Moving the Technology into the AU/LBS Classroom Project

Blended Delivery: A Literature Review

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Table of Contents

I. Introduction

A. Background Information

This review is one component of a project which the College Sector Committee for Adult Upgrading (CSC) is undertaking. The project, *Blended Delivery: Moving Technology into the AU/LBS Classroom*, is intended to provide the academic upgrading managers and faculty of Ontario's twenty-four colleges of applied arts and technology with resources and information which will enable them to review the merits of blended delivery and to undertake blended delivery in a more efficient, informed manner. Primary funding for the project **was allocated by Ontario's Ministry of Training, Colleges and Universities**, LBS Research and Development Fund.

Ontario's twenty-four colleges of applied arts and technology provide literacy and basic skills (LBS) and academic upgrading (AU) training to more than 31,000 adult students annually. This includes both classroom and online instruction. AU/LBS students seek to improve their skills to gain entry into postsecondary programs as well as for employment and personal reasons. College AU/LBS programs are unique in that they offer regular continuous intake to students throughout the year, rather than the traditional September/January/May starts of the postsecondary cohort model. While base funding for programming has remained static, learner demand for AU/LBS training has increased. This has prompted the CSC and its members to explore opportunities to increase access to training while improving learner outcomes and curbing costs.

In April 2010 the CSC, as part of its year end evaluation, asked colleges if they were intending to implement a blended delivery course mode, and 86% indicated yes. One important consideration for colleges has been the rising cost of textbooks and materials in a program which serves students returning to school to upgrade their literacy and academic skills. The CSC has assisted colleges by providing online learning materials, most particularly in science and math.

Interested faculty have begun using various technologies to support their classroom instruction and to support and engage learners. Some Ontario colleges, including Algonquin and Mohawk, have identified blended or hybrid delivery as a strategic focus for all program delivery.

Building on what is both an increasing need for and interest in providing programming in a blended environment, the CSC has proposed to do the **"legwork" for colleges by undertaking** this project and completing the following:

1) A literature review to identify best practices in blended delivery

2) **Interviews and surveys with Ontario's colleges to create a snapshot of the** current state of non-postsecondary blended delivery

3) Develop a reference document to inform and guide colleges as they move forward with blended delivery, building on secondary and primary research

4) Pilot blended delivery instruction with a minimum of six colleges across the province at both the LBS and AU level of delivery

5) Train faculty at piloting colleges on why, when and how to implement blended delivery

6) Train college AU/LBS faculty and managers at the annual June conference on the advantages and requirements of blended delivery

Building on the already significant interest of colleges in developing more flexible learning opportunities, this project will provide support and information based on primary and secondary research, enable staff to learn from pilots and provide workshops to interested practitioners. This will provide a consistent base of information and promote an effective strategy to guide future development at all colleges.

Currently, AU/LBS programs seem to be offering some blended delivery based on individual college or faculty interest and ability. This project will provide some guidance to avoid false starts and the wasting of resources. It will also promote acceptance by faculty and increased confidence in their ability to deliver in blended environments. It is important that programs explore all opportunities to both curb the rising costs of text-based delivery and integrate the current and emerging resources in classroom delivery in a cost effective manner. Through the integration of classroom and online activities, AU/LBS programs will continue to embrace the teaching practices which students desire in their quest for success.

B. Objectives of the Literature Review

This literature review provides information about current practices in the blended delivery model of instruction. College AU/LBS practitioners will be able to consider implementing blended delivery in a thoughtful, knowledgeable manner.

The objectives of the review included:

- Determining whether or not blended delivery is:
  - ➢ cost effective for the institution
  - ➢ cost effective for the student
  - ➢ appropriate for adult learners
  - ➢ a factor in retention of students
  - ➢ appropriate for remote/off site locations
  - ➢ appropriate for the adult upgrading/literacy and basic skills (AU/LBS) or Adult Basic Education (ABE) student
  - ➢ appropriate in a college environment

- Determining the required:
  - ➢ preparation or training of faculty
  - ➢ technical supports

II. Methodology

Initial resources and bibliographies were provided by the staff of Niagara **College's** Centre for Educational and Professional Development, who organize and deliver a wide variety of training activities for college faculty and staff, including blended delivery training. References from relevant sources including academic journals, ERIC, Google, and Google Scholar were all used during the key word searches.

The results of recently completed surveys by college AU/LBS practitioners, students and college Professional Development staff were also used as a reference and resource.

To ensure relevance and applicability, the following key words were used in the literature search:

- blended delivery, hybrid delivery (note these terms are used interchangeably)
- cost effectiveness, blended delivery
- adult learners, blended delivery
- adult basic education, blended delivery
- retention, blended delivery
- remote, off-site locations, blended delivery
- college, blended delivery
- success, adults, blended delivery
- faculty training, blended delivery

III. Definition of Blended Delivery

With the introduction of the internet, learning management systems and online learning tools, faculty and learners now rely on these tools to support and sometimes replace traditional face-to-face (f2f) classroom instruction. In most postsecondary institutions in Canada, learners likely encounter a full range of learning opportunities, ranging from traditional classroom instruction to fully online course work. The terms <u>blended delivery</u> and <u>hybrid delivery</u> are generally used interchangeably. For the purposes of this report, the term blended delivery will be used unless cited otherwise.

Here are several recognized <u>definitions for blended delivery:</u>

1. Dziuban et al:

   T**he term "blended learning" refers to courses tha**t combine face-to-face classroom instruction with online learning and reduced classroom contact hours (reduced seat time) The latter point is an important distinction because it is certainly possible to enhance regular face-to-face courses with online resources without displacing classroom contact hours. [1]

2. University of Calgary Teaching and Learning Centre:

   Blended learning is the integration of face-to-face and online learning to help you enhance the classroom experience and extend learning through innovative use of information and communications technology. Blended strategies enhance student engagement and learning through online activities to the course curriculum and improve effectiveness and efficiencies by reducing lecture time. [2]

3. Garrison and Vaughan, authors of *Blended Learning in Higher Education*, state that:

   Most importantly, blended learning is a fundamental redesign that transforms the structure of, and approach to, teaching and learning. The key assumptions of a blended learning design are:
   - Thoughtful integration of face-to-face and technology mediated learning
   - Fundamentally rethinking the course design to optimize student engagement
   - Restructuring and replacing traditional class contact hours [3]

There are some attempts to quantify the face-to-face and online components, generally 2 hours of face-to-face instruction plus 1 hour of online instruction or 70% face-to-face and 30% online, but this can vary and is not accepted as a hard and fast rule.

It should also be noted what blended delivery is not. According to the University of Manitoba, blended delivery is not:

- A conventional f2f (face-to-face) lecture based class, where the Power Point slides used for the lectures or course notes are put online
- A conventional f2f lecture or seminar based course in which online discussions are enabled as an option for students. The discussions are not assessed nor do they replace any f2f activity.
- A conventional f2f lecture based class, where all assignments (e.g. papers) and tests (e.g. multiple auto-marked quizzes or exams) are completed and submitted online
- An online course with no f2f component
- A conventional f2f lecture/seminar course in which students are required to do internet research for an assignment
- A fully online course with scheduled technology mediated synchronous communication
- A course is offered completely online but the final exam is f2f at a specific location at a specific time. [2]

This is not to suggest that using online tools to enhance classroom instruction is not effective or supportive of student success, rather it is simply to illustrate the definition of blended delivery. Using online tools is part of the continuum suggested by Charles Dziuban, University of Central Florida and his colleagues who have contributed significantly to the research of blended delivery. They indicate that:

> At the University of Central Florida (UCF), we recognize a continuum of instructional models ranging from fully face-to-face to fully online. Between the two are Web-enhanced courses (face-to-face courses that make pedagogically significant use of the web through a course management system but do not reduce seat time) and blended courses that combine face-to-face and online instruction with reduced seat time. [1]

IV. What Does the Literature Tell Us About Blended Delivery?

Research about blended delivery is current though not plentiful, given the relatively recent introduction and proliferation of technology. This may be why **Graham Spanier, President of Penn State University's made the statement in** 2002 that **"Hybrid instruction is the single greatest unrecognized trend in higher education today."**[4]. Leaders in the discussion about blended delivery include Charles Dziuban, Director, Research Initiative for Teaching Effectiveness, and colleagues Joel Hartman and Patsy Moskal, University of Central Florida, as well as Randy Garrison, director of the Teaching and Learning Centre, University of Calgary and Norman Vaughan, Associate Professor, Faculty of Teaching and Learning, Mount Royal University, Calgary.

It should be noted that specific research into the blended delivery of Adult Basic Education/Academic Upgrading /Literacy and Basic Skills is particularly scarce, which may be cause for further investigation and research.

A. Why Blend? Rationale for Using Blended Delivery for Adult Learners

Why blend? There are a number of documented and well understood reasons for implementing a blended delivery model for adult learners. Postsecondary institutions seek to increase student success and retention, provide greater access to students, address funding challenges and provide learning opportunities which meet the needs of the diverse learners. The University of Manitoba states these as:

> There are three generally agreed upon reasons for designing blended courses:
>
> 1. Improve learning outcomes (e.g. through alternate pedagogical approaches)
> 2. Increase access (space and time dependence)
> 3. Reduce costs [2]

Faculty interest, administrative concerns regarding costs and increasing student access and adult students seeking flexible, convenient learning opportunities which fit into their complex daily lives all drive the growth in blended delivery.

More simply put, optimizing student learning and maximizing physical resources are seen as the main reasons to provide blended delivery instruction.

B. Blended Delivery and Students

Adult learners have many responsibilities, including family and work. Attending school may present additional challenges and a significant commitment for learners. As David Skelton notes in *Blended is Still Best,* "For many modern students, the problem or **barrier is not geography, but time."** [5].

Learners expect and welcome traditional face-to-face classroom instruction, but a growing number are seeking other alternatives. The trend comes from a desire for more flexible learning times, convenience and personal learning preferences. With the introduction of online courses, students have been able to structure their learning times to suit themselves. This has allowed additional convenience, since learners can complete course work from home or work, and has lessened costs for students - travel, parking, child care, etc. Studies show, however, that attrition rates for online courses are high; many students begin but do not complete online learning activities [6].

Flexibility and Convenience:

The needs and responsibilities of adult learners have prompted postsecondary institutions to examine course delivery methods. Fully online learning meets the needs of many adult learners, but may not always be perceived as the best form of delivery, given the lack of face-to-face interaction with faculty. Some learners are not prepared for online learning. Blended delivery seeks to combine the best of both worlds- the nature of face-to-face interaction with the convenience of online studies. The needs of adult learners are described by Lloyd-Smith in *Exploring the Advantages of Blended Instruction at Community College and Technical School* in the Journal of Online Teaching and Learning:

> A number of potential advantages to blended learning are emerging. Some of these revolve around accessibility, pedagogical effectiveness and **course interaction. Many of today's college students are non**-traditional, attempting to balance family, jobs and university life. Coming to campus is often difficult for many of them and reducing the number of required face-to-face hours can help students manage. [7]

The Association for Career and Technical Education's publication *Expanding Career Readiness through Online Learning* states: "At the postsecondary level, online learning can be particularly beneficial for non-traditional students, many of whom are adults who are citizen students or students concerned with working and paying taxes, supporting families, and other responsibilities associated with the everyday role of a full-time citizen." [8].

Of the **AU/LBS students surveyed at six of Ontario's colleges**, 52% indicated that that some additional online activities would allow them to better arrange their

studies around work and family responsibilities and 56% indicated that they would look forward to completing some course work online [9].

Most often, students describe the main strength of blended delivery as flexibility and compatibility with working life [10].

Satisfaction and Engagement:

In addition to the benefits of flexibility for adult learners, research is showing other benefits of blended delivery, as well. These include the development of **"soft skills" and time management skills** [4] and increased computer literacy as a result of online instructional activities. In the US National Institute for **Literacy's** publication *Emerging Technologies in Adult Literacy and Language Education*, Warschauer and Liaw cited that blended delivery also helps students **develop in ways which would support their success in the workplace."We** believe that these emerging technologies can help diverse adult learners to develop both the language and literacy skills and the proficiency with new media required to fully participate in a rapidly **evolving information society."** [11]

Increased student engagement is cited often as a key consequence of well designed blended delivery courses. Students taking a blended delivery course in a teacher preparation program at the University of Idaho **found that "...as** learners they changed their normal roles from being passive to more active"** [2] and another study by AlphaPlus indicated the **"development of self**-management and self-**direction skills..."** among students in blended delivery courses [13].

In a study which examined generational differences among students in blended delivery classes at the University of Central Florida, Dziuban noted that the **major components of student satisfaction held true for all generations. "We** identify two major components for student satisfaction with blended learning: learning engage**ment and perceived ability to communicate effectively."** [14].

Students who are reluctant to participate actively in a traditional face-to-face class are required and encouraged to do so during the online instruction in a blended delivery course. The anonymity provided by the online course work, along with the time to formulate and prepare responses, makes it more comfortable for some learners to engage. Lloyd-**Smith noted that the "blended** environment offers a less intimidating forum for student participatio**n"** [7] for this reason.

In terms of student satisfaction and success, there have been studies which compare face-to-face instruction, fully online, and blended delivery in this regard. The results for blended delivery are generally positive or the studies

report no significant difference between face-to-face, online and blended delivery.

Dziuban conducted a two year study involving 90 students per group (f2f, online, blended) per semester and reported the results in Higher Education, *Blended Learning and the Generations: Knowledge is Power-No More.* He indicates that student and faculty satisfaction with blended delivery is consistent. **He also notes that** "Students rate the quality of their blended experience as high as or higher than their face-to-face cours**es."** and that "For the most part, faculty report that student performance in blended courses is as good as, or in some cases better, than face-to-face**."** [14].

Since blended delivery was first discussed at UCF in 1996 and subsequently implemented, Dziuban highlights the outcomes of blended delivery and learning: "Our research has found that blended courses have the potential to increase student learning outcomes while lowering attrition rates in comparison with fully online courses. In this regard, we have found that the blended model is comparable to or in some cases better than face-to-face**."**[1].

Recent research conducted at the University of Illinois [15] also compared student performance in blended, fully online and face-to-face delivery courses and found no significant difference in student performance. Both the blended and online versions of the class compare favourably to the face-to-face versions, in terms of student satisfaction, learning effectiveness and faculty satisfaction.

Finally, the United States Department of Education 2009 [16] release of a meta-analysis of more than 1000 empirical studies concluded that "… those who took **"blended" courses** - those with online and face-to-face instruction - appeared to **do best of all."** Student feedback is consistent. Mature, part-time students who were asked to rate and reflect on their participation in a blended delivery course at the University of Salford, UK, noted that blended delivery is compatible with working life, suits different types of learners, and flexible [10]. Some of the positive, qualitative assessments about blended delivery provided by students during a two year study at Georgia Gwinett College included the flexibility, the increased interaction with the professor, the independent learning and the accommodation of learning styles [17].

There are other success factors for learners in blended delivery courses. These include the opportunity to retrieve and review online materials as often as necessary to ensure comprehension [18].

Demographics may also influence the introduction of blended delivery and **students' desire to use technology. The Ontario college survey of AU/LBS**

students completed in March 2011 (part of this project) revealed that fully 50% were between the ages of 20-29. An analysis of replies indicates that more than 90% of AU/LBS students between the ages of 19 and 39 were either "Comfortable" or "Very comfortable" using the Internet and almost 70% currently use the Internet to access online resources for their class work. This age group made up almost 80% of the student population surveyed [9]. U.S. data also shows that an increasing number of young adults are participating in adult education, with recent data showing 41% of adult education students younger than 25 years of age [11].

C. Challenges for Students

Although there are many benefits, blended delivery can also pose challenges for adult learners: concern about use of technology, lack of self-confidence, preference for face-to-face instruction, **it's** not what they know i.e. is different than the traditional classroom environment, and it **uncovers students'** lack of time management skills.

Technology and Confidence:

Technical issues can quickly erode the confidence of adult learners in a blended delivery course and can create challenges for both the learners and the institution. **Beverly Walters' review of the literature cited common** obstacles that were considered barriers to the success of blended delivery programs. These included **an institution's cho**ice of learning technology and student capacity to learn in a blended environment that uses technology [18]. Heinze and Proctor describe weaknesses identified by University of Salford students in 2004 including technical issues using Blackboard, the learning management system [10].

Technical issues may be even more acute for learners who lack financial resources. The California Adult Education Research Digest #4 [19] reviewed the opportunities that e-learning offers in an effort to reach adults who wish to **"study a**t times and in places convenient **for them."** ESL students make up 92 percent of those enrolled in **California's distance learning courses.** These students indicate that the reason for the popularity of this mode is the ability to repeat and review instruction. Also cited, however, are challenges including **"even minor problems with email or program so**ftware can interfere with online **learning process"** and inadequate technological support and hidden costs for the learner may be a barrier. Included in this report are recommendations to begin fully online courses with face-to-face instruction and ultimately blend with distance education.

Learning preferences and Time Management Skills:

What may lead to a positive outcome for some students could, in fact, challenge and create barriers for others. Gould, in his study at **North Carolina's** Durham Technical and Community College, learned that the text based format of the online component of blended delivery courses enhanced comprehension skills of students [4]. Given concerns regarding literacy levels identified in the College Survey of AU/LBS practitioners, an emphasis on text based online formats may, in fact, be a challenge for AU/LBS students. Effective instructional design and selection of learning materials could ensure positive outcomes for AU/LBS learners.

Dziuban identifies that students must relearn how to learn in that **"The rhythms** of blended courses differ from those in face-to-face classes, forcing students to **stay actively engaged and connected."**[1]. While student engagement is a positive outcome, it may initially be frustrating for some learners. Students in blended delivery courses find that they must make the transition from a traditional passive student in the classroom to that of a more active, collaborative learner online. Students new to blended delivery may equate fewer classroom hours with less work, but this is far from the case.

Some students may lament the loss of face-to-face instruction or worry that they do not have the computer or internet skills to be successful during the online instruction [9]. Other areas of student dissatisfaction include feeling overwhelmed and an increased workload, despite the benefits of greater flexibility [20]. Students in a blended delivery course at Georgia Gwinnet College, when surveyed, said the course required discipline, time management skills, comfort with technology, and an investment of time [17].

D. Blended Delivery and Faculty

Faculty interest in student success, student engagement, instructional strategies and technology often prompts the development of blended delivery courses. Other considerations such as class size, increased emphasis on retention strategies, diverse learners and new online sources of learning materials may affect **faculty's instructio**nal approach to a course. Faculty considering the move to blended delivery are, in essence, redesigning their courses and their approach **to engaging students. Moving from the "sage on the stage" to the role of faculty** as "facilitator of learning" requires considerable planning and effort. It is transformative. Dziu**ban states "J**ust as students have to relearn how to learn, **faculty have to relearn how to teach."**[1]. The results, however, may lead not only to greater student engagement and satisfaction, but also increased faculty

satisfaction and effectiveness. At UCF, faculty satisfaction with blended delivery courses was rated as: satisfied-88%, neutral-7%, and unsatisfied-5% [1].

Student Success, Satisfaction and Engagement:

Student performance and student satisfaction in blended delivery courses and fully online courses compare favourably to face-to-face classroom instruction [15]. Faculty concerned about the success of students participating in a blended delivery course will note the results of studies such as those conducted at the University of Illinois, for example.

Faculty value the benefits which blended courses offer to diverse learners. In **Jacobs' Online Discussion in a Hybrid Information Literacy Credit Course, he** notes that **"Asynchronous discussion postings allow time for co**ntemplation and research, providing richer communication than either synchronous chat, e-mail, or face-to-face **discussion."** [21]. He also considers that students may feel more **"equal" during online ins**truction since status differences are minimized in the discussion forum.

Students wishing to succeed in a blended delivery course will necessarily develop or enhance their time management skills, which are crucial to academic **and professional success. Blended delivery tends to increase a student's** computer skills and it addresses a variety of student learning styles. **Gould's** review of research into blended delivery at the University of Central Florida and the University of Wisconsin-**Milwaukee also concludes that "Student participation** in all aspects of the lea**rning experience is increased in a hybrid format." Those** reluctant learners in class will participate online [4].

Social networking has been positive for blended learni**ng. Banerjee's research at** a small college **discovered that "...faculty comment that stu**dents, comfortable with Facebook, develop familiarity with course management systems, Web 2.0 tools and online collaboration with significant ease and are often more open to **learning in blended classrooms."** [22] .

Teachers also benefit from using online course management (e-learning) systems according to a study by the University of Alabama, allowing them to spend more time on advanced material and to increase student engagement [8].

Instructional Strategies:

Faculty considering the development of blended delivery courses recognize the need for a framework for their course redesign. Most often cited in the literature as central to a successful student experience are Chi**ckering and Gamson's** Seven Principles or core characteristics of effective teaching.

They are:

1. Good practice encourages contacts between students and faculty
2. Good practice develops reciprocity and cooperation among students
3. Good practice uses active learning techniques
4. Good practice gives prompt feedback
5. Good practice emphasizes time on task
6. Good practice communicates high expectations
7. Good practice respects diverse talents and ways of learning

Whether or not this set of principles holds true for blended delivery was examined by Toth, Amrein-Beardsley and Foulger in a study which involved five instructors, all teaching a newly developed blended course. The results of the study concluded that the experiences of the instructors and that of the students were positively impacted when teaching occurred in a blended versus a traditional format. Hybrid or blended delivery is a viable alternative and the Seven Principles model holds [23].

Lloyd-Smith notes that:

> Students believe that excellent teaching happens when the instructor can 1) facilitate student learning, 2) communicate ideas and information effectively, 3) demonstrate a genuine interest in student learning, 4) organize their courses effectively, 5) Show respect and concern for students, and 6) assess student progress fairly and effectively.

> Finally, blended instruction offers faculty and students the ability to teach and learn in a variety of different modalities, potentially increasing the instructional effectiveness [7].

Blended delivery is often considered by faculty because it offers the best of both worlds, face-to-face and online instruction. Some faculty are not comfortable **with pure online teaching and blending allows them to "…**maintain the familiarity and security of some face-to-face **contact with their students."**[24]. It has also been determined that some students in blended delivery classes seem to appreciate their classes more when the classes occur less frequently [5].

Dziuban indicates the necessity for a fundamental redesign of instruction to a model with the following characteristics:

- A shift from lecture to student centred instructions in which students become active and interactive learners (this shift should apply to the entire course, including the face-to-face contact sessions)

- Increases in interaction between student-instructor, student-student-student, and student-outside resources
- Integrated formative and summative assessment mechanisms for students and instructor [1]

Walters, in her review "Blended Learning-Classroom with Online**" [18]** notes that students never learn from technology per se; they learn from the strategies teachers use to communicate effectively through technologies. Dziuban et al. reported that when faculty are properly supported with appropriate professional development activities, there is a measurable rate of faculty satisfaction with the blended learning experiences. Faculty value the team approach, they become a facilitator of students rather than an expert on a subject and they also experience flexibility in their schedule.

E. Challenges for Faculty

Training and Development:

The benefits of blended delivery are evident, as are the challenges. These challenges include the time required to fundamentally redevelop and redesign a course and the requisite training for faculty. Designing a blended delivery course is not as simple as merely introducing online components into a traditional course **or a quick "cut and paste",** but rather it is a total instructional redesign. The redevelopment of courses from a traditional delivery to blended delivery format requires considerable time, effort and support, as well as a different perspective on instructional delivery. This is well documented in the literature and cited often as key to the success of blended delivery [25]. Faculty interest and comfort levels may also be a factor. Some faculty are most comfortable with traditional face-to-face, sage on the stage instruction and may find the transition to online activities difficult. Ability to use the technology effectively, as well as ongoing technical support, is also required.

The unsatisfactory use of the face-to-face session times is frequently mentioned by students as a weakness in blended delivery [10].

Some suggest that faculty "start small and keep it simple" since redesign takes time [5]. Regardless of the size of the educational institution, the challenge to find the development time necessary is universal [22].

Student Issues:

Faculty must prepare for students who are not ready for or used to blended delivery. Students may be unfamiliar with online technologies, unprepared to be more actively engaged in their own learning, dissatisfied with less face-to-face interaction, prefer group learning experiences and experience problems with technology at the institution or at home/work.

Newcombe's article describes the challenges encountered while piloting a blended delivery course at the University of Pennsylvania, West Chester.

> When designing a blended course, faculty must not only consider the elements of effective adult learning and find the right blend between online and in-class activities, they must also address some of the student problems encountered … such as the lack of technology and time management skills necessary for success in a blended format. [25]

Tabor reported that students who disliked the hybrid format mentioned problems with finding materials, receiving less instructor feedback, and perceiving the course content to be too advanced for independent learning [10].

The need for technical support is also often mentioned. Johnson's article examining the potential for technology highlights the need for technical support for learners. This project sought to create new resources for Adult Basic Education learners desiring to improve job skills or get a GED. Many of the Adult Education sites available to these learners lacked sufficient technical support and this created difficulties for the learners [26].

AU/LBS classes in Ontario often attract ESL learners who have progressed beyond the services of community ESL and literacy providers. The article "Problematizing the Hybrid Classroom for ESL/EFL" by Harrington outlines several concerns about the ESL learner. These relate to issues of identity, forced individualization and unintended muting in the online portions of the blended delivery course [27].

F. Blended Delivery and the Administrator

Maximizing Resources:

Administrators in postsecondary institutions are constantly faced with the challenges of increasing both access to and enrolment in their programs, in an environment of ongoing financial pressures. This is certainly true of Ontario's

college system and the Academic Upgrading/Literacy and Basic Skills programs. Blended delivery offers the opportunity to decrease institutional costs by decreasing classroom utilization and reducing the need for parking, printed materials and textbooks. While some might suspect that blended delivery reduces teaching costs or the need for teachers, the literature does not support this argument. Though the modality of teaching changes in blended delivery, all components are teacher designed and facilitated.

Most studies cite increasing student access and cost reduction as the primary reasons that postsecondary administrators consider implementing and supporting blended delivery. Typical of these arguments are the following excerpts from two articles which explore these advantages:

> "...may enable schools to maximize classroom space and /or reduce the number of overcrowded classrooms...." [7]

> "On a pure cost basis, hybrids reduce paper and photocopying costs. Postsecondary administrators have also noted the expansion of blended course delivery has alleviated significant parking problems on their campus."[7]

> "On a resource level, hybrid instruction reduces overcrowded classrooms."[4]

> "According to Ron Bleed, Vice Chancellor of Information Technologies at Maricopa Community College, hybrid course offerings" may also be the only way colleges and universities can keep up with continuing populations growth and the demands for lifelong learning." [4]

> Hybrids will not solve the problems of growth, however," hybrids do offer an alternative, innovative and effective strategy for providing educational opportunities and avoid cutting services."[4]

> "Hybrids should be embraced as an instructional delivery system that benefits both the educational institution and the student population."[4]

Ontario's colleges are signifying a shift to blended delivery to optimize student success and maximize physical resources. For example, Algonquin College stated this as a strategic focus, indicating that the college would aim to have 20% of its courses delivered in a hybrid mode by 2013. As of 2008, 8.5% of courses were being delivered as hybrids [28]. Mohawk College has included blended delivery in its academic planning assumptions for the future, indicating that every program will be available through blended learning [29]. It appears that colleges are strategically focusing on the delivery options of postsecondary programming, and while AU/LBS programs do not appear to be excluded from these strategic goals, they have not been identified specifically by colleges. AU/LBS programs have unique delivery demands including non-traditional learners, a continuous intake model, remote delivery sites, individual learning plans and the programs are funded under separate contract with government.

Blended delivery courses reduce seat time in the classroom and provide learners with flexibility and greater responsibility for their learning. Recent MTCU changes to the funding model for AU/LBS focus on a student outcome based model, rather than the previous funding model based on student contact hours. This change favours the additional use of blended delivery in AU/LBS.

G. Challenges for the Administrator

Administrators will face challenges as they seek to increase the number of blended delivery courses. These challenges can be described in terms of professional development and preparatory time for faculty, technology readiness and ongoing support of faculty and students, and a commitment to sustain the professional development opportunities for faculty. Administrators must be willing to make the initial investment, with its attendant risks, if they wish to see blended delivery become a reality at their institutions.

Training and Development:

In order to develop blended delivery courses, faculty require training, whether in-service or from others. Changing to blended delivery is not just "cut and paste" - **it's transformative.** This is amply demonstrated and described in the literature. Whether teaching Adult Basic Education students in California [19], preparing in-service literacy teachers [30] and piloting innovative literacy projects [31] in Scotland, or converting an introductory computing class at a small, public liberal arts college in Georgia [17], all sources indicate the need for faculty training and development time. In order to teach a successful blended delivery course, the instructor must invest a significant amount of time and effort into the redesign of the class [7]. Banerjee notes **"....big challenges** are finding the time, creating a balance between expectations of the students, adhering to the prevail**ing culture of the college and (faculty's)** own needs to **experiment with new pedagogies."** [22]. Heinze and Proctor reiterate that **"...software training is not enough. Faculty also need training on planning** and **managing a course."** [10].

Postsecondary institutions must weigh the initial development costs against the opportunity of maximizing student success and engagement, expanding capacity and reducing infrastructure costs that blended delivery can provide [1]. Academic managers may believe that e-learning environments will reduce costs, but may not consider the longer time required to develop good quality, responsive online and multimedia resources [5].

Most of the literature includes recommendations for initial as well as ongoing **professional development for faculty. Some supports, such as Georgia's Hybrid**

Fellow program, are a continuation of initial professional development activities and use a blended learning format year round [17]. Faculty will require high quality professional development to improve integration of online and face-to-face or hands on learning and to use e-learning tools effectively [32], [19]. Penn State University identified seven instructional competencies for blended learning. Their Faculty Development program also applied guiding principles when constructing development opportunities for faculty members: emulate the student experience, provide a safe environment, set realistic expectations, model best behaviours, create a learning community and connect f2f [20].

Technology and Supports:

Successful delivery of blended courses relies upon stable, reliable technology. Unreliable learning management systems and access can quickly discourage learners and faculty alike. Students and instructors at Bow Valley College in Alberta revealed in 2006 that some of the greatest frustrations and dissatisfaction with blended delivery were with an unstable learning platform [18]. With the pace of technological improvements, this may be of less of a concern in 2011 as learning management systems become more reliable.

Another consideration is that of remote internet access for students. While many students enjoy reliable internet service in their homes or at work, others may not be as fortunate. Students who must use slower, less reliable service may require technical support of a more practical nature. Though the AU/LBS 2011 Student Survey results [9] indicate that the majority of students do have computers or access to computers, it is important to note that some students may not have the financial resources to obtain the necessary equipment or services for blended delivery courses.

Making a decision to implement blended delivery also impacts other functions and service areas in the institution. Gains in classroom utilization at the University of Central Florida were only realized once a centralized approach to classroom scheduling was used to ensure efficiencies [1].

An EDUCAUSE Focus session entitled *Blended Learning: Logistics and Administration* involved staff from several institutions. Their discussion stressed that the entire institution must be involved to adequately support students in this mode of learning. Several considerations and suggestions in deploying successful initiatives were ou**tlined, including "seed and completion funding,** cross-institutional communication which describes budgeting model, policy considerations (intellectual property and its consistent application)…, blended program council- **advisory group as a peer network."** Other institutions have adapted their student services - orientation, peer tutoring, advising, and

admissions - to better meet the needs of their blended delivery students [20]. Workshops in time management and study skills can provide support to these students.

V. Summary of Considerations and Challenges to Using Blended Delivery for Adult Learners and Specifically ABE/AU/LBS Students

Blended delivery is relatively new and additional research is ongoing. The objectives of this literature review were to investigate the cost effectiveness of blended delivery for the institution and the student, the appropriateness of blended delivery for the adult learners in a college environment and specifically those in AU/LBS programs, the student success, satisfaction and retention factors and the requirements for faculty training and technical supports.

1. First, the literature clearly shows that students are satisfied with blended delivery courses and do as well as, or better than they do in face-to-face and fully online courses. Student engagement in blended delivery is high. Generational issues are not a concern.

2. Blended delivery is particularly appealing to adult students in that it provides more flexibility and convenience, and may reduce costs associated with in person, on campus activities, such as parking and travel.

3. The literature also reveals that the majority of examples of blended delivery are set in a postsecondary college or university environment. Blended delivery is also appropriate for part time adult learners, including those who are taking adult basic education in urban settings.

4. Training for faculty and technical support for both faculty and students are critical to the successful implementation of blended delivery.

5. There are also challenges to introducing blended delivery into a college environment, most particularly into the AU/LBS program area. While the majority of AU/LBS students surveyed are ready to combine face-to-face and online learning, some students, less than 10%, believe they lack the computer access and literacy skills necessary to be successful in a blended delivery environment. The survey of college AU/LBS practitioners and PD staff **revealed that not every AU/LBS program has access to or uses the college's** learning management system. The reason for this must be researched and addressed, or alternatives must be explored and developed. Some faculty, albeit a small percentage, may also lack the technical skills or confidence to embrace blended delivery.

6. Finally, the unique individualized nature of AU/LBS instruction, combined with a continuous intake of students must also be considered. The combination of face-to-face instruction with integrated online instruction seems to be suitable for any class size - **whether it's** face-to-face with one student or twenty. Online instruction and resources allow for the customization of learning plans for students.

Further research into the specific challenges in blended delivery of ABE/AU/LBS students and programs is warranted.

VI. Tools and Resources for Faculty

The bibliography which follows in the final section provides a comprehensive list of references used for this literature review and will be of interest to anyone wishing to learn more about blended delivery.

Among the many references listed, a number seemed particularly useful resources for faculty. These are listed below for quick reference. To access the documents, use the web addresses listed for each:

University of Iowa Writing Center. (2009). "*The Art of Netiquette*"
Website: www.uiowa.edu/~writingc/writers/handouts/Netiquette.shtml

College Sector Committee for Adult Upgrading. (2008). **"***ACE Program*"
Website: www.collegeupgradingon.ca/ace.htm

A. Chickering and Z. Gamson. "*Seven Principles for Good Practice in Undergraduate Education"*
Website: learningcommons.evergreen.edu/pdf/Fall1987.pdf

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Website: www.nwt.literacy.ca/digital_literacy/why_use/using_technology_classroom.pdf

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N. Napier, S Dekhane and S. Smith. (2011, February). "Transitioning to Blended Learning: Understanding Student and Faculty Perceptions" *Journal of Asynchronous Learning Networks (JALN)*, vol. 15, issue 1.
Website: sloanconsortium.org/jaln/v15n1/transitioning-blended-learning-understanding-student-and-faculty-perceptions

 L. J. Ausburn. (2004). *Course Design Elements Most Valued by Adult Learners in Blended Online Education Environments: An American Perspective*. Educational Media International. United Kingdom.
Website: test.scripts.psu.edu/users/k/h/khk122/woty/OnlineAdultLearners/Ausbum%202004.pdf

Here is a highly recommended and "classic" book on using Blended Delivery:

R. Garrison and N. Vaughan, *Blended Learning in Higher Education: Framework, Principles, and Guidelines*. San Francisco, CA. John Wiley & Sons, 2008. Book.

VII. Bibliography

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