Online Learning for Adults:

Factors that Contribute to Success

A literature Review

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College Sector Committee
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A Literature Review

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Acknowledgments

I. Introduction

A. Background Information

The Academic and Career Entrance (ACE) Program was approved for delivery in July 2004, at all 24 colleges in Ontario by the Colleges Branch of the Ministry of Training Colleges and Universities. It replaces the College Entry Level programming called Basic Training for Skills Development – Level 4 (BTSD 4) approved in the mid 1960s. ACE is a Grade XII Equivalent program for the purpose of entry to college and apprenticeship programming. The Apprenticeship Branch accepts ACE as Grade XII equivalent. It is the level of programming generally accepted by colleges for admission to college-level post secondary programs.

Students desiring an ACE credential must complete clearly-defined criteria. Students not requiring the credential may continue to take only those courses or portions of courses required for admission to their chosen post secondary program. The 10 ACE Online courses listed below are available in English and in French; an additional course, Anglais Langue Seconde, is available through the French colleges. ACE courses are as follows:

> Communications – English
> Communications – Français
> Communications – Anglais Langue Seconde
> Computer Studies
> Self Direction
> Core Mathematics
> Apprenticeship Mathematics
> Business Mathematics
> Mathematics for Technology
> Biology
> Chemistry
> Physics

ACE courses are described in terms of learning outcomes, and colleges are encouraged to develop demonstrations as part of the evaluation process for students. Students must demonstrate successful mastery of all the learning outcomes in Communications (English or French), a mathematics course, and any two other courses from the list.[1]

In winter 2007, the College Sector Committee (CSC) received funding from the Ministry of Training, Colleges, and Universities to develop ACE courses for delivery in an online format.

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[1] See *Overview of the ACE Program* on the College Sector Committee Web site at http://www.collegeupgradingon.ca/ace/overview.htm.

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The CSC worked with Ontario*Learn,* the online consortium of Ontario colleges, and the Embanet Corporation which hosts Ontario*L*earn courses, to develop 10 English language ACE and nine French language ACE courses.

The CSC conducted a trial instructional test in May of 2008 and has just recently begun implementing the full piloting of ACE Online. During this pilot phase (July to December 2008), the CSC will provide ACE training in both English and French to a minimum of 300 learners across Ontario. Support mechanisms and materials required to promote learner success are also being developed.

The ACE Online project fills an identified gap in existing academic upgrading programming by providing relevant and recognized training to learners in isolated, remote, and rural areas who are unable to access face-to-face programming. It will create better access for individuals who are currently employed and unable to access classroom-based programming due to their schedules, for part time learners who want to accelerate their learning, and for Ontarians seeking to qualify for entry to apprenticeship or postsecondary programs.[2]

The CSC saw the importance of conducting a literature review to inform the implementation of ACE Online in terms of effective online practices for adult learning and instruction, characteristics of successful online learners, and organizational supports needed for effective learning.

B. Objectives of the Literature Review

The key question this literature review seeks to answer is how to ensure that the ACE Online program is successful and effective. In order to answer that question, the objectives of the literature review were to:

- identify the benefits and drawbacks of online learning
- determine why adults choose online learning over the traditional classroom experience
- identify the profile and characteristics of successful and unsuccessful on-line adult learners
- find out the reasons why adult learners drop out of their on-line courses
- determine the most effective instructional practices in an online setting that support retention and success
- determine key institutional supports needed for successful online learning

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[2] See CSC MTCU 2007-2008 funding proposal: *Accessibility, Flexibility and Reliability: Delivering ACE On-line*

II. Methodology

The researcher began her search using bibliographies provided by experienced online learning colleagues as a starting point. She reviewed key documents from these bibliographies from the last eight years and then the references from these documents for other relevant reports and research.

In addition, further searches using Google, Google Scholar, and academic journal databases using the following key word combinations were conducted:

- online learning
- online learners
- GED, online, success
- success, adult education
- success, distance education
- ACE, online
- success, adults, online
- success, high school equivalency
- adult basic education AND online learning

There were few documents that the searches turned up that specifically related to high school equivalency programs and online learning. However, there were several full-scale studies related Adult Basic Education and online learning that proved very useful. The review is based on literature that relates to adult online learning in adult basic education programs, post secondary education and adult training and education.

III: Findings

A. Introduction

i. Definitions of E-learning

The 2006 report *State of the Field Review on E-learning* defines E-learning as "the development of knowledge and skills through the use of information and communication technologies (ICTs) to support interactions for learning—interactions with content, with learning activities and tools, and with other people."[3] The authors of the report note that E-learning does not involve a specific technology, and can be used in a blended or a hybrid approach where E-learning is only

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[3] See Rossiter Consulting (2006). *State of the field review on E-learning.* Available from http://www.ccl-cca.ca/NR/rdonlyres/7AC11EC3-7324-4A6C-AE4B-F91B06F65E1D/0/ELearningRossiterFullE.pdf

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a component of the overall learning. In the realm of E-learning for adults, E-learning goes by a variety of names including Internet learning, Web-based learning, and online learning, to name a few.[4]

Similarly, the 2003 report *Expanding Access to Adult Literacy with Online Distance Education* describes blended approaches where learners might come together face-to-face at certain times but generally learn at a distance. The authors note the distinction between distance education and online learning. While distance education involves the instructor and the students being in different places, they may communicate through print or online. Thus, online learning can then be considered a form of distance education. Online distance education is described as "education in which all or part of the learning is built on resources available on the Internet."[5] Online education may also use e-mail and discussion boards for interaction between instructor and students and among students. The Internet may also be used to exchange files including homework documents.

ii.   The scope of adult learners who take advantage of online learning

The *State of the Field Review on E-learning* describes the continuum of adult learners who may take advantage of online learning. This includes adults in professional occupations who may want to go back to school for job-related reasons to those with low skills who may or may not be in the workforce. The authors suggest that E-learning is becoming increasingly popular with non-traditional groups of adults learners including those adults with low literacy skills, disabilities, and at-risk learners. One group of non-traditional adult learners who are taking advantage of online learning are those adults who are older, need a flexible time schedule, are moving into a different occupation because of layoffs, and are using technology to learn for the first time. At the same time, the report indicates that the variety of online learning offered to adults is uneven in its quality and is difficult to track. One of the major issues raised is that even though the chance to interact with other learners is a motivating factor for those adults who engage in online learning, online programs do not necessarily foster this social interaction.

iii.   Overall advantages of online learning

While the need for training and education for adults has increased, classrooms reach only a small portion of those in need because of constraints for potential learners such as transportation, childcare, and work schedules. Online learning is promoted as a way to help adults and college

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[4] Rossiter Consulting (2006)

[5] See Askov, E. N., Johnston, J., Petty, L. I., & Young, S. J. (2003). *Expanding access to adult literacy with online distance education.* Cambridge, MA: NCSALL. Available from http://www.ncsall.net/fileadmin/resources/research/op_askov.pdf , p. 2

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students retrain in a way that is affordable and accessible with many advantages. These advantages include the adage of "any time, any place" for those learners in remote areas, as well as those who might have access to classroom or face-to-face learning but want to save time. Online learning is also promoted as a way to learn technology for the future.[6] For example, Porter and Sturm found that there was a 16% skill gain in learners' technology skills in their study involving 154 ABE students. Gains happened in the areas of start up, keyboard/mouse, launch program features and files, and connection to the Internet.[7]

iv. Overall disadvantages of online learning

The literature also reveals the digital divide and other key barriers to online learning, especially for non-traditional learners. These barriers include lack of access to computers and the Internet, limited literacy and computer skills, and the inability of the online programs to accommodate these learning needs and circumstances. Adult basic education students are described as "the least likely to have access to computers, the Internet, and knowledge of how to use either one."[8] These two factors present a challenge for implementing online programs for these adult learners. Another key issue is that only a portion of adult basic education learners may have the confidence, self-motivation, independence, study skills, and organizational skills needed to a successful distance learner.[9]

v. Application of online learning to adult basic education and high school equivalency programs

In Canada, the general uptake of online learning for adult literacy learners as been reported as limited, with the exception of those learners who participate in AlphaRoute, an online learning program offered by the AlphaPlus Centre in Ontario.[10] The AlphaPlus Web site reports that 16,000 Ontario adult learners have registered in AlphaRoute since 2000. These learners are from six provinces and two territories outside of Ontario. Since 2005, AlphaPlus has offered 37 online courses.

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[6] See Mingle, J., & Chaloux, B. (2002). *Technology can extend access to postsecondary education: An action agenda for the south.* Atlanta, GA: Southern Regional Education Board. (ED 475077). Available at http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1a/ef/60.pdf

[7] See Porter, P., & Strum, M. (2006). *Crossing the great divides: Distance delivery and flexible delivery in adult basic education.* Toronto, ON: AlphaPlus. Available at http://www.distance.alphaplus.ca/pdfs/ CrossingTheGreatDividesFullRpt.pdf

[8] See Askov et al. (2003) and Rossiter Consulting (2006), p .7

[9] Ibid.

[10] Rossiter Consulting (2006)

The 2005 *State of the field report: Adult literacy*[11] notes that the research on adult literacy and technology reflects both the challenges and the promising possibilities and is growing rapidly. On the plus side, the possibilities reflect greater access and the potential of online learning to empower learners. The challenges, as have been mentioned previously, include the information technology itself and social exclusion.

The results of the study *Crossing the great divides: Distance delivery and flexible delivery in adult basic education*[12] show that distance delivery can be effective with adults who have low literacy and in particular to those learners who live in rural or remote areas.

The study *Expanding access to adult literacy with online distance education* also reports that even though online learning has been around for a long time, it has not been used much with adult basic education (ABE), adult secondary education/general education development (ASE/GED) or for second language speakers.[13] Similar to the *E-learning State of the Field Review* findings, the authors see online education for adults learning in these areas as having promising potential.

By 2003, at least five states in the United States had developed or were developing GED or high school completion-related programs that enable adults to complete the program online with the exception of tests. In addition, 13 states had come together to work on improving distance education for adult learners. However, there is little information on how successful these programs have been.[14]

The state of Massachusetts identifies a clear need to reach more adult learners who need basic skills. This includes those who have a high school diploma but not the skills for the new economy, those who have not completed high school, and others who need to improve their language skills in English. Thousands of adults are on waiting lists for ABE programs; yet the fact that only 6% of students could be reached, makes the need to reach out to more adult learners imperative. Although the state of Massachusetts had significantly integrated technology into ABE programs successfully, there were challenges. These challenges included not enough training time for staff, securing sufficient funding, the need for best practice models, and more technical assistance. Research on technology in ABE programs indicates that the next phase of

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[11] See Quigley, A., Folinsbee, S., & Kraglund-Gauthier, W. L. (with the Adult Working Group Advisory Committee. (2006). *State of the field review: Adult literacy.* Vancouver, BC, Canada: Adult Learning Knowledge Centre & Canadian Council on Learning. Available at http://www.nald.ca/library/research/sotfr/adultlit/adultlit.pdf

[12] Porter & Strum (2006).

[13] Adult basic learners in this report are described as adults who need ABE, ASE, GED (high school equivalency), ESOL or workplace training.

[14] Askov et al. (2003).

infrastructure development should focus on training, curriculum development models, best practices, and capacity building.[15]

In Florida, GED programs are offered through home study/online as a complement to the traditional classroom at the community college. AGED instructor in the online program estimates that 70% of the students who learn home study/online would not attend the classroom program. The students who choose the home study/online option have non-traditional work schedules, transportation problems, family responsibilities, chronic illnesses, or insufficient resources to pay for childcare. Some do not feel comfortable in a classroom. The program is free except for the cost of the GED tests. Students spend about six hours a week on GED activities and take tests on campus. The online instructor says, "Students need frequent interaction with their instructors in order to be successful in the program (p. 3)."[16]

Interestingly, nearly one-third (115 students) of the students in Florida's GED home study/online program have come from the classroom program. Instructors in the classroom program refer students to the online program when they have something going on in their lives that does not allow them to attend the classroom program anymore. The in-class community college instructors view the online program as a highly regarded resource.[17]

Despite this opinion, the Florida online program has an annual dropout rate of 40%. The question of resolving the retention problem is complex, and lacks a single solution. The distance program presents many of the same obstacles for those adult learners who attend as does the classroom program. The program also received a grant to purchase and maintain a small lending library with GED materials.

vi.   Overview of learnings from post secondary education and workplace training

Online learning is the most rapidly growing segment of the distance education market in post secondary education. It is growing quickly in business training as well. At the same time, the literature shows that in higher education, it takes time to get online education up and running and that it does not necessarily come easily. There needs to be attention to building infrastructure, training faculty, finding the students, and addressing organizational tensions.[18]

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[15] See Porter, P., & O'Conner, L. (2001). What makes distance learning effective? Support mechanisms to maximize the impact of distance learning in adult education. A report to the Massachusetts ABE distance learning project. Cambridge, MA: Mass Interaction. Available at *http://anywhereanytimeabe.org/images/ part1_DL_report_abe.pdf*

[16] See McLellan Schoneck, L. (2006).Distance learning as a back up: A community college's distance learning program also serves those who would otherwise drop out. *Focus on Basics, 8*(C), 11–12. Available at http://www.ncsall.net/fileadmin/resources/fob/2006/fob_8c.pdf

[17] Ibid.

[18] See Askov et al. (2003).

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Studies and reports on online learning tend to show that there are few differences in satisfaction and quality of learning based on test scores, course grades, and students' ratings. The two most significant predicators of satisfaction with online learning are the ability to use computers and the quality of the social interaction.

B. Effective practices in adult online learning

This section provides an overview of what the literature reveals about what makes for effective learning with adults online. It include research reports from all types of adult learning—adult basic education, post secondary, and workplace learning. The section focuses on three areas:

- planning for online learning
- effective instructional practices
- policy issues

i.   Planning and policy considerations for online learning

Three major studies from the field of adult basic education shed the most light on the importance of institutional planning for online learning programs.

The study *Expanding access to adult literacy with online distance education* emphasizes that when developing an approach and infrastructure for online learning, the delivery model of choice must be carefully planned. The choice of model depends on the curriculum to be taught, the identified learner needs and abilities, and the availability of computer technology and other resources. Planning issues "revolve around licensing, infrastructure, training and support." [19] Additionally, planning must consider 1) how students will get access to materials and resources, 2) the amount of support that students will need, as well as 3) how instructors will provide feedback to students. Students will also need easy access to computers and the Internet. Both students and instructors need to feel comfortable with the products used and be able to navigate with them. Unfortunately, this is rarely the case. Systematic training for both instructors and students must be available. Instructors will have new roles, two of the most important ones are how to motivate and support students, and how to create interaction between them and the students and among the students. [20]

Similarly, *Crossing the great divides: Distance delivery and flexible delivery in adult basic education* reports the need to develop a business plan that includes how technology needs and infrastructure supports will be addressed. Findings from this study also highlight the need for

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[19] Ibid. p. 65
[20] Ibid.

extensive instructor training because distance delivery involves different skills and instruction through different media.[21]

In Pennsylvania, the Bureau of Adult Basic and Literacy Education funded a distance learning initiative to meet the needs of adult basic learners. The initiative involved an initial 12 pilot sites and then 8 more. The sites used one curriculum: the Workplace Essential Skills (WES). The Bureau provided financial support and extended time to learn what would work and what would not. It encouraged experimentation and freedom from usual accountability measures. There was support for the pilot sites, including technical and teaching online support. In Pennsylvania, pilot sites learned the importance of providing an orientation program for online learners, including assessment and student computer training. While the orientation programs varied, their purpose was to build a relationship with students, provide instruction to meet student needs, and determine the appropriateness of distance learning for students.[22]

Research findings in Massachusetts are based on successful distance programs for ABE. One important consideration for the implementation of online learning is to determine how the online courses will be sustainable, but cost effective. Based on their findings, the authors identified a number of challenges that relate to both the planning phase of online learning and policy issues. These challenges were identified through data from four pilot sites and other ABE distance learning sites. Important challenges include: licensing issues, insufficient resources and staffing for start up, lack of preparation for staff, failure to consider learner related hidden "home" costs, and not enough training and preparation for staff. The authors also note that many of the same challenges that ABE learners face in classroom programs are the same concerns for online learning. However, they note that the solutions for addressing these concerns are different.[23] The Illinois Online Network also emphasizes the need for students to have access to technology for online learning and an online environment, along with computer knowledge and user friendly and reliable technology.

The article *Top-ten teaching and learning issues, 2007* highlights the need to take an iterative approach to online implementation, the importance of accommodating the institutional culture, and identifying and working with the key stakeholders who will determine the success of the strategy. Similarly, the Illinois Online Network reports on its web site that faculty and administration who are uncomfortable working with technology or are not supportive of online education will inhibit the success of a program.

Pilot sites for online learning for WES in Pennsylvania learned the importance of demonstrating to other agencies the value of online learning so they would see the program as a benefit rather

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[21] See Porter & Strum (2006).
[22] Ibid.
[23] See Porter & O'Conner (2002).

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than as a competition for existing programs. Interestingly, Porter and Sturm found that it takes time for distance learning to be accepted in rural and remote communities.

In *Expanding access to adult literacy with online distance education*, Askov et al. (2003) conclude from the Pennsylvania WES project that if distance education program are to succeed they need "extensive planning, support, and time to develop."[24]

ii. Effective instructional practices

Most of the literature on effective online instruction comes from general adult online learning and post secondary education rather than adult basic education or high school equivalency online programs. The literature is quite consistent in what constitutes effective instructional practice.

Smith outlines the characteristics of an effective online instructor. She indicates that the online instructors need advanced technological skills, more patience than in a traditional classroom, and the ability to develop confidence and comfort with students. She also emphasizes that online teaching can be challenging and that instructors can be fearful of it.[25]

One of the most important ingredients for successful online learning is the creation of social learning online through interaction between the students and instructor and among students. In addition, a key role for instructors is to facilitate, monitor and support online communication. This entails careful design and has been identified as one of the weakest aspects of online programs for adults.[26] Some research suggests that online instructors pay too much attention to the technology and need to focus more solidly on the principles of education.[27] The Massachusetts report *What makes distance learning effective?* also notes the importance of interaction among students and with the instructor and indicates the need for more preparatory time for online instructors than classroom teachers.

The authors of *Putting the teacher online: TEC's Learnscope project* puts relationships first as a critical education principle for success in online learning. Other education principles include ensuring that online delivery meets the needs of both students and instructors, that instructors understand learners' online needs, and that the instructor is a facilitator rather than an expert. Students and instructors need support and development so they are prepared for online learning. Students benefit from an assessment to determine their readiness, and they need to know explicitly what kind of support they can expect and under what timelines and conditions.

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[24] p. 46
[25] See Smith, N. (2003). Characteristics of successful adult distance instructors for adult learners. *Inquiry, 8(1)* at http://www.vccaedu.org/inquiry/inquiry-spring2003/i-81-smith.html
[26] Ibid.
[27] See Kempe, A. & Team. (2001, October 15). Putting the teacher online: TEC's Learnscope Project. Presented at the 2001 Net*Working From Virtual to Reality Conference, Brisbane, AU, October 15–17, 2001. Available at http://flexiblelearning.net.au/nw2001/01_attending/papers/4_6Kempe.doc

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Other research similarly cites the importance of relationship. One large scale 2004 study of over 2000 students from 21 community colleges and other institutions hypothesized that the core role of the instructor in developing community and building productive learning was one of the most promising ways that an online community can be built. The researchers found that students experience a stronger sense of being part of a learning community in relation to the strength of the "teaching presence" behaviours of the instructor. Strong and directed facilitation on the part of the instructor was directly related to the students' sense of belonging and learning. Instructor behaviours that reflected this sense included engaging participants, creating an accepting climate for learning, reinforcing student contributions, and making sure that students have understood. The authors of the study recommend that faculty professional development for new online instructors should focus on the relationships of strong connectedness and learning related to strong teacher presence. They also noted that also noted that strong student connectedness in face-to-face learning is related to lower attrition levels [28]

As noted in the assessment of TEC's Learnscope project, relationship-building can occur when the instructors post their picture and biography and hold a teleconference at the beginning of the course so students and instructor can get to know each other.[29]

Mason, in *Models of Online Courses*, says that even though most online students have the freedom to post messages at will, the conditions for good educational discussions are complex and dependent on people rather than technology. These discussions take careful planning and structuring. Mason also emphasizes the changing role of the teacher from "sage to guide" and the need to move to "resource-based rather than packaged learning."[30] Frequent student-faculty contact and opportunities for shared social learning among participants are cited as critical factors in keeping students motivated and are cited as the first two principles in Chickering and Ehrmann's *Implementing the seven principles: Technology as a lever.*[31]

Mason summarizes several issues that are pivotal to online instruction. These issues include collaboration— designing activities for participants to work together—, addressing the non-participators, and motivating students. Other important principles of online teaching include interactive learning, realistic amounts of time to complete tasks, high expectations, and respect for diverse talents and learning styles.[32]

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[28] See Shea, P., Swan, K., Li, C., & Picket, A. (2004). Developing learning community in online asynchronous college courses: The role of the teaching presence at
http://www.sloan-c.org/publications/jaln/v9n4/pdf/v9n4_shea.pdf
[29] Putting the teacher online: TEC's Learnscope Project. Presented at the 2001 Net*Working From Virtual to Reality Conference, Brisbane, AU, October 15–17, 2001
[30] See Mason, R. (2001). Models of online courses. *Ed at a Distance, 15*(7), 21–32. Available at
http://www.usdla.org/html/journal/JUL01_Issue/article02.html, p. 25
[31] See Chickering, A. W., & Ehrmann, S. C. (1996). Implementing the seven principles: Technology as a lever. *AAHE Bulletin, October,* 3–6. Available at http://www.tltgroup.org/programs/seven.html
[32] Ibid.

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These principles were tested through the evaluation of four online courses for adults. The findings showed that in reality there were challenges. In terms of faculty-student communication, instructors wanted to be accessible to students but feared an overload of messages. They were also concerned about not responding quickly enough to students. These fears indicated the need for guidelines around communication with students with respect to both the types that should take place, and timelines for responding to messages. Additional findings indicate that student interaction was weak and lacked clear focus for discussions.

The authors recommend discussion groups that are small, focused on a task, have an end goal, engage learners in the content, and provide feedback to students. Expectations for how discussion should proceed should be posted. The authors also note the importance of feedback that acknowledges a student's response and the kind that provides information. They found that instructors rarely provided acknowledgement feedback except when they were late getting back to a student. Models of work expected along with praise for good work were also cited as essential.[33]

Hootstein outlines the role of an online facilitator as instructor, social director, program manager, and technical assistant. He notes that instructors need to focus on the learners rather than technology, and need to create problem-based learning. As a social director, an online instructor needs to facilitate collaborative learning, interaction, and a high degree of participation. Like other authors, Hootstein notes the critical importance of instructor facilitation of interactivity and participation. He indicates that these instructor skills may be as important as the content goals of the program. Interaction and discussion can happen through chat rooms, e-mail, listservs, forums, and conferencing, etc. As a program manager, the instructor manages organizational and procedural tasks. As a technical assistant, the instructor helps learners become comfortable with the technology and helps learners resolve technical difficulties.[34]

Instructor challenges

Benfield, an online instructor himself, documents some of the challenges that first-time online instructor often experience. One of the first points he makes is the need for instructor support during the beginning phases of online instruction. He notes that it is easy for instructors to feel isolated but also to feel that online teaching is all consuming. Benfield and his colleague, a first-time online instructor, found the need to discuss their online work as a way to relieve stress. Another challenge he identifies is online communication with students. One difficulty occurs when students do not respond to a posted message. His advice is to be patient; given their busy

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[33]Graham, C., Cagiltay, K., Lim, B.-R., Craner, J., Duffy, T. M. (2001). Seven principles for effective teaching: A practical lens for evaluating online courses. *The Technology Source Archives, March/April*(Assessment). Available at http://www.technologysource.org/article/seven_principles_of_effective_teaching/

[34] See Hootstein, E. (2002).*Wearing four pairs of shoes: The roles of E-learning facilitators*. Alexandria, VA: ASTD Learning Circuits. Available at http://www.learningcircuits.org/2002/oct2002/elearn.html

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schedules, students may respond to the message later. Benfield indicates that it is a fine balance between sending out another message when no responses have come in and waiting too long to follow up.

As well, Benfield discusses the visual cues that are missing in online communication and the absence of casual conversations that can happen with students in face-to-face situations. Often communication online can seem cold and formal. He reports that his colleague found an orientation session early on in the program is valuable, and like others, defining expectations around how students will communicate with the instructor is also important. Benfield also notes that just like the classroom, it takes time to foster a community among students.[35]

Similarly, in the Pennsylvania WES pilot initiative, online instructors felt it was difficult to support and motivate their students because they could not read their non verbal language and had less frequent contact with students. They found that it was difficult to develop rapport with a person they had never met. Some of the strategies that instructors used to address the motivation challenge are worth mentioning here.

Instructors sent e-cards to students to encourage and praise them. They e-mailed people individually, usually with questions related to their goals. Instructors telephoned students to learn more about their goals, or when they had had a period of inactivity. They also tried to encourage student-to-student support. Although there is little evidence about what works in online peer support—aside from the fact that chat rooms did not—the authors pose some suggestions. These include having a state wide rather than an on site support network to include more students, and having a buddy system. The authors highlight the area of student interaction as one that needs more attention.

In their lessons learned, the Pennsylvania project administrators report that because distance education is different from classroom instruction, instructors have to find new ways to support and motivate students. They also report that it is difficult to do this and that more research is needed on effective approaches.

C. Characteristics of Effective Online Adult Learners

Cercone describes adult learners as different from traditional college students. Adult learners have families; jobs; and situations such as childcare problems, domestic violence, and transportation that can interfere with the learning process. They may also have fewer stable supports, memory problems, and life complexities. She reports that most distance learners are

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[35] See Benfield, G. (2000). Teaching on the web: Exploring the meanings of silence. *Online*. Melbourne, AU: ultiBASE Available at http://ultibase.rmit.edu.au/Articles/online/benfield1.htm

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between the ages of 25 and 50, thus making it important to understand the nature of adult learning in general to work in distance learning environments.[36]

In 2008, Berendon, Boyles, and Weaver report that the literature on the profile of successful online learners is scarce, relatively recent, and anecdotal. Furthermore, they report that there is little institutional data for predicting academic success in the online format. Similarly, there is little information for students to peruse to find out whether or not online learning is appropriate for them. This data would be helpful in targeting and retaining online learners.[37]

Porter and Sturm found that out of 154 ABE online learners, the majority were women and the most common age group was 27–39. While half were not employed, the other half were working full or part-time. All had at least grade 7 with 62% having Grade 10 or more. The authors also found that the demographic profiles of online adult literacy learners were similar to traditional classroom learners except for problem solving and independence preferences. Online learners appeared to have slightly higher preference for these modes of learning. The main reason adults in this study chose online learning was that they wanted to work at their own pace. The remaining top four reasons these adults chose online learning over classroom learning were:

- family obligations
- work schedules
- inability to get into a face-to-face literacy program
- discomfort with the classroom

The main goal of these learners was further training and education followed by getting a job and independence.[38]

For the purpose of this literature review, some Web sites were reviewed for characteristics of successful online adult learners. The characteristics that the Web sites reported in order of frequency with respect to successful online students were:

- self direction and self motivation
- self discipline
- ability to communicate in writing
- assertive
- ability to stay on task
- meet the time requirements of the program

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[36] See Cercone, K. (2008). Characteristics of adult learners with implications for online learning design. *AACE Journal, 16*(2), 137–159.

[37] See Berenson, R., Boyles, G., & Weaver, A. (2008). Emotional intelligence as a predictor for success in online learning. *The International Review of Research in Open and Distance Learning, 9*(2). Available at http://www.irrodl.org/index.php/irrodl/article/view/385/1036

[38] See Porter & Strum (2006).

- problem solving and critical thinking abilities
- comfortable with computers
- access to computers and a modem[39]

In the Pennsylvania pilot project with 20 sites implementing WES for adult basic learners, students who were most successful shared similar characteristics. Most were working or looking for work. They had a clear goal for why they were in the program and good organizational skills. Students read at the grade 7 level or higher and had enough computer skills that they could use the Internet and navigate the curriculum site. Finally, they had a computer at their home or a place where they could comfortably use a computer. Conversely, those students who were not as successful were those who had had low literacy skills and weak computer skills. They tended to be unemployed and lacked the independence needed for distance learning. The research digest *New options for adult basic and English language education* also reports that those adult learners who perform better academically and have better study and research skills appear to do better online. In contrast, those adults with low literacy and limited computer skills may be deterred.

Another study examined the attitudes and outcomes of 94 students working on their GED online. The study found that students were highly motivated and saw the program as important and useful. Almost all said they were strongly supported by their instructors.[40]

The WES initiative in Pennsylvania and the GED home study/online program in Florida both found that the majority of the learners their program attracted would not have enrolled in a classroom program of the same nature. Thus, many distance programs appear to be able to attract adults that are not currently being served.

D. Online Learners: Why They Drop Out

One of the most significant problems with distance education is the high turnover even though the number of enrolments has increased. The cost of low retention is high for the institution involved, the faculty and the students. Retention for post secondary online programs is lower than for campus learning. There is little information on why adult learners specifically drop out of online ABE or high school equivalency programs. This section will begin with what is available and then focus on findings from postsecondary programs.

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[39] See Illinois Online Network (2008). *What makes a successful online student?* Retrieved July 9, 2008, http://www.ion.illinois.edu/Resources/tutorials/pedagogy/StudentProfile.asp; World Wide Learn. (2008). *Is Online Learning for You?* Retrieved July 9, 2008, and Glendale Community College (2008). *Characteristics of the successful online student* Retrieved July 9, 2008, http://www.gc.maricopa.edu/English/onlinestudent.htm from http://www.worldwidelearn.com/elearning-essentials/learning-online.htm
[40] See Wolters, C., Karabenick, S., Johnston, J., & Young, S. (2005). *Measuring the motivation and strategy use of GED students in distance education programs.* Ann Arbor, MI: Project IDEAL Support Center. Available at http://www.projectideal.org/pdf/Reports/IDEALMotivationStudy2005.pdf

Online Learning for Adults: The factors that contribute to successful and effective learning

In *Expanding access to adult literacy with online distance education* the Pennsylvania pilot WES initiative for adult basic learners reports a retention rate of about 40% or 19 students out of 47 per instructor, per class. The issue of retention is described as complex. It includes factors such as student characteristics and demands such as motivation and family responsibilities. It also includes external barriers such as access to computers and barriers related to the program itself. The authors note that many of these factors are beyond the realm of the instructor and they are unable to draw any conclusions about retention at this time.

The findings from *Crossing the great divides: Distance delivery and flexible delivery in adult basic education* indicate that retention of adult literacy learners is related to strong orientation programs and having a good relationship with the instructor.

In *Improving the motivational appeal of online instruction for adult learners: What's in it for me?*, Chyung presents diverse reasons for these dropouts, including students' beliefs that their goals and the course structure are not aligned. Another reason is that students may not feel confident in the distance learning environment or they may leave when they have learned what they want to. Chyung suggests that distance learning environments need to appeal to the goal orientation of distance learners and provide interesting and useful learning experiences for them.

Willging and Johnson acknowledge similar findings. They found that in one masters program, level of satisfaction with the first or second course in a program was the main reason for dropping out. Other reasons for dropping out included that students didn't like the learning environment, the programs was not aligned with their personal goals, they have low confidence and experience in distance learning and software. They also were overwhelmed by too much information and felt the learning environment was impersonal. They conclude that why students drop out is complex and can not be neatly and easily explained. They add that the reasons for dropping out are similar to face-to-face programs although factors such as technology and lack of personal interaction and communication are specific to online learning.[41]

In exit interviews for another master's level university program with a 44% drop out rate, the main reason for leaving was dissatisfaction with the online learning environment. They cited four reasons for leaving: 1) the program was not interesting, 2) the program was not relevant to them, 3), they had a low confidence levels with online learning, and 4) they felt overwhelmed. The ARCS model suggests that to retain online students, programs need to be appeal to four motivational factors: interest, relevance to learners (content and method), confidence, and satisfaction.[42]

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[41] See Willging, P. A., & Johnson, S .D. (2004). Factors that influence students' decision to dropout of online courses. *Journal of Asynchronous Learning Networks, 8*(4). Available at http://www.sloan-c.org/publications/jaln/v8n4/v8n4_willging.asp

[42] See Chyung, Y. (2001). *Improve the motivational appeal of online instruction for adult learners: What's in it for me?* Conference paper, presented at the American Educational Research Association (AERA) conference, New Orleans, LA. Available at http://coen.boisestate.edu/ychyung/researchpaper.htm

Online Learning for Adults: The factors that contribute to successful and effective learning

The university in question implemented strategies to address retention based on these motivational factors. The first series of interventions addressed learners who were first time online learners. The university kept class sizes small, provided expectations of online behaviour, and monitored learners' online behaviour with feedback. Strategies were implemented to address the needs of those learners not familiar with using the Internet as learning tool. The university provided a technical training program for students before they started their online program and then ongoing, timely technical support.

The needs of learners new to the content were addressed by ensuring the materials was structured and went from easy to more complex, and concrete to abstract. The university also ensured that students participated in an entry level assessment and instructors used assessments to ensure that material was at the right level. Demographic information about students was viewed as important. The university got information on the students' different personal and professional goals before the semester started. Instructors could then relate examples in the course to the enrolled students' interests and goals.

Clear weekly goals, information about evaluation, and guidance and feedback on goals were provided to students to address the goal-oriented needs of these learners. Instructors used a variety of learning activities, multi-media methods, and instructional techniques to appeal to different learning styles and interests. Students received weekly feedback on their work and frequent personal contact from the instructor. The instructor also encouraged activities that supported student collaboration. These strategies addressed the fact that students report they miss interaction with their instructor and other students.

The university improved its retention rates by using the strategies previously described. After implementing the interventions for three semesters, the retention rate increased from 56% to 78%. Two years after that, the rate reached 85%. The university implemented systemic and systematic strategies to improve the motivation of online learners in the program. It saw the benefit of improving the retention rate as more cost effective than having to recruit new students.

Despite the fact that the research cited above involved undergraduate and masters level students, the authors' findings are similar to the limited results of the few studies done with online learners with lower literacy skills. These comparable findings between diverse populations points to the need to learn lessons from the available research on the online and distance learning for its applicability to the ACE Online program and its intended population.

IV. Analysis of the Findings

A. Introduction

Overall, the literature reviewed on online learning for adults focuses on effective instruction for general adult learning and the post secondary system. There is some literature that relates to adult basic education and high school equivalency programs online that would be of interest to the CSC. Fortunately, some of this literature is quite comprehensive with lessons learned for planning and implementation and policy considerations. Overall, little information was found on the characteristics of successful and unsuccessful online learners, especially those in ABE or high school equivalency programs. Nor was there a great deal of literature on the best ways to retain adult learners who are at risk for dropping out of online programs. However, the review identified some general program information and student characteristics across online learners that can be somewhat helpful.

Online learning is growing in all segments of adult learning. The literature shows that the least amount of online learning has taken place in the field of ABE, including high school equivalency programs. However, the review showed that this area has great potential. At the same time, there are a number of identified potential barriers that need to be considered if online learning is to be successful for this group of adults. External barriers that must be addressed are access to computers and the Internet, costs of technology and materials, both students' and instructors' computer and technology skills, and students' literacy levels. Institutional barriers around the program itself, along with personal barriers and level of proclivity towards online learning, also need to be considered. The results of the literature review suggest that most of the known circumstances that adult learners bring in face-to-face learning are still present in online learning; plus, new ones that relate specifically to online learning also emerge.

The results show that in order to implement an online learning program institutionally, there are many important planning and policy considerations. These considerations recognize that online learning is different from classroom teaching and that the potential students are not necessarily the ones who would attend the same program face-to-face. Extensive planning is recommended to ensure successful implementation.

The findings from the literature review emphasize the need for policy considerations. The main considerations focus on time and experimentation to determine what works, adequate financial investment in the program, and training and support for both faculty and students and others involved. Plans are needed to ensure the program is cost effective and sustainable. Training for instructors is needed to assist them with the technology, and provide instructional and support strategies that are particular to online learning. Internal and external stakeholders must be consulted to get their buy in. Stakeholders need to see that online learning is viable and that it

can complement rather than compete with face-to-face programs. Results from the review support the idea that online programs do target a pool of adults who would not typically enroll in classroom learning. Furthermore, online programs in the same network or institution can provide a bridge when students are unable to attend the same programs face-to-face because of illness or family and work responsibilities. The online program may also be sees as an additional resource for classroom instructors teaching the same subject.

Much of the literature focuses on effective instructional practice in adult online learning. Effective practices include student assessment when adults enter a program and student orientation to the program. The literature is relatively consistent across adult learning in terms of good practice. The most important good practice found in all of the literature centres around social inclusion and the need for quality interaction between students and the instructor and among students in the program. Fostering community and interaction is often difficult and quite different from face-to-face interaction. However, this interaction and relationship building is identified as a key indicator of student satisfaction and retention. Interaction needs to accepting, acknowledging, supportive, timely, and indicate clear expectations. The review includes many strategies that have been identified as effective for online learning. The literature also emphasizes the instructor as facilitator rather than transmitter of knowledge. It cites the importance of on-line content that is at the right level, interesting, interactive, and involves multi-media—not just text online. In addition, the program needs to have realistic time frames for completion of activities and clear instructions for how students will be evaluated.

Although the research on ABE online learning is limited, the findings of this literature review reveal successful online adult learners are those who are highly motivated, organized and self-directed, and have access to and are comfortable with computers. Successful online learners also need sufficient literacy skills. These findings are also confirmed for adult basic education learners.

The literature acknowledges that retention is an issue for online programs. In all programs, but particularly for ABE students, retention is a complex issue without an easy solution or answer. From what little is available it seems that the adults learners who find the content does not meet their goals, who have discomfort and low confidence with the online environment, and who do not have enough interaction with instructors and other students are more prone to drop out. The literature review provides some general strategies for addressing these factors. Clearly, this area needs more research.

B. Effective Practices from the Literature Review

The literature reveals some remarkable consistencies with respect to many aspects of online learning. ACE Online is aware of, or already following the effective practices found through the literature review. The literature review provides confirmation for the practices that ACE Online has already undertaken at this stage in the project and provides some lessons learned for the project as it progresses to future stages. These practices are summarized from the literature review below.

i. Allow for enough time and financial resources to implement and refine ACE online

Adequate financial resources are a must to move to full and sustainable implementation. The findings also suggest that new online programs need to allow enough time to find out what works and what does not. This includes analyzing program design and content and identifying the support and training that students and faculty need. Importantly, ACE Online needs to determine what instructional strategies work best to motivate and retain students and determine what they need to be successful in meeting their goals. Time is also needed to get the buy in from internal and external stakeholders to show them how ACE can serve their interests.

ii. Build in policy for sustainability, cost effectiveness, and success

Based on the literature for this review, clear policies that consider the multitude of factors that are important to online learning are needed. These factors include faculty professional development and ongoing instructional support, technical support, orientation, training and support for students, and student access and costs. The CSC has already considered how to promote and target potential ACE learners in a way that aligns with ACE college programs and recognizes ACE Online learners as a potentially different pool of learners from the face-to-face campus students.

Policy needs to consider how the capacity to deliver online will be developed. Clear policy directions for ongoing program evaluation that determine factors related to program completion and leaving are also critical. Colleges could also consider using ACE Online as a temporary bridge for those students that have to temporarily leave their classroom program due to extenuating circumstances.

iii. Ensure an effective assessment and orientation process

The literature reviewed highlights the importance of assessment and orientation to student success online. The assessment should determine whether online applicants have the prerequisite academic and technical skills to be successful. Along with an introduction to the professor and the other students, an orientation should focus on the technical and computer skills needed to participate in online.

iv. Experiment with and document effective instructional practices

The literature review documents effective instructional practices. Faculty teaching ACE Online could review this report and document their own successful practices— especially the strategies they use to engage and communicate with students and to foster social learning and interaction among students. The development of effective practices could be an iterative process with the document made available to all new ACE Online professors.

v. Develop a profile of ACE Online learners

The findings of literature review did not reveal a comprehensive profile of online learners, especially those in high school equivalency programs. The CSC is developing its own participant profile for all students to complete when they start ACE Online. This information will begin to build a database of information about these students that will assist in promotion, student satisfaction, retention, and elimination of external barriers. The profile will address areas such as gender, age, location, student goals, familiarity with online learning, computer access, learning styles, employment status, language, and reasons for taking ACE Online.

vi. Develop and implement an ongoing program evaluation

The importance of ongoing program evaluation was emphasized in the literature review. The CSC will continue to evaluate its efforts with ACE Online, especially student satisfaction. This will determine what elements of the program are working and what factors cause students to leave the program before finishing. The collection of program evaluation data will help the CSC design strategies to address barriers, improve retention, and improve the quality of the program and support on an ongoing basis.

C. Conclusion

The literature review provides a great deal of information on effective practices and potential barriers to inform the original question posed in the literature review with respect to how to ensure ACE Online is successful and effective.

The review provides information on institutional factors needed for success, effective instructional practices, and online learner characteristics along with ways to motivate and retain online adult learners.

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