

Effective Delivery of On-line Learning

AlphaRoute National Pilot Project

By Kerry Lyon

I. Introduction

A blended learning approach

Over the years, delivery models of on-line learning have taken many forms. Early use of technology for purely distance education followed a transmission of learning approach, in which information was transmitted from teacher to learner. More recently, a constructivist approach to learning has become more widely accepted as an effective approach to on-line learning (Askov, Johnston, Petty, & Yonge, 2003). A number of reasons can be attributed to this shift; the first is the general shift in educational theory toward a constructivist approach. This approach places learners, rather than the teacher, at the centre of learning. Some have used the phrase “guide on the side, instead of sage on the stage” to refer to the role of teachers in the learning process. A constructivist approach to learning sees learners generating knowledge through the exploration of content (Wenger, McDermott, & Snyder, 2002). For learners to generate knowledge, they need to be at the centre of learning and to direct their own learning, as is useful and relevant to them. Askov et al. see on-line learning as being “entwined” with constructivist learning theory in that on-line learning, if developed properly, requires learners to construct knowledge. Knowledge transfer is not so easily achieved, as learners need to be actively engaged with the learning medium. On-line learning has the capability to support learners’ exploration of knowledge in the use of, for example, the Internet and synchronous and asynchronous communication tools, which enable or empower learners to add to, enhance, and validate learning information they find on their own. This two-way learning can take on a learning path of its own and it is important for the facilitator or teacher to guide the direction this learning path takes. As practitioners explore the intentional blending of paper-based to Web-based learning tools, they need to be conscious of the implications their choices of learning media have for both teaching and learning, recognizing that learner interaction with paper-based content will be different than with Web-based content. To ensure learners are benefiting fully from the use of technology in literacy instruction, support for teachers and practitioners in effectively blending learning resources is essential.

Breaking down barriers

Blended learning enriches the learning experience by providing a method of reaching different learning styles and by supporting learners in generating their own knowledge with the help of a practitioner, as opposed to passive learning through the transmission of knowledge from practitioner to learner. Blended learning can also break down barriers to learning by enabling a more flexible approach to learning. Barriers which a more flexible approach can address are lack of transportation to a learning centre, lack of daycare to support access, lack of learning opportunities in the community, and physical access barriers resulting from disability. A further barrier, identified by Adult Basic Education (ABE) practitioners, is the “digital divide”, evident when distinct groups of society do not have access to computer services and computer skills, and so cannot participate in the growing number of ways to digitally access information, jobs, and training, as is expected. In the growing knowledge-based society Canada is becoming, computer skills and access to information via the Internet is considered to be essential. In a recent research report by AlphaPlus (2003), 58% of respondents felt exposure to on-line learning opportunities helped them feel more connected to the community they live in.

Breaking down barriers to ABE support in communities has been a motivating factor for ABE programs across Canada that have expressed interest in using AlphaRoute, an on-line learning environment to support a blended learning approach for literacy learners. The delivery of the learning medium has a direct impact on the way learning and teaching is carried out, and support extended to practitioners in their effective blending of learning will go a long way toward ensuring learner success. Practitioner support in the delivery of AlphaRoute has been a cornerstone of AlphaPlus Centre's piloting of AlphaRoute across Canada over the past two years.

The following is an overview of what AlphaRoute is, how it is being used, and how the delivery models support literacy learners and help break down barriers to lifelong learning.

II. Background information

AlphaRoute is an on-line literacy learning environment with four separate but virtually-linked learning areas, one for each of the four streams of Literacy and Basic Skills (LBS) delivery agencies in Ontario: Deaf, Native, Francophone, and Anglophone. Originally designed to support distance learning, AlphaRoute has evolved into a resource that also supports on-site delivery of literacy training, providing programs with tools and resources to offer learners more flexibility in how they engage in literacy upgrading. AlphaPlus has completed its third year of AlphaRoute piloting across Ontario and currently supports nine ABE programs in British Columbia, the Northwest Territories, and Newfoundland in integrating AlphaRoute into their program delivery. This coming year, AlphaPlus will add Saskatchewan and New Brunswick to the list of provinces that offer AlphaRoute to their learners. Literacy program inclusion of e-learning opportunities for learners using AlphaRoute is one of the main areas of interest for AlphaPlus, and valuable information about the successes and challenges of this integration has been gathered from all the national pilot sites over the course of the past two years.

The power of blended learning using AlphaRoute is in the flexibility to provide regionally-responsive learning support, depending on identified community needs. Of the three pilot models explored outside Ontario of blended learning which included AlphaRoute, all three considered their pilots successful and requested continued access to AlphaRoute as a result. An increasing number of literacy stakeholders across Canada, seeking to expand their program's e-learning opportunities for adult literacy students in their regions, have expressed interest in exploring the possibilities AlphaRoute can offer.

All three piloting provinces have indicated AlphaRoute gave them the capability to support learners in a way they had not been able to before. These provinces have indicated they have been able to reach learners who cannot or will not attend traditional face-to-face literacy programs, learners who have no interest in continuing to learn via traditional methods, and learners who have no literacy programs existing in their communities. Each of the sites considered their pilot a success, as they were able to reach these learners through AlphaRoute and support them in numeracy, literacy, self-management, and information and communication technology (ICT) upgrading.

In the East Kooteney region of BC, practitioners see AlphaRoute as a bridge to connect lower-level learners to college programs which generally cater to higher-level learners, while at the same time closing the "digital divide" which is becoming more obvious in their communities as broadband Internet connection becomes widely available across the province.

Deer Lake Community Learning Centre (DLCLC) in Newfoundland struggled with how to support community members who needed literacy upgrading but who were not able to attend a face-to-face program due to lack of transportation, lack of daycare, physical disabilities, or other barriers to literacy program access. Over the past year and a half, the DLCLC has supported twenty

learners by including AlphaRoute as a program delivery option, and has found that AlphaRoute has been instrumental in reaching traditionally hard-to-reach learners.

In four communities across the NWT, e-learning is essential to support community members pursuing further education through on-line high school or college programs. While on-line higher education programs are available, many community members do not have the literacy or technical skills to be successful learners in these programs. AlphaRoute is being used to bridge this gap, and in spite of a few technical barriers, many NWT learners have taken advantage of AlphaRoute to upgrade their skills.

III. Planning for delivery

Valuable information was gathered on AlphaRoute delivery models and training needs in literacy programming from College of the Rockies in BC during their first year of piloting. The research tools used to gather this information, however, were informal and not central to the early planning phases of this initial pilot outside of Ontario. Consequently, during the 2003/2004 pilot phase, College of the Rockies in BC, DLCLC in Newfoundland, and the four programs of the Northwest Territories Literacy Council were asked to consider delivery planning as their first step. AlphaPlus developed a Delivery Plan (see Appendix A) to help guide programs, and each program filled in and submitted their plan to the AlphaPlus project coordinator. The plan was reviewed and revised quarterly, and changes made over the course of the pilot were documented, as a way of tracking delivery model development. At the end of the project, pilot programs were asked to participate in a teleconference to comment on and discuss their delivery models. In general, delivery models did not change from initial planning to the end of the project. The following findings highlight key delivery considerations from each pilot program offering AlphaRoute as part of their programming.

Findings

1. Recruitment

Target audience: In general, the target audience was community members with low literacy skills and, in some cases, learners who required English as a second language (ESL) support. In many communities, literacy and ESL support are available through the same program. Although AlphaRoute was primarily available directly through literacy programming, non-literacy community programs such as job find programs or women's shelters were targeted, and if computers were available, AlphaRoute was made available as an extension of the literacy program participating in the pilot. One pilot site stated all community members would be targeted for AlphaRoute access, but with a particular focus on young adults currently unemployed or underemployed due to low literacy levels. In Aboriginal communities in the Northwest Territories, Council Chiefs were asked to try AlphaRoute to support community members in using it.

Special needs of the target audience: Flexible delivery of literacy programming was the common need identified by all three piloting provinces. Because many learners are not able to attend day classes or long sessions, their learning opportunities need to be available when and where learners can access them. AlphaRoute was explored as a possibility. One way this access issue was addressed in the pilot was to involve community agencies where participants could have the use of a computer to learn literacy skills and, just as importantly, where they would be familiar with the learning environment, be that at home, at a library, or at a college. As the target audience was mainly low-level literacy learners, trained AlphaRoute mentors were an important support and were built into the pilot plan from day one. Regardless of whether AlphaRoute was accessed at a community centre, college computer lab, or at home, all learners were matched with a mentor and varying degrees of support were provided as required.

From the beginning, each pilot site identified a number of learners who would benefit from access to AlphaRoute, but who lacked the basic computer skills required to be initially successful in an on-line environment such as AlphaRoute. Recognizing that mentoring would go a long way toward supporting learners initially, it was acknowledged early on that more direct intentional support would need to be provided at the outset, and provisions for computer skill orientation and development were built into the delivery plans. For most programs, this meant providing initial computer skills workshops for new AlphaRoute learners. This support was provided either one-on-one or in a group, depending on the learner's needs.

Strategies used to recruit learners: The following strategies were employed to recruit learners from the local communities:

- Pamphlet distribution to public libraries, museums, schools, and training and community services
- Newspaper and radio ads
- Program facilitator on-site at partnered community agencies
- Local media approached to produce stories on the success of the program using AlphaRoute
- Presentations to community groups
- Promotion within the literacy program's outreach strategies
- Selection by instructors of clients who had some literacy skills and for whom AlphaRoute might be beneficial
- AlphaRoute open house to introduce the environment and to talk about on-line learning
- Posters throughout the community
- Promotion with Career Development Officers and Income Support Workers
- Letters sent to those registered in continuing adult education courses at colleges
- Designated AlphaRoute time negotiated in community computer labs
- Word of mouth

Partnerships: Many pilot programs partnered with colleges and community organizations in an effort to reach a greater number of learners and to provide literacy support in a number of different environments. For programs that had already established clientele who were considered the target audience, partnerships were not deemed necessary.

2. Learner orientation

Orientation to on-line learning: Programs were split on how to provide initial and ongoing orientation to learners participating in this pilot. A number of sites indicated orientation would be available to learners dependent on learners' needs, while some programs built in orientation for each learner at the beginning, ranging from one- to six-hour sessions. Three areas were identified as important orientation topics:

- 1) Computer skills necessary to use AlphaRoute independently
- 2) The AlphaRoute environment
- 3) On-line learning skills – how to be an independent learner

3. Delivery

Moore and Shin (2003) recommend that programs should not engage in distance education unless there is a niche to fill, and even if so, that it is not beneficial to rush into delivery. This is exactly the sentiment expressed by the AlphaRoute pilot sites in their evaluations. Each site had identified a gap in programming that they saw AlphaRoute supporting, and although they were eager to fill that gap, time was allocated for planning, orientation, and recruitment before delivery began. Most pilot sites started out with a small sample of learners using AlphaRoute on-site, either in a program or outside a program, but always with mentor support. Many programs were interested in using AlphaRoute as a distance learning tool, but chose to pilot AlphaRoute in the controlled environment of an on-site program initially. Now that these programs are familiar with AlphaRoute and are confident in their ability to effectively use AlphaRoute, AlphaPlus expects to see these programs explore AlphaRoute as a distance learning option during the coming year.

The exception is the Deer Lake Community Learning Centre (DLCLC) in Newfoundland, which identified distance learning for literacy learners up front as a solution to the issue of accessing hard-to-reach learners in their area. In an initial attempt to explore this delivery option, AlphaRoute was available to ten learners at a distance and ten learners on-site. Both delivery models were considered successes, as they addressed the needs of different learners and supported the DLCLC in reaching more learners they may not have been able to reach through on-site programming only.

One AlphaRoute feature considered key to learner success is the mentor support option. All learners registered in AlphaRoute are matched with a trained program mentor, and learner/mentor relationships can vary, depending on whether they are within an on-site model or a distance model. Mentor support is highly rated by learners. A recent research report by AlphaPlus (2003) found that 90% of on-site learners felt it was important to have mentor support available while using AlphaRoute.

Another key on-line delivery consideration is the importance of blending learning resources for learners. Most programs recognized that an intentional mix of learning resources available to learners and mentors is most beneficial to learners. While the majority of programs used AlphaRoute as one of many resources, AlphaRoute was considered a key resource, since it offered a variety of learning opportunities in one on-line place. Only one program presented AlphaRoute to learners as a stand-alone learning tool and did not consider providing learners with additional resources. That approach changed, however, once learners identified that their full learning needs were not being met by AlphaRoute alone. AlphaRoute is not, and was never meant to provide, a full curriculum of learning. Paper-based resources which could be mailed or emailed to learners were the most common supplementary resources identified by the pilot sites. Additionally, other Web-based resources were added, and by the end of the pilot period, most programs had a bank of both paper-based and Web-based resources to draw from.

Mentor-to-learner ratio: On average, each program mentor was matched with three learners. Programs found that distance mentors were better able to support a lower number of learners. Some on-site mentors could support more than three learners, as there was less support required by learners meeting mentors on-site. Mentor-to-learner ratios were affected by time issues, and varied depending on whether the mentor had full-time or part-time status at the program.

4. AlphaRoute access and support

For most programs, flexibility in programming was a key draw in recruiting learners. AlphaRoute provides an environment that supports flexibility, since it can be used anywhere there is Internet access, so this aspect of AlphaRoute helped in recruitment. To capitalize on this flexibility, most programs tried to give learners options as to where they could access AlphaRoute. Partnerships developed by the pilot sites with libraries, colleges, and community computer labs enabled learners to fit literacy upgrading into their own schedules. One program installed donated computers in learners' homes for the duration of the pilot, since many of the learners were not able or willing to travel to a program or to an off-site location for literacy upgrading.

Mentors took advantage of the tools available in AlphaRoute, such as email, to connect with learners, and supplemented these with regular mail and face-to-face communications. Most mentors noted they want to learn more about the communication tools in AlphaRoute so they can connect with learners in a number of different ways.

Technical issues are a reality when working with on-line applications, and in the initial planning phase of the pilots, participating programs were asked to consider how technical issues would be handled. Many programs had mentors or coordinators who were familiar with technology and were able to handle minor issues, but in some cases a technical support person was required to deal with challenges such as networked computers and other technical issues. AlphaPlus offered AlphaRoute technical support specific to issues relevant to the AlphaRoute application itself.

Programs found this useful, but were not always clear when a problem was an AlphaRoute application issue or network-related issue.

5. Mentoring

For learners working on-line, especially at a distance, motivation can be a challenge. Mentors play an important role in fostering a learning environment that motivates and encourages learners. An AlphaPlus research study (2003) found that 75% of learners agreed they were making progress more quickly and more easily using AlphaRoute than they were with mainly or only “book learning”. However, not all learners are intrinsically motivated. AlphaRoute pilot programs used a number of different strategies to encourage learners and to create a positive learning experience. Mentor strategies employed included:

- Creating learning groups and learner support networks
- Providing timely feedback
- Encouraging regular learner/mentor contact
- Hosting face-to-face social events for learners to create a sense of community and support
- Providing incentives such as prizes for regular participation
- Hosting weekly “Bravo!” sessions to celebrate learner achievements
- Passing on words of encouragement

Some programs also tried to foster a positive experience for mentors by providing a support network, weekly check-ins, and social events for mentors. Mentors indicated these support mechanisms were essential for them to learn more about their roles as mentors, to support each other, and to thereby more effectively support learners.

6. Evaluation

AlphaRoute pilot programs indicated that progress with AlphaRoute would be measured in a range of different ways. A few programs chose to administer pre- and post-tests to determine if learners had made progress over the course of the AlphaRoute pilot. Assessment tools used included CABS Online and the Brigance Diagnostic pre- and post-test tool. Not all programs were as rigorous with testing, and for those programs, advancement from one level to the next within AlphaRoute was enough indication of learning progress. For some programs, learner perception of their own success was all that was required.

IV. Challenges

Although all pilot programs considered their pilot a success, some challenges were identified. College of the Rockies in BC and the Northwest Territories Literacy Council in NWT piloted AlphaRoute at a number of sites and as a result of their pilots, not all their pilot programs will continue to use AlphaRoute. These sites did not succeed for reasons specific to the site, but common challenges identified by these programs included:

- Dial-up Internet connections resulting in slow download times for AlphaRoute graphics, which contributed to learner dissatisfaction. Not all learners using AlphaRoute on dial-up Internet connections considered this a problem, but for one site, this was such a barrier that AlphaRoute had to be discontinued as a program delivery option.
- Mentors with low technical skills proving to be a weak area in delivery. Low mentor technical skills were often more of a challenge than low learner technical skills. Some programs found that mentors who were not comfortable with computers or who were not enthusiastic about using AlphaRoute had a direct negative impact on learner satisfaction and use of

AlphaRoute. Learners drew on their mentors' enthusiasm and satisfaction, and learners' attitudes toward AlphaRoute often mirrored that of their mentors.

- Difficulties in recruiting learners for the pilot. College of the Rockies (COTR) in BC was hoping to use AlphaRoute to reach learners who had not identified themselves as literacy learners, and found many of these targeted learners participating in various community programs in the area, such as Better Babies for young mothers and fathers, and job find programs. For organizations that were interested, COTR provided a mentor to be on hand at the organization to support anyone wanting to use AlphaRoute. Recruiting learners within these programs to use AlphaRoute was a bigger challenge than anticipated, and the work involved in getting these learners and program staff engaged required significantly more time and effort than expected. COTR persisted however, and succeeded in their recruitment efforts because of the time and energy spent.

V. Characteristics of Quality Delivery

Recent research reports by Dr. Paul Porter and Liz O'Connor, *What Makes Distance Learning Effective?* (2001), and Askov et al., *Expanding Access to Adult Literacy with Online Distance Education* (2003), outline what are considered characteristics of quality programs. The AlphaRoute pilot programs highlighted many of these identified characteristics in their evaluations. The following characteristics of quality delivery outline the findings from these recent research reports, and were validated by the AlphaRoute pilot sites as being relevant to the delivery of AlphaRoute:

1. *Match learning needs to the delivery model.* It is important to know the needs of the target audience and to provide learning support which meets those needs.
2. *Provide mentor support.* Whether learners are on-site or at a distance, having a mentor to guide and encourage learners is essential to ensuring learner success.
3. *Recruit technically savvy/enthusiastic mentors.* As learner attitudes reflect mentor attitudes, successful on-line learners will need to be supported by someone who can positively enhance their learning experience.
4. *Foster learning communities.* Mentor support may not be enough for some learners. Peer-to-peer support benefits learners in a number of ways, such as by supporting the construction of knowledge, and by keeping learners motivated.
5. *Provide supplementary learning resources.* AlphaRoute will not meet all required learning needs, so programs must be prepared to draw on other resources to provide a comprehensive blended learning experience. Doing this will provide a seamless blend of learning resources, learning styles, interests, abilities, and behaviours supporting the learning process.
6. *Provide learner orientation.* Orientation to both the skills to use the application and to the application itself is key to starting learners off right. Self-direction/self-management skills support may be needed as well.
7. *Spend time program planning.* Take time to plan a delivery model and to consider all the factors affecting a program's ability to deliver that model.

V. Conclusions and recommendations for programs

1. Connect with established programs or pilot sites that share a similar delivery model. Learn what successes and challenges they have identified.
2. Work with new pilot sites on delivery planning, connecting sites with other sites to collaborate on effective delivery.
3. Take advantage of professional development opportunities, and participate in a community of practice to learn and share information and experiences in effective delivery of flexible blended learning.
4. Suggest resources and other tools available to support a blended approach to learning.

VI. References

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Appendix A – Delivery Plan



Delivery Plan

Each AlphaRoute delivery site should complete a delivery plan prior to commencing delivery. Over the course of delivery, modifications may be necessary as plans change to meet the needs of the program and the learners.

Recruitment
1. Who is the target audience for AlphaRoute in the service area? For example, learners in literacy programs, learners not serviced by programs, other?
2. Describe any specific needs of the target audience. Outline ways of addressing these needs.
3. What strategies will you use to recruit the target audience?
4. Will you be partnering with other agencies? For example, community groups or literacy programs? If so, which specific agencies?
Orientation
1. Where and how will you provide orientation for new learners? Will it be done one-on-one or in group sessions?
2. What orientation will you provide about AlphaRoute content, computers, and the Internet? Indicate major points to cover and how long the session(s) might take.

3. What study skills training will you provide, especially on how to work independently or, if applicable, at a distance?
4. Will you use the training plan in AlphaRoute? If so, how? If not, how will you assess individual learner needs and develop a study plan for each learner?
Delivery
1. How will AlphaRoute be delivered? For example, on-site, off-site with on-site support, at a distance, other?
2. How many learners will each mentor work with?
3. Who will fill the roles of coordinator(s) and mentor(s)?
<ul style="list-style-type: none"> • Coordinator(s) Name: Responsibilities:
<ul style="list-style-type: none"> • Mentor(s): Name: Responsibilities:
4. Will AlphaRoute be used as a stand-alone application or will it be supplemented with other resources?
5. Identify any resources you know will be required. How will you gain access to these resources?
Access and support
1. How will learners access AlphaRoute? For example, personal computer at home, computer at a program or other agency, computer at another location?

2. How will you distribute any supplementary resources? This is important if learners will be working at a distance.
3. How will you solve technical problems students may have with computers and the Internet in general, and with the AlphaRoute application?
Communication/mentoring
1. How will you communicate with learners? For example, telephone, face-to-face, email?
2. How will you provide feedback to learners about their progress and performance?
3. What strategies will you use to encourage learners to stick with the program? Will you develop any kind of "support groups" among learners?
Tracking learners
1. Will a mentor monitor or track their contact with learners? If so, how?
2. At the end of the pilot, will data on learner involvement in AlphaRoute be available? What criteria will you use to designate a learner as "active", "inactive", or "dropped out"? Will you collect data on the reasons why a learner drops out of the program? How?
3. What criteria will you use to determine that a learner has made satisfactory progress?

Other: