funding
- Classroom accommodations (note taking support, special seating)
- Exam accommodations (exam reading, extra time, separate space)

- Provision of Educational Assistants (tutors, readers, note-takers, sign language interpreters)
- Advice and training in using technology aids (special software or equipment)
- Ongoing disability counseling

(Deimert & Caldwell, 2006)

There is a policy set in place by the college in LC Policy 2.13 *Academic Accommodation for Students with Disabilities* (See Appendix G). This policy offers guidelines for these circumstances and addresses protocols and procedures to be met. There is limited information online in regards to these services on campus. Other than the policy being accessible, information about disabilities services at LC is presently listed under counseling services only. It should also be noted that this policy does not make reference to online learning nor have there been any amendments to it on such a topic.

Accessibility Needs

For some, the ability to attend a college or a university is fraught with challenges as noted previously in the section discussing disabilities. Unless the system is willing to address the issues surrounding their specific challenges, these individuals will remain at a disadvantage for obtaining further education and training compared to most other students. Traditional correspondence courses have been around for many years. They primarily rely on assigned readings and assignments submitted by the student and correspondence in the form of feedback to and from the tutor or instructor. Although technology has decreased the time factor of responses between the student and the instructor, the traditional correspondence course still relies heavily on the students' abilities to grasp the material on their own.

In light of this, traditional distance courses by correspondence have never really allowed some students with accessibility issues a reasonable opportunity at education. With the means to have both communication and delivery online, the pendulum has swung back to offer the distance student a richer and more rewarding educational experience. The turning point is now upon us with the ever-emerging popularity of online learning. As early as 1999, the term "distance learning" was taking on a whole new meaning as more and more technological advantages were available to the student. Consider the following statement by Sally M. Johnstone, a founding director at the Western Interstate Commission for Higher Education, when asked where distance learning was headed.

> I think the concept of distance learning is changing; what we have called distance learning is converging with on-campus learning. For example, ten years ago it was unique for a student who did not come to campus to have access to any of the campus's resources. Now, students register online or by phone—even if they live on the campus. Students have access to search engines at their libraries, from their dorm rooms, from an apartment down the street from campus, or from 1,000 miles away. Campus services are being designed so that, more and more, a student does not have to be in a particular place at a particular time to have access to them. (Morrison & Johnstone, 1999, para. 12)

That interview was in 1999; we have achieved and even surpassed those predictions as over 90% of all institutions offer online courses (Johnstone, 2005). Some of the impressive differences between the new online methods and traditional correspondence are the instructor/student/class interactions, which can be synchronous

(Simultaneously) or asynchronous (at different times). The ability of a student to get immediate feedback to questions and to participate in discussions with peers is an educational necessity.

> Most online learning programs in North America have the ability to provide the same teaching atmosphere similarly available to on campus students. The uniqueness of the online programs allows greater freedoms to both the students and the instructor regarding location, time, and in turn most students are finding more confidence to participate in class discussions with a certain level of anonymity in the classroom (Online Learning, 2007 para. 7).

The increase of technology has the potential to decrease the pedagogical difference between online learning and face-to-face classes. Technological changes, such as the increased bandwidth on the Internet and the use of communication applications over this medium, may actually allow more instructor/student interaction. Although this is potentially good news for accessibility, it brings with it some challenges. One concern is with the speed at which courses are produced. In the rush to get content up online to compete with other institutions and to take advantage of this new market, the concerns of those with accessibility issues were generally ignored due to lack of awareness and understanding.

Off Campus Support

While Lethbridge College has an onsite resource service for those current and prospective students on campus with physical or learning disabilities, these services are not extended to students that are completing courses in the online format. As previously mentioned, the college is well equipped with a Disability Counsellor and a Learning

Strategist/Assistive Technology Specialist. Unfortunately, these services were setup in the contextual environment of the traditional face-to-face classroom paradigm and were not set up for the online learner. Students currently need to come to campus to benefit from these services. This would defeat the purpose of taking an online course.

Research Questions

- What is the state of online accessibility at Lethbridge College and how can it be improved?

This research explores Lethbridge College's current online course development, the processes involved, and what protocols are in place for accessibility. Within this case study, key individuals playing a role and/or having a significant and direct say in the creation of online classes were interviewed. These included instructional designers, media specialists, subject matter experts (most often the current instructor), deans, and instructional technologists.

Answers to the following questions helped determine the state of online learning accessibility: What is the state of LC's online courses and programs? Are these courses learner-friendly in regards to accessibility? What guidelines or policies are they following, if any?

This research is beneficial to the college and students as it directly deals with the issue of online accessibility. This is an appropriate approach to the question as currently, in Canada, online learning is becoming ever more popular as a choice for learners. McGreal and Anderson emphasize that

E-learning is expanding as the vast majority of universities and community colleges continue to expand their e-learning options

for the benefit of their students. The average Canadian university

student now works part time (or full time) while studying and is

demanding more flexibility in the course offerings

(McGreal & Anderson, 2007, p. 4)

Another researcher states, "The proliferation of, and interest in e-learning in Canada is

unquestionable" (Abrami, 2006). As an instructional designer working in this field of

course development, the author has become aware of these questions and the gap that is

increasing between those with accessibility issues and online learning.

Literature Review

Accessible Divide

There is a divide between those with disabilities and those without. Using computer-mediated solutions the divide could be lessened; however, not enough is being done to address the issues. The more institutions move to computer-mediated solutions, the larger the divide may become if nothing is done. Although positive efforts are in play to address the issue of inaccessibility, without a concentrated effort those that could benefit the most from the wonderful new applications will continue to have problems getting access to it.

> As with many types of products and technologies, including those used in online distributed learning, people with disabilities may be inadvertently excluded if accessibility is not considered and incorporated into products and technologies. If steps are not taken to incorporate accessibility into distributed learning, people with disabilities may be excluded from the many benefits offered by online technologies (NCAM, 2006, p. 1).

Accessibility has become a challenge for many, but when programs' applications are developed and applied with standards that enable those with disabilities to use them, it may not be such a challenge. Look at the boom of online courses and programs from universities and colleges. At one time, people with a disability that hindered them from full mobility found it difficult to achieve their educational goals. Now, with the advancement of e-learning, the same student could enter a program, fulfill all obligations, and obtain a diploma, certificate or even a full undergraduate bachelor's degree, master's

degree, and for some, a doctorate degree from their own accessible computer at their home.

Interestingly, while we think we are adding these functionalities just for people with disabilities, society as a whole can benefit. Coombs and Banks explain that just like the "curb cuts, or the portion of the sidewalk that rests flush with the street, were instituted for people in wheelchairs, they are much more frequently used by mothers with strollers, shoppers with carts, and cyclists and inline skaters" (Coombs & Banks, 2000). They continue by implying that any changes that we make in functionality that increases accessibility for those that require additional resources and modifications will become the digital curb cuts for all of society (Coombs & Banks, 2000). Some of these changes or unintended benefits, for example, could provide options for those who have different learning styles.

It's not hard to see that people prefer different ways of acquiring knowledge. These different styles and techniques are called learning styles. It is now known that everyone has a mix of learning styles, but each has a dominant one as well. Some have the ability to use different styles in different situations (Overview of Learning Styles, 2007). However, most people do not have the self-awareness to know which learning style they prefer.

Table 2 lists the many different learning styles that people may have. The Internet is a media rich environment that can carry a message in many unique forms. This is advantageous for delivery of online courses for those that have strengths in other learning styles. Development with this in mind potentially creates a highly assessable learning tool. Society as a whole could benefit from this.

Table 2

Style	Definition	Description
Visual	Spatial	Prefer using pictures, images, and spatial understanding
Aural	Auditory- musical	Prefer using sound and music
Verbal	Linguistic	Prefer using words, both in speech and writing
Physical	Kinesthetic	Prefer using your body, hands and sense of touch
Logical	Mathematical	Prefer using logic, reasoning and systems
Social	Interpersonal	Prefer to learn in groups or with other people
Solitary	Intrapersonal	Prefer to work alone and use self-study

(Overview of Learning Styles, 2007)

Standards

World Wide Web Consortium (W3C)

The World Wide Web Consortium took action early in 1999 with the Web

Content Accessibility Guidelines. These guidelines explain how to make Web content

accessible to people with disabilities. The guidelines are intended for all Web content

developers (page authors and site designers) and for developers of authoring tools. The

primary goal of these guidelines is to promote accessibility. However, following them

will also make Web content more available to all users, whatever user agent they are

employing (e.g., desktop browser, voice browser, mobile phone, automobile-based

personal computer, etc.) or constraints they may be operating under (e.g., noisy

surroundings, under- or over-illuminated rooms, in a hands-free environment, etc.).

Following these guidelines while developing Internet content will also help

people find information on the Web more quickly. These guidelines do not discourage

content developers from using images, video, etc., but rather explain how to make

multimedia content more accessible to a wide audience (W3C, 1999).

The following are the main guidelines laid out by the W3C.

Web Content Accessibility Guidelines

1. Provide equivalent alternatives to auditory and visual content.
2. Don't rely on color alone.
3. Use markup and style sheets and do so properly.
4. Clarify natural language usage
5. Create tables that transform gracefully.
6. Ensure that pages featuring new technologies transform gracefully.
7. Ensure user control of time-sensitive content changes.
8. Ensure direct accessibility of embedded user interfaces.
9. Design for device-independence.
10. Use interim solutions.
11. Use W3C technologies and guidelines.
12. Provide context and orientation information.
13. Provide clear navigation mechanisms.
14. Ensure that documents are clear and simple.

(W3C, 1999, p. 2)

Special Education Needs and Disability Act

The guidelines set out by the Special Education Needs and Disability Act are strictly voluntary and have no binding power on developers and designers to enforce change or compliance. However, the Act did get the attention of governments because of a number of legal cases where individuals felt disenfranchised because of their accessibility needs. Governments made their moves to remedy the problems faced by those with disabilities concerning the computer and Internet (Carnevale, 2005). In the United Kingdom, the Special Education Needs and Disability Act came in during 2001; the following is the range of e-learning activities that are covered.

- Information and resources hosted on general university web pages (e.g. information, library catalogues and literature databases)
- Virtual Learning Environments

- Computer Assisted Assessments
- Course material contained within departmental or school
    web pages
- Computer workstations in libraries, laboratories and other
    study areas
- Multimedia applications
- Assistive technology

(Seale, 2003, p. 458)

Section 508

The United States also addressed similar issues. President Bill Clinton supported

an amendment to the Rehabilitation Act of 1973 Section 508, which relates to e-learning

developers. This act did not go into effect and become enforceable until June 21, 2001.

The standards provide criteria specific to six main categories of technology:

- Software applications and operating systems
- Web-based information or applications
- Telecommunication products
- Video or multimedia products
- Self-contained, closed products, such as information kiosks
    or fax machines
- Desktop and portable computers

(Salopek, 2001, p. 1)

While this standard does not address education specifically, many of the sections

deal directly with the elements it takes to build and deliver an online course.

There is no doubt the Internet has changed the way many things are done. Society shops,

communicates, and browses the web for both recreation and education. For some, the

barriers of entry into these lifestyle changes are too high.

Some Canadians rely on assistive technologies such as text readers,

audio players and voice-activated devices to overcome the barriers

presented by standard technologies. Others may be limited by their

own technology, but old browsers, non-standard operating systems,

slow connections, small screens or text-only screens should not

stand in the way of obtaining information that is available to others. (CLF for the Internet – Accessibility, 2004, p. 1)

Common Look and Feel Standards

The Canadian federal government brought forth the "Common Look and Feel Standards" which is a set of regulations regarding web content. It is divided into several sections, one of which is accessibility. This is Section One of the standards. These standards have been an official policy since 2000 for government websites (Richardson, 2006). Initially, the government set these standards up for official government websites. However, the intentions were for them to permeate throughout the rest of Canadian websites.

Duty to Accommodate

Stemming from the federal government's Charter of Rights and Freedom, Alberta constructed, like its provincial counterparts, its own human rights code. "Although the provincial and territorial acts differ in details, all are subject to the Charter and must be interpreted in a manner consistent with it" (Cantor, 1996). While Alberta's original document did not address the duty to accommodate, The Human Rights Commissions of the Province of Alberta have published guides stating that employers are expected to provide extra assistance to those with special needs. "The duty to accommodate requires employers to identify and eliminate rules that have a discriminatory impact. Accommodation means changing the rule or practice to incorporate alternative arrangements that eliminate the discriminatory barriers" (Government of Canada, 2004).

The question is, what are these barriers and do they apply to the educational system? The following statement found online at the Alberta Human Rights website breaks it down in the following way:

> All persons are equal in dignity, rights and responsibilities, regardless of race, religious beliefs, colour, gender, physical disability, mental disability, age, ancestry, place of origin, marital status, source of income or family status. In addition, the Government of Alberta agreed to "read in" sexual orientation as a protected ground, effective April 2, 1998 (Government of Alberta, 2008, p. 1).

This act will continually be addressed on all campuses in Alberta as mandated by the Alberta Government. The following two web pages are examples of both the University of Alberta and the University of Lethbridge web pages that address the issue of accessibility.

- http://www.uofaweb.ualberta.ca/humanrights/nav01.cfm?nav01=46987
- http://www.uleth.ca/ross/counselling/disabilities/duty_to_accommodate.html

Universal Design

Universal design is another standard that has come out of the United States. It is based on the changing of society over many years and a number of factors, including age and those with disabilities. It was greatly influenced by war veterans, architects, and the Civil Rights movement. From this progressive evolution of society, universal design emerged as "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" (Mace, 2008). Table 3 outlines universal design within the educational context.

Table 3

Representation	Expression	Engagement
Provide multiple options for perception • customize the display of information • provide alternatives for auditory and visual information	Provide multiple options for physical action such as • the mode of physical response • the means of navigation • the options for accessing tools and assistive technologies	Provide multiple options for recruiting interest • to increase individual choice and autonomy • to enhance relevance, value, and authenticity • to reduce threats and distractions
Provide multiple options for language and symbols that • define vocabulary and symbols • clarify syntax and structure • decode text or mathematical notation • promote cross-linguistic understanding • illustrate key concepts non- linguistically	Provide multiple options for expressive skills and fluency in the following • media for communication • tools for composition and problem solving • scaffolds for practice and performance	Provide multiple options for sustaining effort and persistence • heighten salience of goals and objectives • vary levels of challenge and support • foster collaboration and communication • increase mastery-orientated feedback
Provide multiple options for comprehension • provide or activate background knowledge • highlight critical features, big ideas, and relationships • guide information processing • support memory and transfer	Provide multiple options for executive functions • guide effective goal-setting • support planning and strategy/development • facilitate managing information and resources • enhance capacity for monitoring progress	Provide multiple options for self-regulation • guide personal goal-setting and expectations • scaffold coping skills and strategies • develop self-assessment and reflection

(Rose & Wasson, 2007, para, 33)

All of these standards should have a direct or indirect affect on LC's course development process. The following visual image (Figure 1) shows some of the current existing external standards and guidelines that deal with accessibility online and course development.

Figure 1
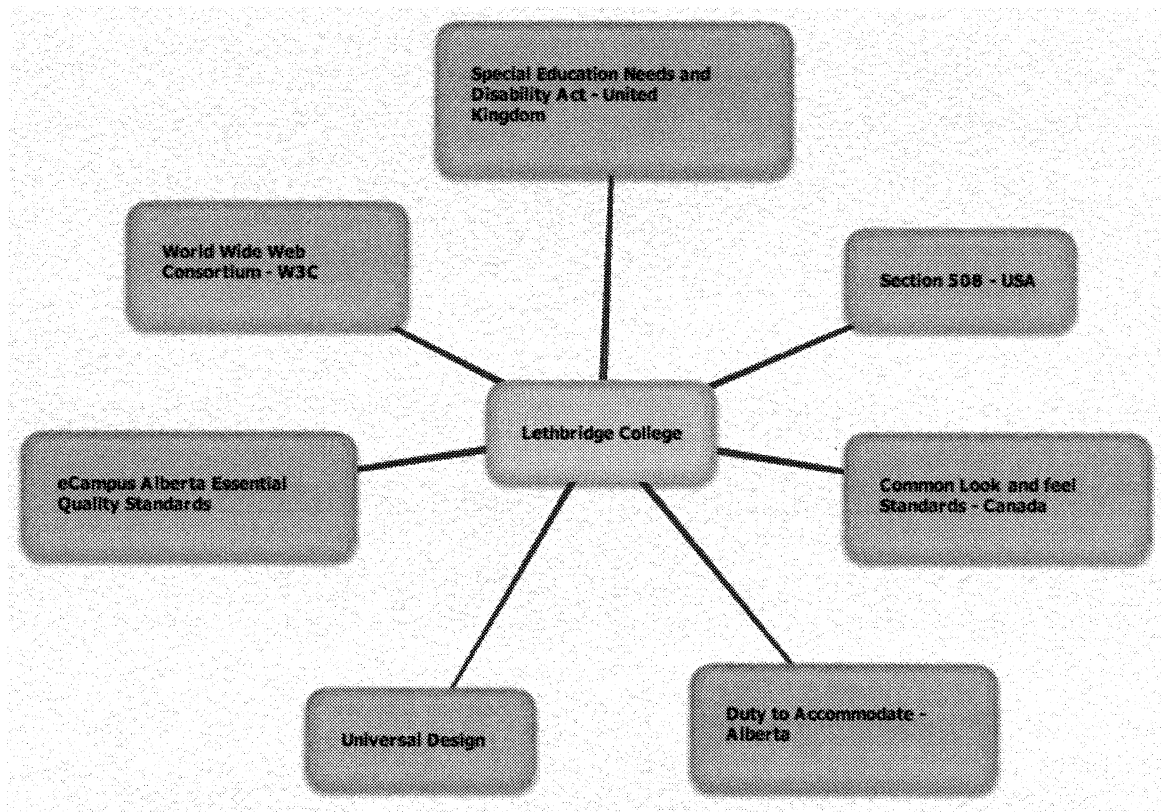
Learning Disabilities

While it is great to see these standards put in place by governments, one must

remember that we have had the Internet as a mainstream apparatus since the late 1990s

and computers have been with us for much longer. That is almost a twenty-year divide

for those waiting to hop on the virtual highway and explore the World Wide Web. The

barriers of seeing the text, typing, hearing the audio, and others have hindered some

people's ability to take part in the wonderful opportunities the online world has to offer,

one of which is e-learning. These standards, when applied could greatly eliminate a

significant number of the barriers for disabled individuals and help them pursue

educational goals.

It has taken almost twenty years for Canada and other countries to bring to the forefront these principles to increase accessibility for those with all types of disabilities or barriers. Again like the curb cuts analogy, there were a lot of sidewalks and developments that went through many retrofits to comply with the new regulations. The same will be true in the case of what is already online. Consider a recent report by an accessibility agency commissioned by the United Nations to see what percent of websites met the most basic accessibility requirements. The results were stunning; of the 100 websites from many different nations selected only 3 met the basic requirements, leaving 97% inaccessible (Johansson, 2006).

The potential for those with disabilities to access online learning is remarkable. Fortunately there is no sign of colleges and universities moving away from it; as a matter of fact, most are scrambling to convert, revamp or create courses to reside online. In response to this action, O' Conner called online learners with disabilities potential "early adaptors" (O'Conner, 2000). In any marketing management, that term would enliven almost all present. With the amount of rich media, resources, and learning assessment tools, the apparent result is a level playing field for those with accessibility issues.

Research has shown that individuals with learning disabilities communicate in other areas such as spatial and visual sensory (Ae-Hwa, Vaughn, Wanzek, & Wei, 2004). Although it seems redundant, putting content online in as many transferable formats as possible will enable many people to gain access regardless of disabilities. One of the most popular tools within online courses is the discussion board where the instructor acts as a facilitator and poses a question to the body of asynchronous students. Over the course of about a week, the students respond and discuss the issue. "Utilizing

asynchronous methods for student discussion whenever possible removes the pressure of instantaneous information processing in a course chat room, so that learning disabled students can have time to read and review information before responding" (O'Hanlon, 2005). This is both exciting and frustrating as we are still in the midst of change. While all these standards do exist and are required, Canadian educational institutions have been slow to follow.

There is no doubt that applying accessibility standards to online course development is needed. The issues seem to be awareness and then compliance. We are just scratching the surface of accessibility. Most people would define accessibility as those who, because of some physical or cognitive disability, require some assisted methods to gain information, communicate, and/or participate. In 2002, French and Valdes claimed in their research that one in five people has a disability (French & Valdes, 2002). Another study that looked at open source management systems reported that within the post secondary students' age range, 10% to 15% identify themselves as disabled (Cook & Gladhart, 2002). Since this method included self-reported numbers, it's likely more conservative since some are unaware of their disabilities.

For the purposes of examining online education delivery methods, accessibility for those with learning and physical disabilities is examined. How have universities and colleges adapted or created standards? Are they adhering to them? Most universities and colleges have been leaving accessibility issues to the learning management systems (LMS) they are using to host the courses. It's the author's impression that while current LMSs have some accessibility features, it is not their prime focus and is a poor place for the institutions to rely on for solutions. That said, the choice of LMS system does play a

part in making learning accessible, but ultimately it is the institutions responsibility to ensure the courses are accessible.

In 2003, a white paper describing the procedure for picking the best LMS recommended the following: "Check the security, privacy, and accessibility regulations". It further recommended, "government entities should ensure that their selected LMS has been thoroughly tested for Section 508 conformance" (Considerations for Acquiring a Learning Management System, 2003). As mentioned, there is little motivation whether policy or enforcement to push schools to use their LMS to the fullest potential when developing courses.

What is the current feeling among the educational environment? One can well imagine that there is a cost issue to revamping courses that are already online and then there are added initial development process costs. In an article from *Campus Technology* it states the following:

> It is likely no one will question the legal responsibility of universities to accommodate disabled learners. So the initial question of "why accommodate?" answers itself: We have to. But this answer is far from satisfying, and only opens the floodgates for the critics. Undoubtedly someone makes the claim: "The legal requirement forced on universities to make complex software, such as an LMS, accommodate users of assistive technologies, hampers deployment, limits functionality for the non-disabled, and ultimately hobbles pedagogy" (A public consortium emphasizes the importance of LMS accessibility, 2006, p. 1).

Some institutions are staying true to the course and looking for additional skills to add to the development team that already exists within their production staff. Ohio State University created a new staff position entitled "Usability Specialist." The duties are to oversee technology initiatives university-wide and work directly with disabled faculty staff and students (A Public Consortium Emphasizes the Importance of LMS Accessibility, 2006). Other LMSs such as ANGEL have won the Software and Information Industry Association (SIIA) Award for Best Postsecondary Course or Content Management Solution for two years in a row. One of ANGEL's highest priorities is ease of use, which takes accessibility into full consideration (Schmutzler, 2007). Most learning management systems claim to be complying with either section 508 of the US Rehabilitation Act or the W3C web content accessibility guidelines. They claim that their systems have the features and configuring options that enable developers to create compliant content; however, the publishers and developers do not necessarily use these options.

Canada Now

Currently, a large amount of research is being done at the University of Toronto led by Jutta Treviranus at the Adaptive Technology Resource Centre (ATRC). ATRC is involved in research and development to find innovative solutions to accessibility challenges. They also provide training, consultation, and information to help both educators and users to effectively utilize adaptive technology (Treviranus, 2008).

One of the applications that has been developed at ATRC is known as A-Prompt. It was developed in partnership with the University of Wisconsin and designed to help with improving the availability of Internet information for people with accessibilities

issues. This software program is informative to web developers that want to test their site to see if it is compatible to many devices and applications that those with accessibility and disabilities use to navigate the Web. In addition to bringing awareness, this program also offers tutorials for designers to improve their accessibility quality (The History of A-Prompt, n.d.).

Best Practices

While a number of guidelines and standards have been mentioned, they should not be regarded as the only set of criteria that developers of online courses need to consider. Current research is encouraging institutions to develop program around the students needs. (Kelly, Phipps, & Swift, 2004). The learners in this case must include those who have all types of accessibility needs. If the e-learning material is not accessible, other options must be provided for the student. "This approach focuses on the broad learning outcomes and recognizes that inaccessible e-learning resources may be deployed provided that alternative accessible learning resources are available" (Kelly, Phipps, & Swift, 2004). LC has, like most institutions, embraced e-learning and while there are resources for students with disabilities and accessibility issues on campus for face-to-face learning, the same is not true for the online learner. A more holistic view of how LC has approached this new delivery method of e-learning is needed to address this issue.

Purposes and Objectives

The speed at which online learning is growing in North America is alarming. "One survey has suggested that online learning in higher education grew at an average

annual rate of almost 22 percent from 2002 to 2006, with an estimated total of 3.5 million students having taken at least one online course in the fall of 2006" (Price, 2008). Invention, technology and innovations sometimes have a tendency to leave some people in society behind, often those with learning and physical disabilities. Online learning is no different. As universities and colleges open their virtual doors to those off campus, they also knowingly or unknowingly open their doors to interested individuals with accessibilities issues who are ready and eager to embark on the chance to obtain further education and personal advancement.

The author has investigated the state of online accessibility at LC to determine how it could be improved. Also, the courses were looked at in regards to learner-friendly accessibility, and to what guidelines or recommendations, if any, were being following. This research is a snapshot of the college. The interviews were completed over a period of 6 days.

The research is crucial at this time for the college as Educational Enhancement Team is a newly formed department made up from smaller areas and new employees. The older areas have set ways and EET needs clear direction on the issue of accessibility. Although student response, reaction and assessment of online courses would be invaluable to the college as a planning tool, this research focuses exclusively on the processes involved in creating online courses.

Research Question

Hypothesis

Accessibility at LC is an issue that seems to be on many minds, but does not seem to be an issue fully understood by course development or management at the college. The research question "What is the state of online accessibility at Lethbridge College and how can it be improved?" probes into the thoughts and actions of staff members directly and indirectly involved in the development of online courses at LC.

This research question leads to more unanswered questions such as who should be responsible for accessibility? What standards should be followed? What, if any, resources or expertise does LC need to fulfill such a mandate? Can accessibility be adequately addressed when time is an issue among designers, media specialists and others working on course design.

This research offers a glimpse into where the perspectives of LC staff and administration lie on accessibility issues. After becoming aware of the research and acting on the recommendations based on this research, the current course development process could have a systematic place for accessibility issues within their process; however, cost and time would need to be addressed.

Web accessibility means that people with learning barriers and disabilities can use the World Wide Web. Lethbridge College is a vital part of Lethbridge and the surrounding southern Alberta communities. It provides an economic, social, recreational, and cultural focus for the area.

Like most colleges and universities, LC has been developing online courses to be delivered over the Internet within a Learning Management System. "Currently most Web sites and Web software have accessibility barriers that make it difficult or impossible for many people with accessibility issues to use the web" (Henry, 2005).

Through the Educational Enhancement Team at LC, a significant number of online course are being developed each year. There is no policy or standards officially followed that ensure that the courses are accessible to those with learning and physical disabilities. Research shows that accessibility is good for all and will benefit the whole of society rather than the few. While barriers become broader, accessibility counters it by helping with those that have different learning styles, those with " temporary disabilities such as a broken arm, and people with changing abilities due to aging" (Henry, 2005).

Some important research has been done at Canadian institutions such as the University of Toronto and these recommendations could be modeled. The question is if there are more guidelines or government regulations to follow. All of this must be weighed and considered when developing online courses.

This research asks what is the state of online accessibility at LC and how can it be improved? By probing into the thoughts and actions of the staff members of those directly and indirectly involved in the development of courses online at LC this study will thereby offer a glimpse into the LC perspectives on accessibility issues. Once the initial snapshot of LC current practices in regards to accessibility have been addressed, other issues such as additional cost, time, and implementation may be addressed in future research.

Methodology

Background

A case study was performed involving Lethbridge College (LC) using interviews ranging from 30 min to one hour long. These interviews were recorded using a digital

audio recorder. The recruitment process was by e-mail notification (see Appendix A) with a follow-up telephone call to confirm participation. Thirteen people agreed to participate. They were required to sign a written consent form to agree to the use of their interviews being recorded (see Appendix B). This consent ensured participants understood the nature of the interview, the time commitment, and that they could withdraw from the study at any time before the final results were compiled. Also, interview comments would to be kept anonymous.

The development process of an online course requires the skills of many types of expertise; all having a direct or indirect influence on the final course design. The following positions were included in the interviews: media specialists, formatters, instructional designers, project managers, subject matter experts, instructors, department supervisor, educational technology managers and accessibility counsellors. All interviewees had a direct or indirect relation to the development of online courses.

Description of Methodology

This project is an intensive inquiry about the development process of online courses and how they measure up to current standards or guidelines set in place by numerous outside agencies. Creswell defines a case study as an in-depth exploration of a bonded system e.g.: activity, an event, or a *"process"* (Croswell, 1998). Within this case study, the research will look at LC's current online course development. More specifically, it will look at the processes involved and the protocols in place or not in place for accessibility issues.

A case study creates a "description of a real situation, as a study it's characterized

by an investigation of a single ... group...or culture" (Wiersma, 1991, p. 422). In this

research, a case study approach will be used. The case study will concentrate on the

course development process and how it complies with external standards and guidelines.

"Case studies work for both qualitative and quantitative approaches, and leans on

the belief that human systems develop a characteristic wholeness or integrity and are not

simply a loose collection of traits" (Sturman 1994, p. 640). In studying the process

within EET, a well founded conclusion and recommendation can be delivered based on the

analysis of the primary research compared to the current standards in place by

governments (both federal and provincial), web consortiums and other institutions.

While case studies have certain fundamental defining characteristics, Stenhouse

referred to four styles of work within case-study methodology as seen in Table 4.

Table 4

Type	Description
Ethnographic	Involves single in-depth studies and usually employing the techniques of participant observation and interview
Evaluative	A study involving the evaluation of programs where more often than not condensed fieldwork is considered appropriate rather than lengthy ethnographic techniques
Educational	A study designed to enhance the understanding of educational action
Action-research	A study designed to contribute towards the development of a case under study

(Stenhouse, 1985)

More recently Silverman has narrowed case studies down to three types, they are as

follows. (See Table 5)

Table 5

Type	Description
Intrinsic case study	In the intrinsic case study, no attempt is made to generalize beyond the single case to build theories.
Instrumental case study	In which a case is examined mainly to provide insight into an issue or to revise a generalization. Although the case selected is studied in depth, the main focus is on something else.
Collective case study	Where a number of cases are studied in order to investigate some general position.

(Silverman, 2005)

This study can be defined as both an educational case study and an instrumental case study. The study is an educational case study because it enhances the understanding of the educational action of course delivery that is accessible to all learners. The study is also an instrumental case study. Although college course development process is studied in depth, the main focus is on learning accessibility.

Procedures

To determine what procedures and processes were involved in the course development process, 13 people were interviewed over one week in May 2008. The participants were selected for their roles both directly and indirectly in the development process of online courses at LC. Where there were several participants that had the same role, only two were selected to represent that classification. In these cases, only those people who were believed to be able to contribute most to the study were approached. These individuals were willing to participate. In this way, opinions and information were obtained from the most knowledgeable people in those particular roles.

This research, while acknowledging the different types of e-learning courses, concentrated exclusively on the fully online format because enhanced or blended formats involve some campus-based instruction, students in those courses can still utilize

Disabilities Services on campus. Also, one of the current policies of EET is to develop fully online as often as possible.

Participants who were indirectly involved were not responsible for the design of the course, but would have opinions on the aspects of a well-designed course in terms of online learning or student interactions. For example, employees from Disabilities Services deal with students with accessibility issues on campus, but they have no involvement in online course production. As they are directly involved with distance online students who would benefit from increased accessibility, they were an important element of this case study.

Once Lethbridge College's research ethics committee and the University of Alberta's Research Ethics Board approved the study, then all those required to be involved were asked to participate in this study. If perspective respondents agreed to participate, they were invited through an email to reflect on a definition of accessibility that was provided. Once participants had returned both a participant consent form and pondered the supplied definition of accessibility, an interview was set up. Because the respondents were from within LC, interviews were very efficient and participants felt comfortable. The interviews were recorded.

The questions (See Appendix C) were structured, and tailored for each participant, as some questions were not applicable to some participants. Also, some of the participants were management and so the questions dealt more with decision-making and policy setting. Jot notes were taken as each participant was interviewed. These notes were mostly used to record snippets of the conversation, to continue the conversation, or to receive clarification on an interesting point.

Once I completed all the interviews were completed, the responses were listened to again and grouped into categories. From these responses, an analysis was built to the current operational status within EET and the staff awareness of accessibility. It was also determined if guidelines and regulations were in place regarding accessibility for those with learning and physical disabilities taking online courses and if these regulations were being followed.

Analysis

Of the 13 individuals interviewed, eight had a direct involvement in the creation and development of online courses at LC; five had an indirect involvement. The five indirectly involved were either in management policy-setting positions or working directly with individuals who would benefit from increased accessibility. All five were aware of EET and had in varying degrees an understanding of development process of online courses. They all expressed full confidence of the present development system despite a limited knowledge with either accessibility options or of the development processes.

The Educational Enhancement Team presently follows four types of guidelines. One is external the other three are internal policies created to achieve a standard level of quality and consistency. The external policy was established by eCampus Alberta, a consortium of 15 Colleges within Alberta that host e-courses developed by its respected members. ECampus Alberta requires each college to follow their "Essential Quality Standards" (EQS) (see Appendix D) The EQS ensures that all eCampus courses have a level of consistency and quality regardless of the campus system where they were developed. The EQS is divided into 4 sections: Legal, Instructional Design, Writing, and

Development it should be noted here that none of these areas mention or deal directly with accessibility. The four internal guidelines EET presently follows for course development are

- Course Development Checklist (Appendix E)
- Project Manager Phase 3 Checklist (Appendix F)
- Two best practices working models (see Figure 3 and Figure 4)

The course development checklist is a quality assurance checklist designed to minimize mistakes and oversights in the development process. It is used after a course is completed and up online within WebCT. It does not deal with accessibility. The Project Manager Phase 3 Checklist is the third phase the instructional designer works the course through with the subject matter expert. It requires student, instructor and peer evaluation of the course after the initial pilot-run of the course. There is no mention of accessibility in this third phase either. The last two models were developed in-house to visualize the process and offer a conceptual system for employees to follow and thereby align the development team. Again, there is no visual representation of accessibility in these two models.

It should be noted that LC produces courses other than ones for eCampus Alberta, but for quality reasons all three guidelines and two models are used for development regardless of the courses' final destinations. The three instructors interviewed who are also considered subject matter experts commented that accessibility was overlooked and not featured in any of their guidelines. They also stated that they honestly did not consider the issue when they developed their courses.

While there are many levels of management within the college, no level has been assigned nor accepted responsibility for accessibility issues. This is evident since the interviewees were unclear as to who was responsible for building accessibility into courses. The majority of those interviewed felt the institution's management team held the greatest weight of responsibility. While accessibility in online learning may come to the attention of the leadership team from a department such as Disabilities Services or EET, it needs to have the support from above, both financial and policy-wise. At one point in the past, the college made similar implementations in relation to accessibility for on-campus students with physical disabilities by establishing the disability service department.

Presently, when asked if they knew what the current position was regarding online accessibility for students, interviewees' responses had a similar theme. Seven of the participants were not aware of any position regarding accessibility. Neither an extensive web search nor questioning the interviewees referenced any policy. If current policy is in place, it has not been communicated to those that need it. If there is no current policy, there is definitely a need for it.

Of the participants, most knew that there was a Disabilities Services Department on campus to help on-campus students with learning and disabilities issues. Beyond knowing where they were located, they were unaware of the full scope of service, resources, tools and assistance available for students to access. As for this department's web presence on the Colleges' Website, no one was sure where it was. The available services are described and do reside on a page, but as one interviewee stated "it's not up to date and it's imbedded within counseling service… not very intuitive."

With the current courses being developed and the ones already in existence, much work has been done to make these appealing to many learning styles. This includes the creation of numerous learning objects. A learning object helps demonstrate a principle by way of an animation, a video or an audio recording (mp3). The students can view the learning object, download it onto a computer or mobile device, or stream it via their computer.

When interviewees were asked what they would do to improve accessibility, most continued with the previous theme of creating learning objects and catering to different learning styles. One felt it would be wise to collaborate with Disabilities Services to gain a better understanding of what they could do for each other. Another stated that a switch in the present learning management system would improve accessibility as well. One interviewee shared an opinion that communication at the college is a challenge and accessibility is one of the topics that has suffered. All interviewees felt that accessibility is going without the proper attention and care within the context for both campus and online courses.

While most participants admitted that there was a need to improve, there were some things mentioned that could pose as a hindrance to those with accessibility issues. While content is being placed in the digital environment in many different modes, each instructional designer deals with accessibility differently. Standards are not determined or evenly applied. When a video is placed within WebCT, the option of Closed Caption is not supplied or even considered. Similarly, if a podcast is made, the text it replaces is removed thus making it a useless learning object for the deaf, without some speech to text tool. On a whole, most were not aware of anything really outstanding that was being done

that could be considered a hindrance to online learners with accessibility issues. "I'm not aware of anything" was one answer.

In the interviews, we discussed internal policy and internal standards and methods of quality assurance. The participants were also asked if they were aware of any external government or legal standards or regulations in place for the college to follow as it created courses for online learners. More specifically, they were asked if they were aware of any regulations to follow for those with learning needs and disabilities. One or two participants brought up important regulations such as the freedom of information and protection of privacy act (FOIPP) and copyright. These are concerns in course development, but have little impact on accessibility issues. Four participants stated that the college follows the Provincial 'Duty to Accommodate' document. The rest were unaware of any policy or standards in Canada provided by the Canadian government or the Provincial government.

Some participants expressed a general feeling of cooperation and sharing among institutions. They felt that progress could be made if LC looked at what other institutions were doing about this same issue. An awareness during conference attendance could also result in current research studies and practices in place for us to model. One participant shared how extensive research was going on at two other Alberta colleges, NorQuest College and Mt Royal College, and indicated that the college may be interested in their final report, findings and recommendations.

Lethbridge College is not using the most current version of their LMS. Those interviewed did not think the current LMS was user friendly and compliant with the new demand for accessibility issues for online learners. The consensus from most of the

participants was that it was outdated and had a severe lack of accessibility features for <u>all</u> who used it, not just those with special needs. The individuals from the Learning Disabilities Centre commented that the current LMS was not compliant with new programs students are using such as screen readers.

Lethbridge College is presently in the process of upgrading or replacing the current LMS. Companies showing off their newest LMS products have conducted numerous demonstrations on campus and over the Internet. While the Learning Disabilities Department was invited to participate in this decision process, it had limited input. The companies promoted their features to faculty and staff. A number of them demonstrated features that were compliant to numerous standards and guidelines dealing with accessibility. Most, if not all, of the LMS companies are from the United States, so they would be compliant to a totally different set of rules. One media specialist and two interviewees in supervisory management positions felt that overall, these features were desperately needed at the college. Most employees in the Learning Disabilities department believed the new LMS was very positive. One of the respondents remarked "The [newer systems] take a serious approach to accessibility and will be a welcome change on our campus."

Currently on campus much is being accomplished for students with disabilities. Mentioned were all the services offered by the disabilities office such as exam accommodations, conversion of text to Mp3 and the access to special software for students' personal computers. There are still gaps. A disabilities councilor explained how they were trying to get these programs in the student labs for students that could not afford a personal laptop or computer. The only access these students would have to these

applications would be on the few computers in the disabilities office. That office closes at 4: 30 pm every weekday and is closed on weekends; this is not very conducive to most students' study schedules. If the programs can be loaded onto computers in the common student labs, full access for disabled students would be available, as it is for every other student.

Another concern expressed is that for security reasons, computers in the large labs have the system preferences locked. This means that students can't change certain things on the system. This makes sense for security reasons, but for students with accessibility issues, it locks them out of the specialty designed built-in feature adjustments that make learning accessible.

The final question was a holistic question: did they feel that as the college moved in the direction of online learning was it giving the appropriate attention to the issue of accessibility? Eight of the interviewees said no. One well-made point expressed by someone in management was that the college was moving in the right direction with the implementation of EET and the new position of "Learning Strategist/Assistive Technologist" in the disabilities services. A manager described it as "a process" and believed that these steps showed progress. It was pointed out that accessibility is listed as one of the five 'buzz' words posted prominently on the back of all LC employees' business cards, but how they're defining accessibility is not clear (see figure 2).

Figure 2
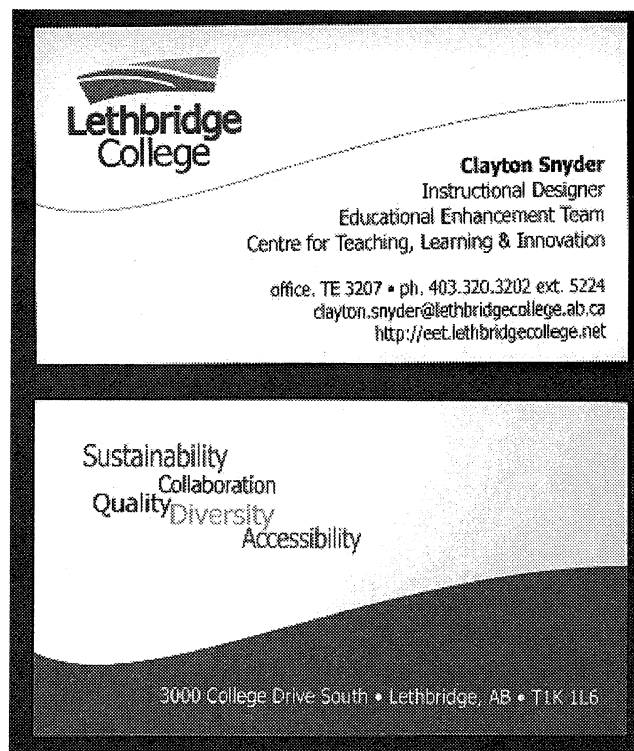
Summary of Analysis

The heart of this case study is the present state LC is in with regards to accessibility for online learners. Obtaining this information was done through a series of interviews with individuals within the organization. Using the case study methodology offered the best research approach to gather this snapshot.

Analyzing the data from the interviews made it possible to highlight significant comments from the participants. Their lack of knowledge shows where additional information is needed. The following particulars from the interviews were identified.

1. EET follows only one external guideline and three internal ones.

    a. None of these policies address accessibility

2. The acknowledgment of who is responsible for integrating accessibility within online courses is very ambiguous.

3. No current policy from the college exists regarding accessibility for online students.

    a. The policy that deals with the "Duty to Accommodate" is sufficient for students on campus but would need to be amended for those students off-campus in the online medium.

4. The present Website with information for students with accessibility issues on campus is lacking in detail and difficult to locate on the college website.

5. At present, the development team is following a number of best practices that do improve the diversity of use for their courses, such as creating learning objects and chunking the content.

6. No consensus was shown throughout the interviews regarding policy or regulations, whether federal or provincial or that they should be following any.

7. The college presently uses an old Learning Management System, which has limited accessibility options and features.

8. Most participants felt that the college was moving in neither a productive nor aggressive enough way in the area of accessibility for online learners.

These eight key points showing the deficiencies of LC in regards to accessibility provide the basis for further analysis and recommendations.

Conclusions

The state of the college in relation to accessibility for online learners is quite ambiguous. Responsibility for it floats around from area to area while no one department feels it is their mandate to address and apply the regulations to course development

procedures or standards. The internal standards set in place by EET improved the quality of the courses and ensured consistency, but did not mention accessibility. Along with the internal standards, LC follows the eCampus quality guidelines. The eCampus guidelines also do not address the much-needed guiding principles for accessibility for those with learning and physical disabilities.

Of the many regulations, guidelines, policies and standards discussed in this paper, two have the most direct influence on e-learning at LC: the Canadian Common Look and Feel Standard from the federal government and the Duty to Accommodate document from the Alberta provincial government. These two documents are binding to all institutions serving the public whether by online access or not. Only four participants interviewed mentioned these standards. This research has found that while the college deals with on-campus students' accessibility issues through Disabilities Services, the college has not integrated these standards into the development of online courses for off-campus students.

Currently, there is a large amount of research and action from the University of Toronto. This research demonstrates how institutions, such as LC, can embrace accessibility issues and adhere to the regulations to increase the quality of their online courses to include those with accessibility issues.

Jutta Treviranus established the Adaptive Technology Resource Centre in 1994 at the University of Toronto. Her goal was to ensure that technology was designed to be inclusive and accessible. She stresses that accessible online content is advantageous for everyone, not only those with disabilities and believes that making technology accessible should be everyone's concern (Treviranus, 2008).

At the time of this research case study, NorQuest College and Mount Royal College have partnered together to conduct external research on the topic of accessibility. Their findings will be of great significance to LC as these two institutions are both in Alberta and are members of the eCampus Alberta Consortium. The researchers are Sandy McIntosh, Pattie Mascaro, Deanna Kiss, & Amanda Veinotte. Both institutions have expertise in supporting learners with disabilities in the classroom and in the design and delivery of web-based courseware. Their project will

> develop a series of web-based, stand-alone tutorials to guide the design of accessible e-learning to meet the needs of diverse learners. The development model will be based on principles of universal instructional design allowing disabled learners to participate fully in web-based learning.
>
> (McIntosh, Mascaro, Kiss, & Veinotte, 2008, p. 1)

The staff at LC involved with the development of online course was unaware of any standards they should be following. Those that were aware were not in a position to administer change. Currently, the Alberta duty to accommodate is being practiced completely for students attending the campus during regular working hours through policy and the services at the Centre for Disabilities Services. Those students who are enrolled in online courses are presently left to themselves to cope with difficulties that arise in their studies. The issue of who is responsibility for accessibility remains unresolved. The college has not assigned responsibility and no one department or combination of departments has taken ownership. Each department agrees that accessibility is important and a definite need, but each appears to believe that responsibility for it lies elsewhere.
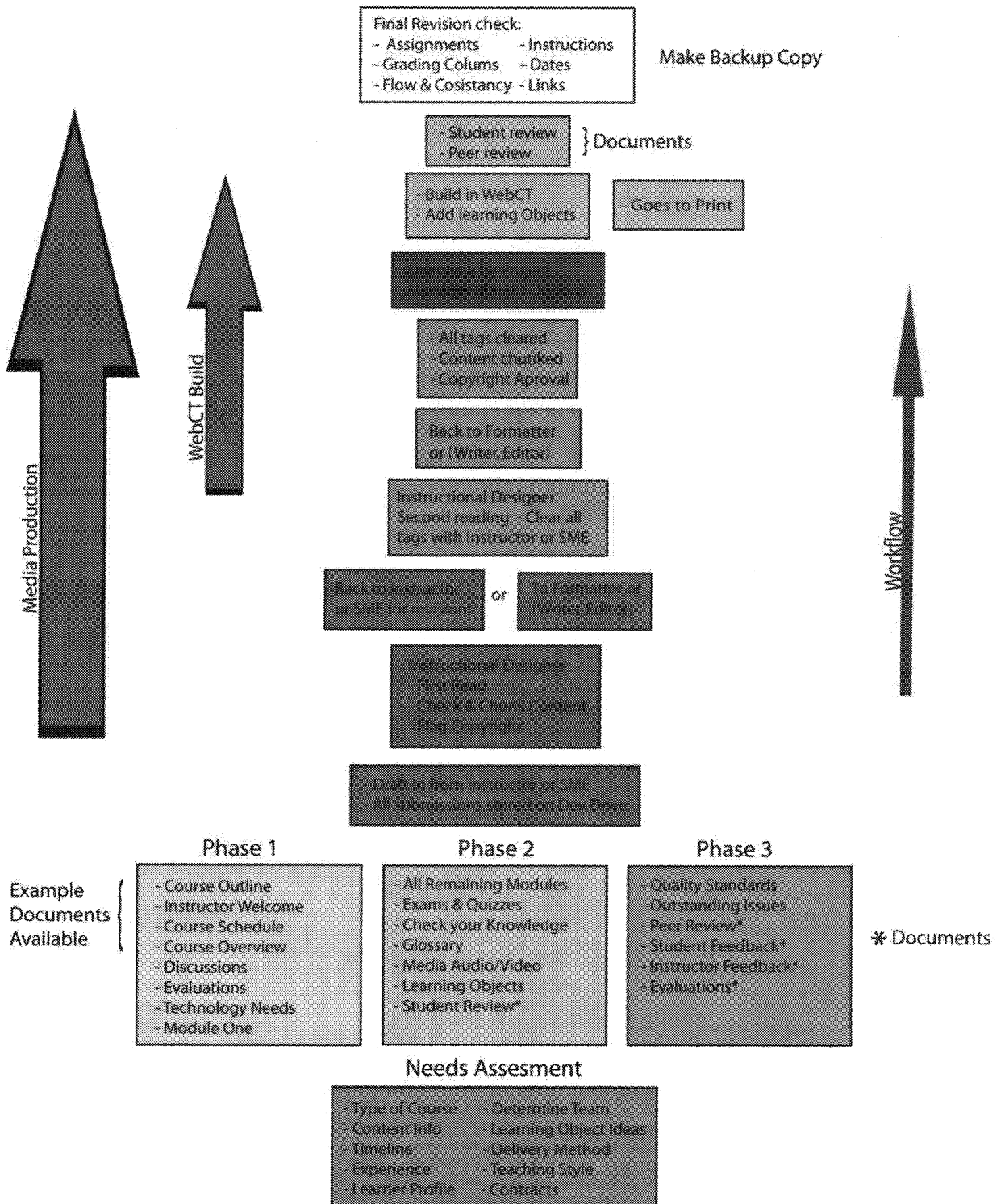
The status, therefore, of LC's online accessibility is minimal. If things are being done, they are probably done by accident rather than concise policy or guidelines. For example, it is suspected that an instructor creating a podcast of a lecture is only doing this because of the fad of podcasting, and neglecting to allow access to the lecture notes for those with accessibility issues.

Under the current procedure, a Dean or Program Chair suggests a course for development. If the course is approved based on workload availability, all contract positions such as a subject matter expert (SME), writer, and editor are assigned. When these resource people are in place, the course is assigned to an instructional designer and a media specialist. The instructional designer meets with the SME and begins the process of developing the course content for online delivery. The appropriate delivery mode, enhanced, blended or fully online, is discussed and selected based on program and student requirements.

As more content arrives from the SME, the instructional designer reviews it. As the work progresses, a formatter and a media specialist become involved and work with the instructional designer and SME to create e-learning activities and transition the course into a web format. This process is not a linear process. The instructional designer works through a three-phase system. The following models (see Figure 3 and Figure 4) existed in EET as a visual design for the employees to understand the processes and chart the development cycle through this system. The phases deal mainly with content and at any point in this system, and may go through the process many times.

**Figure 3 Content and Course Cycle for Instructional Designers** [6]

Content and Course Cycle for Instructional Designers

Final Revision check:
- Assignments   - Instructions
- Grading Colums - Dates
- Flow & Cosistancy - Links

Make Backup Copy

- Student review
- Peer review
} Documents

- Build in WebCT
- Add learning Objects

- Goes to Print

- All tags cleared
- Content chunked
- Copyright Aproval

Back to Formatter
or (Writer, Editor)

Instructional Designer
Second reading - Clear all
tags with Instructor or SME

Back to Instructor
or SME for revisions   or   To Formatter or
Writer, Editor

Instructional Designer
first read
Check & chunk Content
tag copyright

Draft in from Instructor or SME
All submissions stored on One Drive

Media Production

WebCT Build

Workflow

Phase 1	Phase 2	Phase 3
- Course Outline - Instructor Welcome - Course Schedule - Course Overview - Discussions - Evaluations - Technology Needs - Module One	- All Remaining Modules - Exams & Quizzes - Check your Knowledge - Glossary - Media Audio/Video - Learning Objects - Student Review*	- Quality Standards - Outstanding Issues - Peer Review* - Student Feedback* - Instructor Feedback* - Evaluations*

Example
Documents
Available

* Documents

Needs Assesment

- Type of Course   - Determine Team
- Content Info   - Learning Object Ideas
- Timeline   - Delivery Method
- Experience   - Teaching Style
- Learner Profile   - Contracts

On the left side of Figure 3 is an arrow indicating media production. This runs concurrent to the content being developed for the course. Media production takes place as the content comes in. The ID and the SME work with the media specialist to develop learning objects that will demonstrate concepts to help the students meet the course outcomes and overall course objectives. The following is a learning object design model (Figure 4) that the media specialists currently use to adhere to good client relations, quality standards and best practices.

As seen in Figure 3 and Figure 4 the process in both diagrams, at no point is there accommodation to accessibility for those with learning and physical disabilities. If guidelines, regulation or standards were being adhered to, they would be found here in the heart of these procedures and diagrams of the educational enhancement team at LC. It is the author's opinion that on Figure 3 accessibility should be represented as a blue arrow similarly as the WebCT and Media specialist procedures are represented. This will ensure that accessibility following initial discussion remains a constant issue. In Figure 4 it is recommended that accessibility be discussed during the "Concept Meeting" with all the key participants on site. Others could be called in to advice at this time if the need arises such as staff from The Centre for Disabilities Services. Putting accessibility in the checklist that follows the 95% complete stage can represent follow up.

Figure 4 New Media Project Process Model[7]
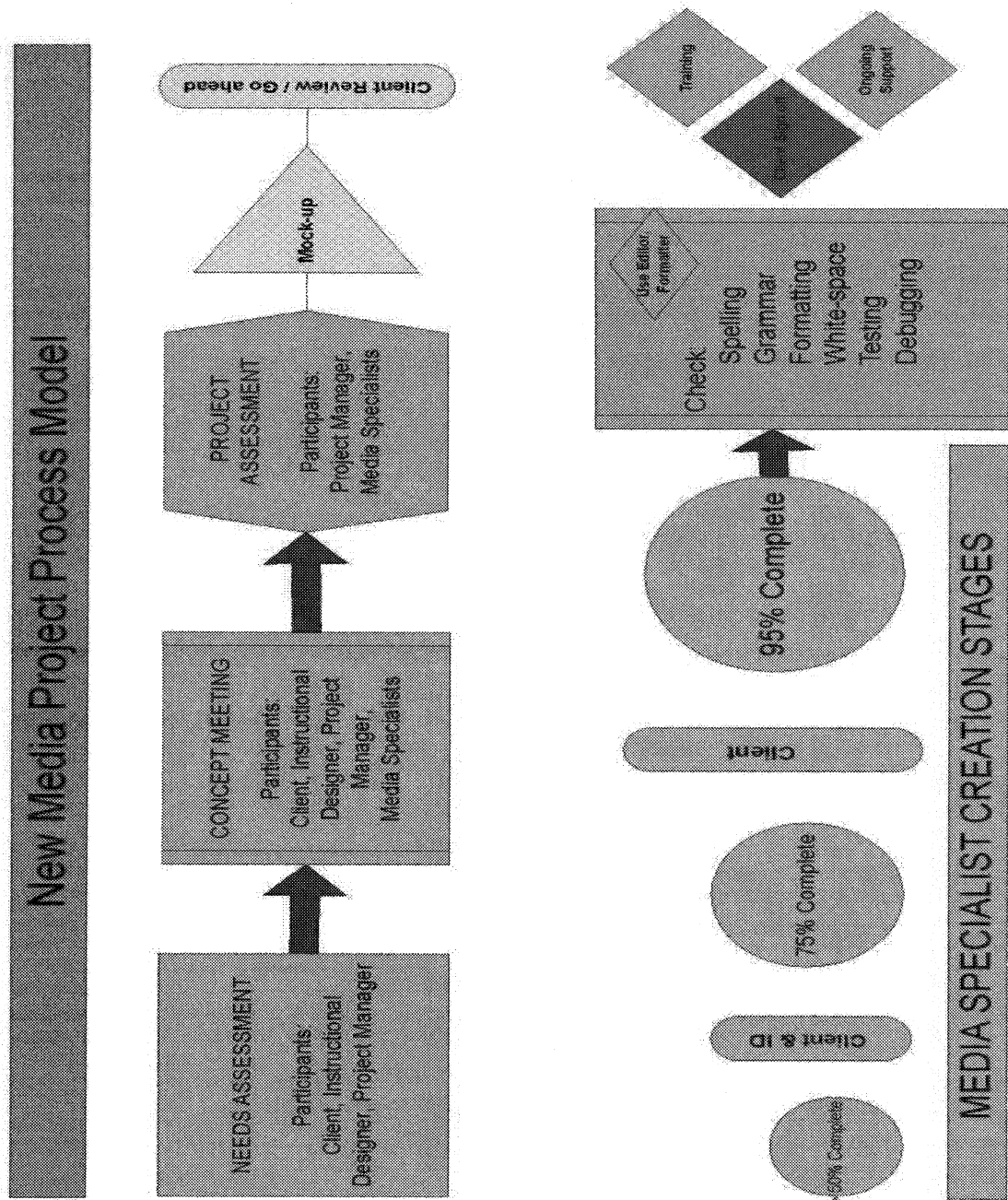
Recommendations

In review of the literature and a thorough analysis of this research, the following recommendations are made. These preliminary recommendations would need to be viewed in the context of cost and time constraints.

When the president of the college uses the term pointy end of the ship to address workers at a bag lunch meeting, she has hit the nail on the head for metaphors. Those at the helm of this ship are the decision makers and the college captain. They decide what direction and speed the college will move in the area of accessibility and online learners.

Recommendation 1

In order to get accessibility changes made to course content for online learners at LC the Dean of the Centre for teaching Learning and Innovation, the Chair of The Educational Enhancement Team and The Coordinator for Disabilities Services will need to divert the attention of the college's senior leadership team and sound the warning bell that this iceberg is looming. Once these collaborators have received approval to implement the needed actions to accommodate accessibility issues for online learners, this partnership is not to be severed.

Recommendation 2

The college will need to follow or build new accessibility Standards and Policies. The EET and Disability Services will then need to follow these new accessibility standards and build or amend internal policies to be consistent with

these standards. Three standards to be taken into consideration are the World Wide Web Consortium (W3C), Common Look and feel Standards, Universal Design. The following outlines these three guidelines:

- *W3C*: The non-governmental W3C is most likely to stay current and adapt to changes in technology, the Internet, and the needs of students. W3C provides the standard by which other guidelines are based.

- *Common Look and feel Standards*: This homegrown Canadian Standard is an obvious choice as it is from the Federal Government. This standard was built on the W3C and other countries regulations. It is not updated regularly and may fall behind as technology changes.

- *Universal Design*: This policy was influenced by industry and society. It will keep the college well rounded and abreast of what is happening elsewhere in both non-educational and other educational institutions.

Recommendation 3

After a policy is created and approved by senior management, responsibility will lie solely on EET to build courses that meet the standards of this new policy. To meet the criteria of integration: All staff involved directly or indirectly with online course development must be notified of this new policy encouraged to become familiar with its recommendations. Those directly involved such as instructors/SMEs, instructional designers, media specialist and formatters should follow the policy and recommendations when building online courses at LC.

The key requirements from this new policy will need to be integrated into the existing internal standards; for example, within both the Course Development

Checklist (Appendix E) and the Project Manager Phase 3 Checklist (Appendix F).

Appropriate measures can then be taken to integrate these policy guidelines into

EET's working documents such as the "Content and course process model for

instructional designers" (Figure 3) and the "Media Project process Model" (Figure

4). This step is critical, as it will indicate placement and solidify the procedures in

the actual working of the production team and their daily routines. For example, if

the new accessibility policy requires that all rich media have accommodating options

such as text, mp3, or closed caption, then this will be a clear checkpoint in these

models as much as copyright or any other step.

Recommendation 4

Lethbridge College at the time of this research was in the process of

replacing the existing Learning Management System. It is recommended that

accessibility be a consideration in the choice of the new system. Currently, both

recommended choices include integrated accessibility features that accommodate

most if not all accessibility policies.

Recommendation 5

The present Website with information for students with accessibility issues

on campus is lacking in detail and difficult to locate on the college website. It should

be more apparent for students that are both registered on campus and for those that

are registered in online courses. The site should be built to cater to both audiences in

order for them to locate the services they may require or the information they need to

gain assistance. This should be linked from the college's main homepage.

Summary of Recommendations

In all five recommendations to improve LC's online course accessibility changes are suggested. They include approval from senior leadership to advance and adopt changes to the current practices by building or adapting an accessibility standard that should be followed by the course development team. The current Learning Management System should be replaced with one that integrates accessibility features easily. Lastly, improvements should be made to the current website to include up-to-date information for students with accessibility issues.

If the above recommendations are integrated into online course design, development, and college policy, the development of online courses for distance learning students with accessibility issues could be improved. The process of obtaining and sustaining quality and accessible courses for those in the online environment could and should be a major accomplishment for the college and as such the college should feature this in all their publications and promotions as a college that is truly accessible.

Future Research

This research's defining scope of accessibility matched the current definition on campus. There are, however, a growing number of barriers for students that are falling outside of this definition such as financial barriers, time and technology constraints. More research is needed in this direction to advise Lethbridge College of the direction of broadening their definition and offering the appropriate aid and services to meet these challenges.

As indicated in this paper, some believe that any barriers preventing education should be considered an accessibility issue. These broader issues could also be the topic of future research.

In addition, other higher educational institutions within Alberta, Canada, or internationally could be the subject of a case study to obtain a broader view of educational accessibility issues. This research would provide a better view of the overall accessibility landscape.

Lastly, including the student's point of view and their interaction with the online environment would also be a valuable study. An interesting aspect of this possible study would be to include all students and not just those with accessibility issues. Although accessibility is becoming an area of awareness in higher education online learning, more research is needed.

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Appendices

Appendix A
Letter of Introduction to Faculty and Staff at Lethbridge College

Dear xxx,

Hello. I am a graduate student from the University of Alberta. I will be conducting interviews that will help me to complete a research project for my Master of Arts in Communication and Technology.

I am studying accessibility online: Post-secondary e-learning opportunities and challenges and I am interested in asking you some questions about your role and responsibilities in the development of an online courses at Lethbridge College. Participation is completely voluntary and during the interview, I will record our interview with a built in audio application on my laptop and take notes as well.

There is no pressure or requirement from LC or the Educational Enhancement Team. All of your personal information will be confidential. I will not tell other people you participated in the research study, and I will not use your name in my final research paper.

If you agree to participate, you will be asked to do three things with a total time commitment of about 60 minutes:

1. Sign a letter of consent

2. Answer a few questions related to the development of online courses at Lethbridge College and accessibility.

3. The interview will be approximately 45 minutes in length.

Following analysis I may need to follow up with you for clarification at a second time at your convenience for a max to 15 minutes long.

Please review the attached letter of consent for details of the study.

All interviewees will receive the results of the study including recommendation of best practices in relation to disability and accessibility issues and on how to make virtual learning accessible to all.

If you agree, please respond by email to let me know.

Thanks,

Clayton Snyder

cosnyder@ualberta.ca

403-320-3202 ext. 5224

Appendix B
Information/Consent Letter

Information/Consent Letter

Participant Informed Consent Form

Accessibility Online: Post-secondary e-learning opportunities and challenges a case study of Lethbridge College

Principal Investigator: Clayton Snyder 403.758.3453   cosnyder@ualberta.ca
Supervisor: Stanley Varnhagen 780.492.3641
stanley.varnhagen@ualberta.ca

You are invited to participate in a study on Accessibility Online: Post-secondary e-learning opportunities and challenges-a case study of Lethbridge College.

Purpose of the Study

I'm Clayton Snyder; I'm a Graduate student currently completing a Masters of Arts in Communication and Technology (MACT) through the University of Alberta. I am conducting research to meet the requirement of my master's degree. The purpose of my research is to obtain an informative snapshot of the present practices and procedures that are carried out in the creation or development of an online course at Lethbridge College. Specifically, I will be looking at online course creation in relation to accessibility. This research project will conclude the requirements of my Masters degree.

Methodology

I will be conducting a case study involving Lethbridge College. As part of this study, I will use digitally recorded interviews of 45 – 60 minutes long. I would like for you to participate in one of these interviews. I will be asking you general and specific questions about online course development.

Once all information is collected, a more thorough examination will be completed. The results of this study will be written up and distributed to study participants as well as a research paper and possible conference presentations or publication.

Confidentiality

Although direct quotes will appear in the dissemination of the results, no names or identifying information of participants will be used in any publication of this study without prior consent from the participant.

All raw data will be kept in a password-protected file or in a locked filing cabinet for five years as dictated by the University Ethic's Board, before being destroyed.

Interviews will be recorded, but will not be transcribed or listened to by anyone other than the researcher. Some quotes and notes of the interview will be recorded in writing, but no identifying information will be attached.

Time Commitment

Participation in the interviews will be approximately 60 minutes. Although follow-up clarifications are not anticipated, the researcher may contact participants by email or phone with the participants consent. The clarification process will be limited to a time commitment of 30 minutes maximum.

Benefits and Risks

The College is striving to become a world-recognized college. This paper could add to the college's knowledge and have a positive influence on accessibility at Lethbridge College.

It is possible that someone could conclude your identity correctly or incorrectly from quotations used in publications. There are no other known risks from participating in this study.

Withdrawal from Study

Participation in any aspect of this study is completely voluntary, and you are free to withdraw up to two weeks after the interview has taken place without consequences. If you withdrawn within the time limit, information I have gathered from you will not be included in the study. You may not withdraw after that point as it may not be possible to remove your comments and data from the study after analysis has begun.

Dissemination of Results

The information collected will partially meet my Masters requirement of the MACT program. The dissemination goal is a research paper and possible conference presentation and publications either electronically or through print. This study should benefit the participants and Lethbridge College in general as it will assist the college as it moves forward in the development of online material and courses in relation to accessibility. More importantly, my hope is to enable more individuals the opportunity to gain an education and use the benefits of online learning no matter what their barriers may be.

Ethical Approval

All research will comply with the University of Alberta Standards for the Protection of Human Research Participants http://www.ualberta.ca/~unisecr/policy/sec66.html. The plan for this study has been reviewed for its adherence to ethical guidelines and

approved by the Faculties of Education, Extension and Augustana Research Ethics Board (EEA REB) at the University of Alberta and by Lethbridge College's research Ethics Board. For questions regarding participant rights and ethical conduct of research, contact the Chair of the EEA REB at (780) 492-3751

Concerns or Questions

If you have questions or concerns please contact the principal researcher, Clayton Snyder, or the supervisor, Stanley Varnhagen at the numbers or email addresses provided above. You may also contact, Marco Adria who is Director of the MACT Program at the University of Alberta by phone at (780) 492-2254 or by email at marco.adria@ualberta.ca.

If you agree to participate in this study, please sign below.

I ...., understand the purpose, activities and potential benefits and risks of this research project. I understand that the researcher will protect my confidentiality and privacy, that my participation is voluntary and that I may withdraw from the study until two weeks after the interview, after which I will not be able to withdraw. I understand that I am to sign and return one copy of this form and that I may keep a copy.

_____, _____ _____
Printed name   signature   Date

Appendix C
Interview Questions

1. What is your role in developing online courses at Lethbridge College?
2. What recommendations or standards do you follow in building an online course?
3. As you understand it, what is the college's position regarding online accessibility?
4. What steps are you aware of or are in place to facilitate individuals with learning disabilities physical disabilities and any other accessibility issues on campus.
5. What resources are you aware of that are available to the online learner?
6. In what ways do the courses presently available and those being developed respond to the unique needs of individuals with accessibility issues?
7. What recommendations would you make to improve accessibility in future online courses?
8. Are you aware of any methods, applications or design techniques currently being used that could hinder use for those with accessibility issues?
9. Are you aware of any methods, applications or design techniques currently being used that assist in the use of online courses for those with accessibility issues?

Management

10. What external government or legal standards/regulations or guidelines are in place for the college to follow in the design of online material for students with disabilities or accessibility issues?
11. Are there current internal policies or procedures in place that give guidance for the development of online courses for those with accessibility issues?
12. What do you think could be done to improve accessibility within courses that are developed for online?
13. In what ways is the current LMS at Lethbridge College usable for students with accessibility needs?
14. In what ways does the LMS limit students with accessibility issues?

15. Lethbridge College is upgrading their LMS what, if any, considerations have been given to accessibility?

Lethbridge College Disability Services

(Face2Face)

16. What currently is being done on campus to assist students with disability and accessibility issues?
17. What are currently the gaps that you feel need immediate attention.
18. How do you feel these gaps could be filled?

(Enhanced/Blended)

19. What currently is being done on campus to assist students with disability and accessibility issues?
20. What are currently the gaps that you feel need immediate attention.
21. How do you feel these gaps could be filled?

(Fully online)

22. As we move towards a fully online format in many courses and programs do you feel the college is giving the appropriate attention to the issue of accessibility? (Yes or No Please expand on your answer.)

Appendix D
Essential Quality Standards[2] (EQS)

Legal

☐ Copyright clearance has been obtained for all course material under copyright.

☐ Issues relating to the Freedom of Information & Protection of Privacy Act are addressed.

Instructional Design

☐ The course is as academically rigorous as its face-to-face equivalent.

☐ A course syllabus is provided.

☐ Objectives are achievable, measurable, relevant, clearly stated, and concise.

☐ Learners are informed about the criteria that will be used for all evaluation.

☐ Course assignment instructions are clear and complete.

☐ Learners are told whether learning activities are sequential or whether they can be completed in any order.

☐ Learners are informed of the ways in which they can communicate with the instructor.

☐ A variety of instructional strategies are used to ensure compatibility with learners' different interests, abilities, and learning styles.

☐ The material is organized in a way that allows learners to understand relationships between parts of the course.

☐ The content is directly related to learning objectives.

☐ The content is accurate, relevant, and current.

☐ A variety of instructional or learning activities are used to promote interactivity, such as online discussions, online conferencing, collaborative assignments, and listserv participation.

☐ Feedback is incorporated into learning activities.

☐ Access to appropriate information resources is provided.

☐ A bibliography or reference list includes a variety of material such as web links (URLs), books and journals, CD-ROMs, and videos.

☐ Learners can realistically complete the course, given practical constraints such as available time and resources.

☐ Learners are provided with the opportunity to evaluate the course anonymously.

Writing

☐ The tone of the writing is supportive and encouraging.

☐ The level of language used is appropriate for the intended audience.

☐ The writing is free of bias relative to age, culture or ethnicity, gender, and sexual preference.

Development

☐ The course has been piloted and/or beta tested.

☐ The course is designed according to a consistent format.

☐ Tools for collaboration are provided (such as a bulletin board, email, and telephone).

☐ Multimedia elements do not exceed minimum hardware/software requirements.

☐ All links work.

Appendix E
Course Development Checklist - Quality Design3

Standards – Final Checklist

<table>
<tr><td colspan="3" align="center">Course number and name</td></tr>
<tr><td align="center">Formatter</td><td colspan="2" align="center">Media Specialist</td></tr>
<tr><td colspan="3">Contract payment for phase 2 approved _____
Date _____</td></tr>
<tr><td colspan="3" align="center">Instructional Designer</td></tr>
</table>

	Criteria	ID with Instructor	Formatter	Media Specialist
Browsers tested		□	□	□
Read Me First	Course Introduction	□	□	□
	Instructor Welcome	□	□	□
	Instructor contact information	□	□	□
	Course Overview	□	□	□
	Course Outline	□	□	□
	Course Schedule	□	□	□
	Guidelines for Formal Essays and Papers	□	□	□
	List of Readings	□	□	□
	Other Resources (ex. learning resources)	□	□	□
	Other Information as needed	□	□	□
	Reference Page	□	□	□
	Support information for Online and Web Enhanced	□	□	□
	Acknowledgements	□	□	□
	Online Copyright Page	□	□	□
Course Modules	Course has been edited	□	□	□
	Module Introduction / Overview (when appropriate)	□	□	□
	Module Outcomes	□	□	□
	Content is loaded and is in the right location and in right format (html)	□	□	□
	Check Your Knowledge (Check delivery method and functionality)	□	□	□
	Discussion Questions, marking Criteria and grading key	□	□	□
	Links	□	□	□
	Appropriate referencing (APA / Chicago)	□	□	□

	Criteria	ID with Instructor	Formatter	Media Specialist
Layout / Appearance	Banners	☐	☐	☐
	Icons – consistent use of icons both within content and on WebCT	☐	☐	☐
	Background	☐	☐	☐
	WebCT Template	☐	☐	☐
	LC Logo and name used (re-branding)	☐	☐	☐
	Image size (max. size 600 x 400 and 72 dpi)	☐	☐	☐
Learning Objects	Video / Audio on streaming server, checked on PC and Macs and with both browsers (IE & FF)	☐	☐	☐
	Flash: checked on PC and Macs and with both browsers	☐	☐	☐
	Images appear	☐	☐	☐
	Links - all work and are active	☐	☐	☐
Communication	Discussion questions are copied in Discussion Board	☐	☐	☐
	Chat rooms exist if appropriate	☐	☐	☐
	Instructions for other tools exist (ex. Elluminate, Skype, MSN, etc)	☐	☐	☐
Special Requests	Mail - icon is active and running	☐	☐	☐
	Other	☐	☐	☐
	Other	☐	☐	☐
Assessment	Quizzes / Exams are loaded in appropriate delivery method (answers are **NOT** available for students)	☐	☐	☐
	Release times are set (availability dates and times – beginning and ending are set)	☐	☐	☐
	Check to make sure students have **NO** access to answer keys	☐	☐	☐
	Grading checklists included if appropriate	☐	☐	☐
	"Check Your Knowledge" activities function and student instructions are clear	☐	☐	☐
	Assignments are loaded in appropriate location. Drop box exists if required	☐	☐	☐
	Assignments and Marking Criteria are loaded. Release and / or Due Dates are included	☐	☐	☐
	Grade Book – formulas are entered and are working	☐	☐	☐
	Final Grade Column is completed and accurate	☐	☐	☐
Copyright	Copyright clearance for materials and other resources such as Deep links, Youtube, Wiki References, found in Folder on development drive – or found on copyright database	☐	☐	☐
	Watermark idea	☐	☐	☐
Follow-up	Peer Review / Instructor Feedback etc. are here - Editing has occurred	☐	☐	☐
	Instructor Resources	☐	☐	☐
Storage	Course is backed up on Course Dev. Server	☐	☐	☐
	Final - course is backed up on Live Server	☐	☐	☐

Appendix F
Project Manager Phase 3 Checklist [4]

Course:

Course Development Team:

_____ **Quality Standards Audit** (has been reviewed with developer)

_____

_____

_____ **Outstanding Issues to be Addressed** (provide details):

_____

_____

_____ **Peer Reviewer or Program Chair Review of Content** (comments):

_____

_____

_____

_____ **Student Feedback** (summary)

_____

_____

_____ **DL Instructor Feedback** (see attached form)

_____

_____

_____ **Final Revisions Completed**   **Date:** _____

_____ **For online courses (or courses with online components), back-up of WebCT has been saved on the Course Development drive.**

                                    Date: _____

Lessons Learned:

_____ **Memo to Pay Phase 3**   **Date:** _____

Signature of Project Manager: _____

_____

Appendix G
Academic Accommodation for Students with Disabilities [5]
Policy Title: ACADEMIC ACCOMMODATION FOR STUDENTS WITH DISABILITIES
Policy Type: ACADEMIC
Policy Number: 2.13
Effective Date: 2006 12 01

POLICY STATEMENT

Lethbridge Community College recognizes its duty to provide academic accommodation to students with
disabilities. The College will, where reasonable, remove barriers and provide opportunities to students
with disabilities within the limits of its resources, and having due regard to the rights and entitlements of
other students and college staff who may be affected. The College will enable them to access College
services, programs, and facilities, and to be welcomed as participating members of the College
community. The College's goal is to ensure fair treatment of all students, including students with a
disability, in accordance with their distinct needs, and without compromising academic standards and
principles.

PREAMBLE

The purpose of this policy is to clarify the rights and responsibilities of Lethbridge Community
College, its staff and students with respect to academic accommodations for students with
disabilities.

The duty to provide academic accommodation is ultimately an institutional obligation. Accordingly,
any department may be called upon to facilitate reasonable accommodations and has a duty to
cooperate in the provision of a supportive physical, academic, and social environment. The College
will provide academic accommodations to students with documented disabilities in accordance with
the Alberta Human Rights
Citizenship and Multiculturalism Act, and the Canadian Charter of Rights and Freedoms, to the extent
that the accommodation does not cause undue hardship to the College or lower the performance
standards of any academic program.

DEFINITIONS

Student - For the purposes of this policy, a student is a person who has formally applied to the
College, or who is currently enrolled in one or more credit courses offered by the College

Disability - The College recognizes the World Health organization's 1985 definition of disability
which states that a disability is caused by a mental, physical or sensory impairment, or combination
that may result in a permanent or temporary loss of ability to function in major areas of life
activities, such as self-care, reception or expressive language, learning, mobility and self-direction.
Therefore, individuals with disabilities include, but are not necessarily limited to, those with
physical disability, vision or hearing loss, learning disability, psychological disorder, chronic
illness or temporary disability.

Academic Accommodation - An academic accommodation is a change in the allocation of College
resources, or in teaching or evaluation procedures, which is designed to meet the particular needs of a
student with a disability. Accommodation is intended to support the academic capabilities of the
student and remove barriers to the student's success. Academic accommodations may include but are
not limited to, preferential seating location, permission to audiotape lectures, copies of instructor's
overheads and notes, use of assistive technology in the classroom or lab, and access to tutoring.

GUIDELINES

Accommodations are subject to three limitations:

1. The first limit is that of academic integrity. All accommodations must be compatible with academic standards, individual standards, individual course objectives, and the health and safety standards of Lethbridge Community College.

2. The second limit is that of reasonableness. The accommodation must be sensible and workable. For example, it would be reasonable for a student to receive preferential seating to reduce distraction; receiving private lectures is not reasonable.

3. The third limit is that of undue hardship. Undue hardship generally means excessive cost or excessive disruption of or excessive interference with the normal operations of the College.

PROCEDURES

Lethbridge Community College will:

1. Ensure that individuals with disabilities are equally considered for admission to programs for which they meet the admission requirements.

2. Provide admission accommodation according to the same requirements of ongoing academic accommodations, upon request, as outlined in the Responsibilities of Students with Disabilities section of this policy.

3. Make its courses and programs accessible to students with disabilities in accordance with human rights legislation.

4. Review documentation to ensure that recommendations and decisions regarding accommodation are based on appropriate professional or medical information, and assist students in finding satisfactory and workable accommodations.

5. Provide reasonable accommodations to students with disabilities.

6. Ensure that faculty and staff are familiar with policies and procedures regarding persons with disabilities.

7. Respect all information gathered under this policy as confidential and protected according to FOIP policy and principles.

8. Ensure that distribution or availability of all instructional materials under this policy adheres to protection of intellectual property principles, as provided through the Canadian Copyright Act and other relevant legislation.

9. Ensure that the accommodation needs of persons with disabilities are addressed during future renovation or construction projects or initiatives.

Responsibilities of Students with Disabilities

Every student with a disability at Lethbridge Community College who seeks academic accommodation has a responsibility to do the following:

1. Provide relevant and current (within the past 3 years) documentation to the Disability Counsellor, outlining the nature of the disability, the impact of the disability on academic and classroom performance and suggested or recommended accommodations.

2. Submit all documentation for accommodations to the Disability Counsellor in a timely manner (normally a minimum of 3 months in advance), to allow for the arrangement of accommodations. For example, submit in June for September accommodations.

3. Submit separate accommodation requests to the Disability Counsellor for each term or module of instruction.

4. Contact the Disability Counsellor when accommodation requests need to be adjusted to better meet needs or in the case of a change in needs.

5. Discuss accommodation requests with each instructor at the beginning of each term, and monitor the effectiveness of accommodations throughout the term. The Disability Counsellor will contact instructors if requested to do so by the student.

6. Follow specific procedures and instructions related to each accommodation. Exam accommodations may be different for each exam, depending upon content, instructor style, and changes made to facilitate success. Accommodations involving contracts for services may have separate procedures and requirements.

Process for Reaching Accommodations

1. When academic accommodations are requested, the Disability Counsellor will review the student's needs and requests with the Dean, Program Chair/Lead, or appropriate faculty.
2. The Disability Counsellor will discuss the accommodations requested with all faculty members who will teach the student.
3. Instructors are invited to discuss concerns regarding accommodations and can suggest alternate accommodations. Instructors must inform the Disability Counsellor, the Dean or the Program Chair/Lead if granting the accommodations would compromise the course objectives, lower the standards of the course, or pose a health or safety risk.
4. At the discretion of the Disability Counsellor, a meeting to discuss accommodations may be arranged with the student, the Dean and Program Chair/Lead.
    a) The Dean may invite appropriate faculty members to attend.
    b) At this meeting, the nature of the disability, affected functions and requested accommodations will be presented and reviewed. There may be further meetings if warranted.
5. In the event of a disagreement regarding accommodations to be requested, the Vice President, Academic & Chief Learning Officer may be called in to mediate an agreement.

Accommodation Request Form

1. The Disability Counsellor will record the specifics of the agreed-upon accommodations and present copies to the student and the academic department(s) and/or other service providers.
2. The student, the academic department, or other service providers may request modifications to accommodations, upon request to the Disability Counsellor. Agreed-upon modifications shall be noted on the accommodation request form.

Cost of Services

1. When students with disabilities require special equipment or services in order for them to participate in the learning process, the primary responsibility for the provision of such equipment or services shall rest with the student. These may include, but are not limited to, educational assistants, assistive technology, interpreters and materials modification.
2. The Disability Counsellor will establish a fee structure for specific assistive services. This will assist students in completing student loan or grant application forms.

Exceptional Circumstances

1. In exceptional circumstances, a student may be provided accommodation on a limited basis without documentation.

[1] WebCT is a Learning management system that was created in 1995 by Murray W. Goldberg at the University of British Columbia. Recently it was purchased by Blackboard another large LMS competitor. Copyright © 1997–2008. Blackboard Inc. All rights reserved. http://www.blackboard.com/products/Academic_Suite/index

[2] Brochure from eCampus Alberta on their website. http://64.233.167.104/search?q=cache:VO6P62z33YcJ:www.ecampusalberta.ca/Documents/Quality%2520Standard%2520broch.pdf+ecampusalberta+essential+quality+standards&hl=en&ct=clnk&cd=1&client=safari

[3] Created by the Educational Enhancement Team (EET) at Lethbridge College. It is an unpublished internal document.

[4] Created by the Educational Enhancement Team (EET) at Lethbridge College. It is an unpublished internal document.

[5] This is a Lethbridge College policy. It is found at this address: http://www.letbridgecollege.ab.ca/departments/administration/policies/2_13.html

[6] Created by Clayton Snyder for the Educational Enhancement Team (EET) at Lethbridge College. It is an unpublished internal document. Permission granted by EET to use this chart.

[7] Created by Clayton Snyder for the Educational Enhancement Team (EET) at Lethbridge College. It is an unpublished internal document. Permission granted by EET to use this chart.