Essential Education
Learning Made CERTAiN

BLENDED LEARNING
for the Adult Education Classroom

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INTRODUCTION

INTRODUCTION

This guide to blended learning is intended for teachers and administrators of adult basic education (including ESL/ESOL/ELL, adult basic education, adult secondary education, and transition to higher education). It will help teachers and administrators understand how blended learning can enhance learning in their classes, programs, or schools. For those professionals with the desire to implement, or further develop their implementation of blended learning, this guide will serve as a step-by-step road map for choosing and efficiently implementing a blended learning model design that meets their needs and budget. Whether you are a beginner in blended learning, you have experimented with blended learning and want to further develop or improve your practice, or you are a blended learning expert, you will find information and resources that will be worthwhile for you.

In this guide we do not advocate for one blended learning approach or model, for the use of one online learning product, or necessarily for a uniform model across a program or school (although in some cases having a program or school-wide approach can be very useful). Our focus is on students and how blended learning can improve students' learning, and teachers' or tutors' instruction, in classrooms or tutoring situations. We want to help adult basic education students, teachers, programs, and schools to achieve their educational goals and objectives through the effective use of blended learning.

The guide can be used in several different ways. You can start at the beginning and read through to the end. If you already know what blended learning is, why it is important to your students, program, or school, and what it looks like, you might start at section three or four: **How to Use Blended Learning with Your Students** on page 31, or **Deciding On and Implementing an Online Learning Platform that Fits Your Needs** on page 41, respectively. Whatever your level of knowledge and experience with blended learning, we suggest that you skim the sections that you think you may need, and then more carefully read or review those that will help you move to the next step or steps in providing effective blended learning for your students.

ABOUT THE AUTHORS

The author of the guide, **Dr. David J. Rosen**, has many years of experience in adult basic education as a teacher, curriculum developer, administrator, researcher, program evaluator, and director of a large adult basic education professional development program. He has been interested in integrating technology in adult basic education for many years, and for many years has helped adult basic education teachers blend online learning with what they do in their face-to-face classes.

Dr. Rosen's co-author, **Dr. Carmine Stewart**, has worked in adult literacy education for nine years as an instructor, curriculum developer, program coordinator, researcher, program evaluator, program improvement consultant, instructional designer, and professional developer. Dr. Stewart has taught face-to-face and blended learning at the adult education, undergraduate, and graduate levels.

SECTION ONE

What is Blended Learning, and How Could it Help
Adult Learners, Adult Literacy Educators, Programs, and Schools?

WHAT IS BLENDED LEARNING?

Blended learning, sometimes known as hybrid learning, is a teaching and learning model that has a face-to-face class or tutorial component combined with an online learning component.

An online learning component of blended learning can range in complexity from easy-to-use proprietary (purchased) lessons or curricula, to easy-to-prepare online lessons stored in free online filing systems, to more sophisticated online or blended learning platforms that offer many exciting features. These more sophisticated platforms require teacher and student time to learn to use them, and teacher time to find, select, upload, and store lessons or other learning resources. The online component could also be an integrated learning system chosen (and usually purchased) by a program, school, or state education agency that funds adult basic education.

The online component in blended learning can be offered synchronously (as the teacher is teaching) or asynchronously (accessed any time). Usually the online component in blended learning is asynchronous, that is, available both during and outside of the face-to-face class, whenever a student has time to access it. Asynchronous online learning can be offered within a scheduled timeframe. For example, teachers can assign lessons, modules, or units of instruction for students to complete within one-to-three weeks. Since the lessons are accessible via the Internet, students can access them at their convenience.

A synchronous online learning component occurs in "real time," where students and teachers are interacting and accessing the online content at the same time.

A **real-time** online component could be taught at a scheduled time each day to students who log in from a variety of locations across the region, state, or country. This online component could be combined with a face-to-face instructional component scheduled at other times during the week.

A **real-time** online component could also be offered at the same time as the face-to-face component. An example of this would be in classrooms or computer labs where students have access to computers, electronic tablets, or other web-accessible devices. In this scenario, class time may be split between face-to-face instruction and online learning, or the teacher may integrate the online instruction with what he or she does face-to-face.

For example, an English language arts teacher in a face-to-face class may model writing an outline for an essay on a chalkboard or electronic whiteboard. The teacher may then ask students to draft their own essay outlines on their electronic tablets in class. Students may then share their outlines on a web page or wiki page (a web page that allows anyone to add or edit content) so that the teacher and other students may see them. The teacher may then choose one outline, and ask the class to brainstorm some of the details for one or more of the outline's paragraphs at the chalkboard or whiteboard.

In this synchronous blended learning example, the teacher uses an online environment to extend or enhance what students can practice and share in the face-to-face classroom activities. There are many variations, however, of what teachers can do with real-time blended learning in the classroom.

Another real-time example of blended learning, new and still rare in adult education, allows a student who cannot come to a face-to-face class to log in to the class activities while class is being held, from a web-accessible device at home, work, a library, or other place outside of class. This is especially convenient for students who, although they may not be able to physically attend the face-to-face class, can log in remotely when the face-to-face class is held, and participate virtually.

What Percent of Online vs. Face-to-Face Learning is Required for a Model to be Considered *Blended*?

There is no perfect or universal answer to this question, however, a 2007 Sloan Consortium report, *Blending In: The Extent and Promise of Blended Learning in the United States*, describes four different course models, only one of which, the third, is truly blended or hybrid learning:

1. 0% online learning describes a traditional face-to-face model.

2. 1-29% online describes a "web-facilitated" course that "uses web-based technology to facilitate what is essentially a face-to-face course." For example, it uses a course management system (CMS) or web pages to post the syllabus and assignments.

3. 30-79% describes a truly blended (hybrid) model, a course that blends online and face-to-face delivery. A substantial proportion of the content of the course is delivered online, it typically uses online discussions, and typically has some face-to-face meetings.

4. 80+% online is an online or distance learning course where most or all of the content is delivered online. Typically in a purely online or distance learning course there are no face-to-face meetings. http://olc.onlinelearningconsortium.org/sites/default/files/Blending_In.pdf

How Could Blended Learning Help My Learners, My Program, or My School?

There are many possible benefits of blended learning in adult basic education:

Blended learning may be more effective for adult learners than only face-to-face learning or only online learning. Data from the Texas Educating Adults Management System (TEAMS) show that adult learners who engage in blended learning outperform learners who only attend a traditional classroom, and learners who receive more than 50% of their contact hours at a distance.

- "In 2009-2010, 66% of hybrid learners completed at least on[e] level, compared to 53% each for distance and traditional classroom learners."

- "In 2010-2011, 76% of hybrid learners had level completions, compared to 60% each for distance and traditional learners."v

- In 2011-2012, hybrid learners "still had the highest percentage of completion (73%), but distance learners outperformed traditional classroom learners for the first time (60% for traditional classroom learners; 66% for primarily online learners)."

From a post by Glenda Lynn Rose to the LINCS ELL Community of Practice on December 16, 2014
https://community.lincs.ed.gov/comment/9097#comment-9097

K-12 research on blended learning also suggests that it is effective. Evaluation of Evidence-Based Practices in Online Learning is a 2010 U.S. Department of Education Meta-Analysis and Review of Online Learning Studies prepared by the Center for Technology and Learning. The researchers found that although "Few rigorous research studies of the effectiveness of online learning for K–12 students have been published…Students in online conditions performed modestly better, on average, than those learning the same material through traditional face-to-face instruction." https://www2.ed.gov/rschstat/eval/tech/evidence-based-practices /finalreport.pdf

Blended learning is a way to extend learning time so students can reach the new state College and Career Readiness standards. Many instructors and programs are aware of the new standards to which they are being held by their states, standards that are promulgated by the U.S. Department of Education, and referred to as the College and Career Readiness (CCR) standards.[1] These standards have influenced the development of all of the high school equivalency (HSE) exams, as well as most of the instructional materials that help students prepare for HSE exams.

Most adult educators agree that these standards are worthwhile; however, many also believe that most of their students need to increase their time on task if they are to reach the standards. While it might be desirable to increase students' learning time by extending the number of class hours per week, often this is not possible; programs or schools need additional funding to do this. Also, it may not be possible for students to come to class for more hours per week. Another way to increase time on task, however, is by using a blended learning model in which a learner can devote more time learning outside of class through online instruction, practice,

[1] College and Career Readiness Standards for Adult Education, April 2013 http://lincs.ed.gov/publications/pdf/CCRStandardsAdultEd.pdf

Blended learning enables students to acquire digital literacy/digital readiness, and online learning skills. Increasingly in adult education, post-secondary education, and in the workplace, students are expected to have or acquire digital readiness skills, and skills in problem solving in technology-rich environments. Many employers and post-secondary institutions already expect employees and students to do much of their training and education online. This practice will very likely increase in the future. Introducing an online component provides opportunities for students to develop digital readiness skills, which are also required for some—perhaps eventually all—high school equivalency exams.

One aspect, often overlooked in adult basic education programs, is the set of skills needed to learn online. These skills can all be acquired in a blended learning environment. Competency, comfort, and proficiency with online learning can be a great benefit of a blended learning model for adult basic education students.

Know how to return to the learning site

Create, save, & find an effective user ID & password

Know how to use tab browsing

Know conventions of webistes & how to navigate them

Needed Skills for Online Learning

How to click on a link that takes one outside the learning site

Quickly access an online dictionary and encyclopedia

Know how to scroll down a page

Know how to save written work
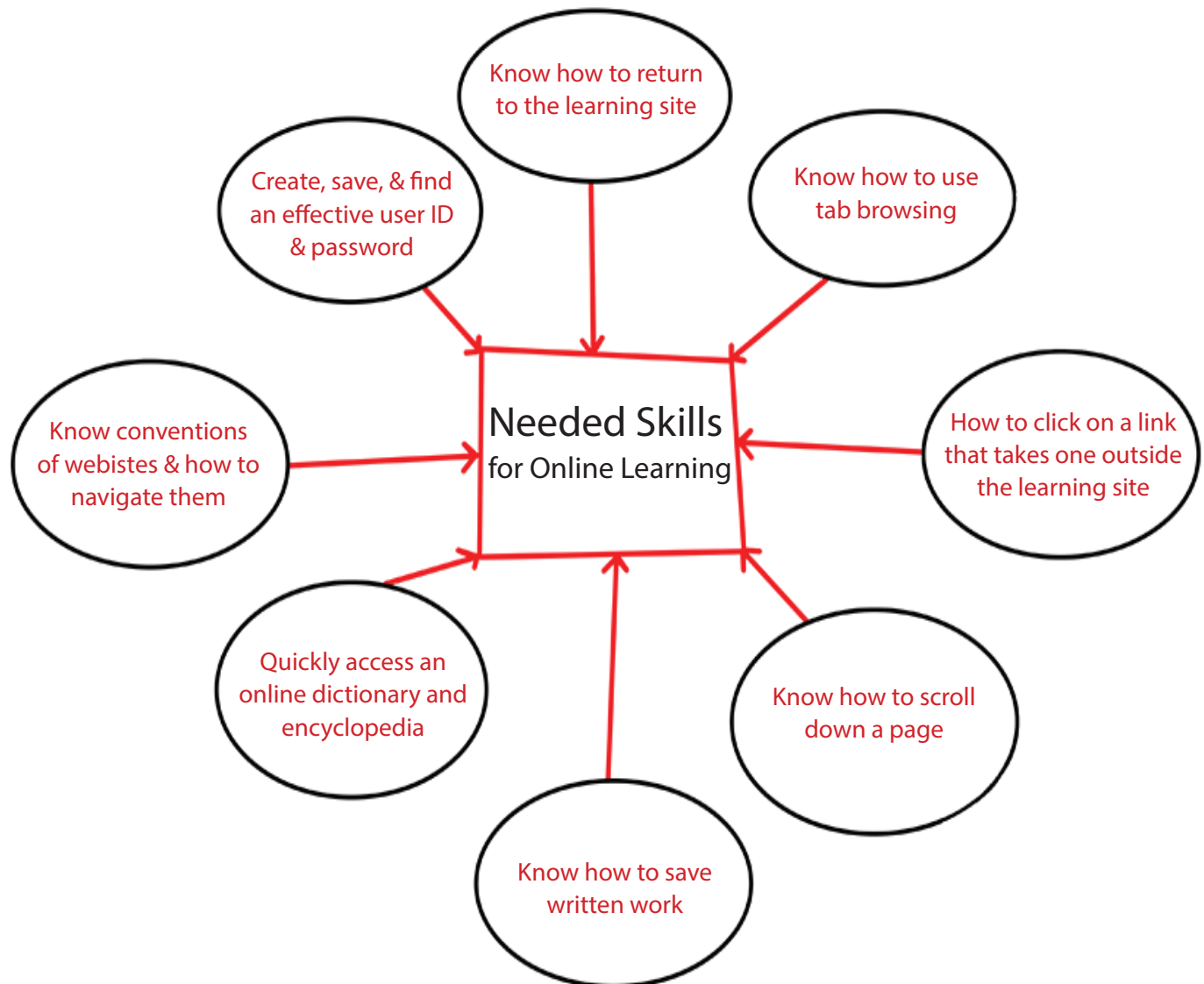
Blended learning is a way to "make up" missed classes. Inevitably students will miss some classes due to work and family responsibilities. With blended learning there are now easier ways for teachers to prepare lessons for the class using software applications on a computer or electronic tablet. These "screencast" lessons can be saved or archived so that students who could not attend can still benefit from key materials. An added benefit is that students who attended the class, who need or wish to review the presentation or practice materials, will easily be able to do that if they are stored or archived online.

Blended learning is a way to make homework more convenient and appealing. For adult learners who have portable digital devices (e.g. smartphones, e-readers, tablets, or laptops) an online learning component will make homework more convenient because it's all in one lightweight, portable device; with it, they can access and do short or longer learning tasks while they ride public transportation, wait in a doctor's or dentist's office, or during down time on the job. Some learners also find that online assignments that offer instant feedback, short videos, opportunity for word-processing their answers, and other features, are more appealing than traditional paper and pencil homework. One example of this is a free vocabulary development program for adult learners is called Words2Learn Mobile Learning. A description of this app will be found in the appendix on .

Blended learning enables easier monitoring of student progress. Many online learning systems or blended learning platforms have well-developed management information systems, automated learner progress reports, and/or online learner progress portfolios. When these are available, it is often easy and quick for a teacher to know which student has completed which assignment, taken which learning assessment, and how each student has done. For example, in GED Academy™, the learning management system automatically develops reports that quickly show the teacher which learners have viewed the assignments, and which learners are proficient, need review, or are struggling in each skill area. With this information a teacher and adult learner can develop an individual plan that addresses areas that need to be strengthened.

Blended learning fits well with competency-based (performance-based or mastery) learning models. Competency-based learning is driven by specific, measurable, or observable learning objectives or intended outcomes. The idea is that the outcomes are what matter, not how long it might take various learners to achieve the outcomes, and that given enough time, all learners can master the competencies. An individually-paced blended learning model that does not depend on the progress of the class as a group can thus enhance a competency-based model.

Blended learning fits well with workplace basic skills, including workplace English language learning. An example of this is an award-winning management-training program sponsored by the McDonald's Corporation called English Under the Arches.

ENGLISH UNDER THE ARCHES

Designed for line employees who want to be trained as shift managers and store managers, this is both a real-time and asynchronous blended learning program that selected employees can participate in by using a computer from the back of the restaurant for real-time online classes and for asynchronous learning on a McDonald's work-contextualized online learning platform.

http://www.aspeninstitute.org/policy-work/economic-opportunities/skills-americas-future/models-success/mcdonalds-english-under-arches

SECTION TWO

What Does Blended Learning in Adult Education Look Like?

Blended learning in adult basic education is relatively new, and teachers are using a range of approaches. For example, they:

Experiment with easy-to-use websites or electronic tablet or smartphone apps.

Ask students to view online instructional videos.

Ask students to bring cell phones (with a text messaging feature) to class to use free or inexpensive online polling software for immediate feedback.

Integrate a fully online instructional program (purchased by their program, school, or by a state adult education agency) with what they do in class.

Make their own "online presence" of assignments, instruction, practice, assessment and other learning resources that aligns well with what they do in class and with their program or school curriculum or state content standards. .

Some teachers start out by experimenting with one or two tools, gradually add more tools, applications, and content, and eventually adopt a fully blended model. Others have integrated some online instruction or resources, and that's as far as they want to take it. Sometimes a decision is made at the program or state level to purchase a complete online integrated learning system, the cost of which is often based on the number of slots or "seats" that are used at any one time. Often when teachers have participated in the choice, and are enthusiastic about it, they are willing to more carefully integrate the online learning system with what they do in class. The following are some examples of what teachers of adult learners, teachers of young adults in alternative programs in schools, and instructors in higher education have been doing with blended learning.

Teachers Make Their Own Websites, Using Easy-to-Use Website Builders.

***MoreThan1Math*, A Teacher-Made Website**

Weebly, http://education.weebly.com/, is a free, easy-to-use online tool that many teachers use to build their own class websites. With Weebly, a teacher can add assignments, graphics, links to instructional videos, audio files, or online assessments. For example, K-12 alternative education math teacher, Michelle Allman, designed a Weebly website for her high school-aged basic math students at Brockton Massachusetts' Champion High School. They use the web pages as they learn operations in a foundation math course. From the website they watch instructional videos, print out and use a workspace and notes handout, take notes, take a quiz, discuss the various representations presented, and use other suggested online resources as needed.

According to Michelle, *MoreThan1Math* was created to strengthen students' conceptual understanding of mathematics rather than procedural proficiency. It was designed to be an added support for students within and outside the classroom, rather than a curriculum. The lessons go over the ideas behind multiplication and division to help students figure out when to use these operations and why. The practice problems are geared to seeing and identifying types of problems and helping students recognize the mathematical structure of math problems, as opposed to surface features or "key words."

The web page was created with support through a grant from the Nellie Mae Education Foundation to TERC in Cambridge, Massachusetts. http://morethan1math.weebly.com/ and http://morethan1math.weebly.com/multiplication.html

BEST Corp. Hospitality Training Center ESL Class

Mei Ngo has been teaching English to speakers of other languages at the BEST Corp. Hospitality Training Center in Boston, an independent non-profit organization serving hospitality workers who have benefits through the Local 26/Greater Boston Hospitality Employers Trust Fund. She uses Edmodo, https://www.edmodo.com/, to create a web page for her class. Edmodo is a free, secure, online social learning platform that allows teachers to create online classes or other groups of students, assign homework, hold real-time or asynchronous discussions, schedule quizzes, host a class blog, and manage learner progress. Only their students, whom they invite to join, can see the class Edmodo web page.

Ms. Ngo uses Edmodo to improve her advanced ESL students' language, vocabulary, and cultural competency skills while increasing their comfort in the online environment commonly used for high school equivalency assessments and online courses at the college

level. This could be particularly helpful when students need to prepare for timed tests that require keyboarding skills and submitting work online. Ms. Ngo adjusted her class schedule to allow students to spend up to two hours of their in-class time every two weeks on Edmodo, after Ms. Ngo found that students were not always able to access online content outside of class. Her goals for the class include:

1. Helping students to understand cultural competencies such as volunteering, handling annoying behavior at the workplace, and developing positive thinking and attitudes.

2. Building skills, vocabulary, and critical thinking through academic readings.

Ms. Ngo says, "The learning model allows me to share supplemental resources with my students. For example, if a student is looking to practice his or her pronunciation skills, I post a link on the Edmodo wall and direct them there. Also, I can generate short-answer and multiple-choice quizzes with answers so they can receive immediate feedback. I can also leave notes for them. Since many of the students are looking to expand their computer skills, this is a great way for them to practice logging in, checking for updates, and writing a response." She says that her students enjoy getting immediate feedback, for example, after completing a quiz. The students also like to see what other students are doing, for example, how they react to a video they have watched or article they have read. An online presence like this supports their asking questions and contributing to discussions when they are too shy to do so in class.

Ms. Ngo says, "As the teacher, I envisioned that the students would spend time at home to complete the assignments. However, because many of the students work the evening shift, they come home to other household duties to attend to, and others can't find the time to do the assignments because a computer isn't available at home. Since they have easy access to computers at our program, they found that it was much easier to do their online work in a classroom environment."

She advises that teachers who are trying out blended learning should explain to their students why they are approaching the class in this particular way. She explains to her students, for example, that she wants them to be able to use a computer as an online forum to communicate and interact with other students. She also advises letting students know how much time they are expected to spend online.

Asian American Civic Association Workplace ESL Program

Diana Satin is an English language teacher in the New Roots to Employment program at the Asian American Civic Association (AACA) in Boston, Massachusetts. New Roots to Employment is an eight-month program to help students improve their English

communication through conversation, reading, and writing, along with some of the specific language used in their industries and more generally in the workplace. Job readiness skills such as searching, applying, and interviewing for jobs, and cultural issues are a large part of the course.

Diana uses Burlington English (BE), http://www.burlingtonenglish.com, a proprietary adult blended ESL/ESOL program that offers a wide range of interactive online English courses at all levels, including many career-specific English courses. BE also includes online software to help students improve their pronunciation and comprehensibility. In addition, Diana uses a topical and skill-based curriculum that she developed in collaboration with program staff, and which students access through a class website that she created through Schoology, https://www.schoology.com. With the free Schoology online learning management system a teacher can manage daily teaching tasks such as organizing courses, posting assignments, posting instructional content, hosting interactive discussions, offering online quizzes and tests with immediate scoring and analysis, recording grades, maintaining a class events calendar, and communicating by email—all from one platform and in a streamlined way. Students can also submit their assignments in an online drop box, where a teacher can provide comments and track revisions.

The online learning for the New Roots to Employment program is approximately six hours per week. The face-to-face learning consists of twice-monthly, three-hour class meetings at AACA. During this time students practice applying for jobs; learn workplace English, including pronunciation, conversation, vocabulary and writing; and they learn about US culture. The students and Diana have weekly one-hour Skype meetings in cohorts of three or four to practice using skills from the lessons, to discuss topics students request, and to improve conversation and pronunciation skills. ESL skills are an integral part of the whole program, and they are covered in the face-to-face class meetings at AACA, in Skype meetings, and in meetings with the counselor.

The face-to-face class time, and the Skype meetings have greatly contributed to building the feeling of community among the students and Diana, since they have the opportunity to enjoy interacting for some length of time, which is qualitatively different from using the Schoology website alone for discussion assignments.

Diana explains that, "We chose a blended model so that students could continue their existing jobs or other commitments. Students appreciate being able to work the assignments into their schedules, while still having due dates for their assignments. It's useful to have all class material in one place online, in the Schoology website and, except for the Burlington

English multimedia portions, to have all class materials available on any device (BE lessons can be printed or downloaded as PDFs)."

"The challenges", Diana explains, "are the usual for online or distance learning: the need to iron out tech snafus that some students encounter; some students need more support than others for navigating the online course and class site; for some, not having regular in-person contact with the teacher can lead to communication issues, such as not being as likely to approach the teacher for assistance. The lack of regular public accountability for handing in assignments on time in a physical classroom may be the reason behind several students being late submitting some assignments."

Julie's ESOL Advanced Class Website

Connecticut adult educator, Julie Bailis, has created a class website, and she has written about this experience. "Setting up a class website has profoundly changed my teaching and my students' classroom experience. I had originally planned on using a website as a way to keep students up-to-date on in-class homework assignments, but it has grown into so much more. Yes, my students can easily catch up on work they have missed if they are absent, but they can expand their English language learning experience by reading our blog that usually has something to do with what we talked about in class, they can add their own comments on the blog, they can review past computer lessons, they can revisit links that we have used in class, and they can make use of their new-found computer skills on their own personal websites (some of them are linked to the class page)."

Julie explains that she begins many lessons by opening the class website and looking at the latest additions to it such as new student writing, recipes, ESOL links, or computer lessons; then students can choose which links they want to follow. She explains that incorporating her website into her ESOL classroom, although quite time-consuming at first, has streamlined her planning time, made her teaching much more organized and focused, and has "brought new life" to her classroom.

Julie Bailis' article can be found in the 6/28/2013 TECH TIPS FOR TEACHERS blog, http://techtipsforteachers.weebly.com/blog/creating-a-class-website-guest-post , sponsored and hosted by World Education in Boston. Her web site link is http://juliesclassadvanced.weebly.com/

Teachers Use One or More Content-Complete Online Programs.

Fully-designed online learning programs such as GED Academy™ http://www.passged.com, USALearns, http://www.usalearns.org, IXL http://ixl.com, or LexiaCore5 http://lexialearning.com/product/core5 allow students opportunities to improve their English language or math skills, become better readers, or complete lessons on high school equivalency exam preparation content. These tools enable them to take assessments to measure learning and track learner progress through the system.

Blended Learning in Berkely, California

Berkeley California Adult School ABE Math and English teacher, Wendy Hoben, writes about how she uses blended learning with her classes using a fully designed, content-complete online program, and also about how her students have used online learning in a special online incentive program in the summer when her school was closed. This is a great example of how to build online learning skills in a blended model that adult students can then use on their own in an online, in-class, or distance-learning mode.

"I decided to use a blended learning model with my classes because I wanted to help students become more self-reliant and independent in their learning styles, which includes becoming more computer literate. I also wanted to take advantage of the differentiation in levels and pacing that good online programs provide, and which are nearly impossible to achieve with traditional materials."

According to Hoben, the ABE classes her adult school offers are intended to help students master basic English and math skills required to enter the high school or HSE programs. Students identify their goals upon entry to the program, and while goals frequently include getting a high school or high school equivalency diploma, they may also include strengthening literacy or numeracy skills to improve their job prospects, to help their children with homework, to better handle their finances, or for other reasons. Some students also use the ABE classes to study for the California High School Exit Exams after they've completed all their high school credit requirements.

Hoben shared that most of her students arrive without the functional and technology literacy skills needed to persist independently with online learning tools, so one of her objectives is to help them to comfortably use these tools, and search for relevant information online, initially in a supported environment, and eventually independently.

Hoben's ABE math class meets for six hours per week; her ABE English class meets for nine hours per week. She provides some time in each class for online work; at least two hours per week of their six math hours are normally spent in a computer lab where all students are logged into an online math practice site (IXL). Most students in the English class use LexiaCore5 for 20 to 60 minutes per week. She encourages and supports students who use IXL and LexiaCore5 if they want to do "homework" or earn extra credit hours, but she does not require it.

Hoben describes a particularly interesting use of blended learning for helping students maintain and advance their skills during the summer, when the adult school is closed, addressing a problem that is common to many adult learning programs, a decline over the summer in skills gained during the school year. According to Hoben,

"Last summer my class created an incentive program to keep students using these tools over the summer. The students conceived a plan to use some money we'd earned writing and selling a booklet of student writings to pay for $25 gift certificates for students who used either of the online tools for at least ten hours over the summer and made specified amounts of progress in either of them. I distributed the gift certificates to those who'd earned them in early September. About a third of the students who were actively enrolled at the end of our spring semester continued using one or the other of the tools over the summer and the students who returned in the fall showed some impressive gains in CASAS reading scores (especially those who worked in LexiaCore5) when they re-tested in the fall. Usually our ABE students tend to lose ground over the summer, so for me, this was a dramatic proof of how effectively and independently students had learned to use these online tools. Students also self-reported, and I observed, that they had retained and deepened skills they practiced over the summer including reading comprehension and fractions concepts."

Hoben says that what she especially likes about blended learning is that it:

> **Enables students** to become confident, self-directed learners
>
> **Is an enjoyable way** for students to learn
>
> **Provides immediate feedback** that enables students to easily see their progress
>
> **Frees her** from spending unpaid time correcting students' math work
>
> **Frees students** from wasting learning time to correct their work, and from needlessly doing work incorrectly before discovering that they are off track
>
> **Enables the use of good online resources** such as Hippocampus, http://www.hippocampus.org/, or YouTube videos, and that students can work together to find these online resources for themselves and for the rest of the class
>
> **Enables students** to get as much practice as they need without other students or the teacher getting impatient with them
>
> **Provides a safe, non-judgmental environment**, especially for older students, in which to learn very basic technology skills such as how to use a mouse, a search engine, or online forms or applications.

Hoben advises, "If you are new to blended learning, I suggest that you let your students be your guide. Engage them in the process of choosing useful online tools. If they can't or won't use the tools, it really doesn't matter how great you think the tools are. Find out what hardware your students have access to. For mine, it's much more likely to be smartphones than computers, and more of my students have electronic tablets such as iPads than computers or Chromebooks. Try to pick software or applications that run on the platforms the students have, especially if you expect them to engage in distance learning."

She suggests that to improve their blended learning practice teachers can:

> **Talk with teachers** who are already using blended learning and who have similar student demographics and similar learning objectives
>
> **Have a small group** of students try them out
>
> **Make a list** of criteria to evaluate possible online platforms and tools

She advises, "Think about where you want to invest your time and money. For myself, I don't want to do a lot of 'authoring' or creating my own materials because given my talents and interests my time is better spent teaching and supporting students. And given our school's infrastructure and IT staffing, it would be impossible to use a system that requires a high degree of IT support. Those factors will be different in different settings, but make sure you've clarified the constraints in which you operate before designing or buying a blended learning environment.

Blended Learning in Waterloo, Iowa

Digital Literacy Lead Instructor/Coordinator and HiSET/CASAS teacher, DeAnn Nixt, at Hawkeye Community College in Waterloo, Iowa reports that she, and some of the other teachers in her program use a blended learning model for adult basic education classes and for high school equivalency preparation. In this model, five hours per week of students' learning is face-to-face in the classroom, and approximately four hours per week are online using Skills Tutor. Due to the change from GED®2002 to the HiSET® test, they are transitioning into more rigorously appropriate programs, such as i-Pathways that is developed and deployed by the Illinois Community College Board and the Center for the Application of Technologies at Western Illinois University.

DeAnn and other teachers there assess students in their classes using a pre-test in each subject that the program has developed, teachers' own observations of the students' skills, and students' scores from a CASAS reading and math test. From this information, meeting one-on-one with students, teachers build a learning plan, called a Check Sheet, that includes using a wide variety of instructional materials. Using assessment data, teachers decide where to place a student in the curriculum. For example, a student who demonstrates the ability to work with whole numbers may skip the whole number lessons. Students who do not meet expectations for a particular lesson are given supplemental instruction during the face-to-face classroom time. This may include direct instruction from the teacher, worksheets, a page out of a textbook, an app that practices repetition on a particular skill, or a lesson on a different computer program. The Check Sheet is updated regularly.

The Check Sheet includes the student's learning goals and also provides mileposts for the student's achievement; the mileposts provide students with the gratification of seeing progress. Teachers use the Check Sheet to help their students develop realistic expectations of when they can reach a given learning goal.

DeAnn emails all of her students on Mondays and Fridays. Monday's message for each student is about the plan for the week for the student. She lets students know if they need additional practice on a particular skill or she describes the set of lessons for the upcoming week. When she sees students on Tuesday she takes a few minutes with each one to discuss the weekly goal. Many times this discussion leads to larger goals regarding possible graduation time frames. Most importantly, she forms a relationship with students in which they feel comfortable to share the barriers that prevented them from being successful. She works with students to connect them with programs that can assist them to overcome these barriers.

DeAnn uses the Remind app, https://www.remind.com/, where she can keep student cell phone numbers and email addresses. With Remind, she can write one message that can be sent to a student as an email and/or as a text message. She can also broadcast an email message to a whole class without students viewing their classmates' contact information. She provides feedback on assignments through email, and she uses email to do learning management communication with the students. She uses the tracking tools in the Skills Tutor online curriculum to ensure that the students are completing the online portion of the class.
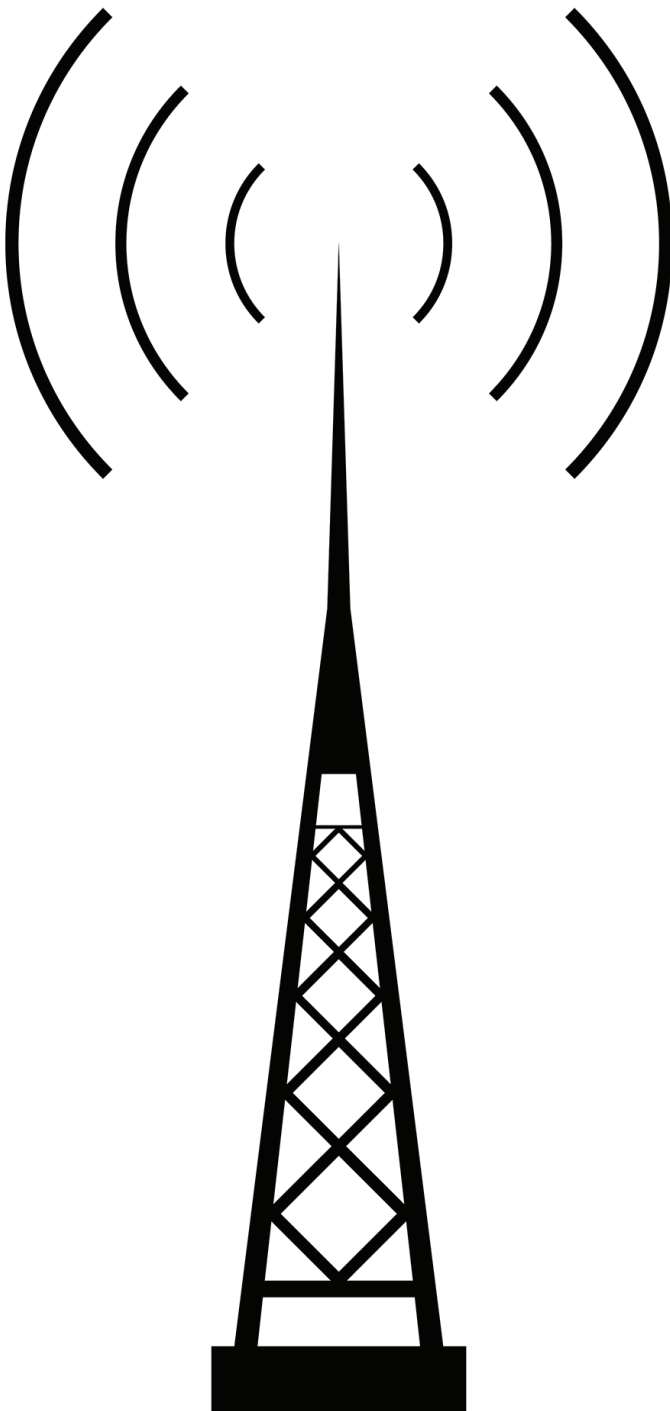
Some of DeAnn's students access the online learning site(s) through mobile devices: smartphones and electronic tablets. The students generally don't have data plans for these devices, so they need to find free Wi-Fi access, which makes it difficult for them to work online for long periods of time. Also, the small size of smartphone screens makes it difficult to read a large amount text; as a result, students who use smartphones tend to take longer to go through a lesson. Many of DeAnn's students use electronic tablets to access the online curriculum, which can be a problem, as she says Skills Tutor was designed for computers, not tablets or smartphones.

DeAnn says she sees an increase in tablets and mini-laptops in the classroom. She says the larger screens on these devices are preferable, and sometimes the touch screen provides additional interaction that makes the learning experience more entertaining. Sometimes students bring in these portable devices to show her learning and technology problems they are having.

DeAnn has learned how to use online curriculum and tools in a variety of ways: through webinar trainings, from other instructors who have experience using the software, and especially from implementing the tools in the classroom herself.

Teachers Assign Online Videos or Watch Them with Students in the Classroom.

Many adult education teachers now use online instructional videos. They show and discuss videos in class, or assign them for homework before or after class; they use videos as alternative kinds of instruction and to stimulate students' interest. Video-based instruction can be especially important for students who prefer to learn from visual and auditory media, or for those who have difficulty reading. Videos, however, can be used poorly. Teachers need to preview them before using or assigning them to be sure they are appropriate for adults, are of good quality, and are relevant to their learning objectives. Simply showing a video in class often does not lead to learning; there are specific strategies for using videos with students that make a big difference in learning. For more on using videos in adult learning, see **Finding and Using Free Online Videos for Instruction** on page 58.

TV411, http://www.tv411.org/, is a free website with a collection of short, professionally-made, instructional videos and accompanying interactive learning activities, specifically designed for adult learners. Some of the videos are also available in Spanish. The website includes a section for teachers with an index to the videos by skill. Topics include reading, writing, vocabulary, math, science, and finance. For example, the TV411 science series "What's Cooking" has entertaining and informative videos on topics such as carbohydrates, salt, water, heat, bacteria, and photosynthesis.

Teachers Use Free Online Polling with Cell Phones Students Bring to Class, or Use Outside of Class.

Electronic, online polling can be used in class if students have cell phones with text messaging. Simple, inexpensive cell phones often do have this feature. Students' phones can be used as feedback "clickers." Teachers can send a question such as:

...and get instant feedback that can be displayed to a class in a chart or graph using a computer and multimedia projector or electronic white board. Polling can also be used to gather data from students outside of class, such as asking:

For more information about how to use Poll Everywhere, see the Tech Tips for Teachers 6/13/2013 blog article by Joseph Abbott, "Using Polling Before, During, and After Lessons." http://techtipsforteachers.weebly.com/blog/using-polling-before-during-and-after-lessons

Teachers Use Web-Based Filing Tools such as Pinterest, Evernote, or Dropbox to Build a Collection of Learning Resources, Assessments and/or Assignments.

With web-based filing tools a teacher can set up a simple, easy-to-use online presence, often at little or no expense. Students can find: a schedule of assignments; documents with links to specific learning resources needed for assignments such as online videos, or practice exercises for these assignments; formative assessments to determine if students have mastered the content of the assignments; or whatever a teacher believes is needed.

Pinterest, https://www.pinterest.com/, is a free, easy-to-use web-based filing system that can be used for a wide range of personal collections such as recipes, articles, or film or book reviews, that can also be used to collect and curate instructional web pages, online instructional videos, or other learning resources or learning assessments for students. It can also be used for individual or collaborative learning projects. Leah Peterson, blog article writer for Tech Tips for Teachers, writes about this in a 6/25/2014 article: Using Pinterest in the Classroom, http://techtipsforteachers.weebly.com/blog/using-pinterest-in-the-classroom.

Also see this YouTube video introducing Pinterest as an educational tool, https://www.youtube.com/watch?v=ap6CaDU2sDA.

Teachers Use a Range of Individual Online Tools, and Some Add These to Their Class Websites.

They add a real-time chat feature.

Real-time chat, as it is often called, allows students and teachers to chat simultaneously. Asynchronous chat, sometimes referred to as a discussion board or threaded discussion, allows students to participate in a discussion at their convenience. Real-time chats and asynchronous chats are both useful, written dialogue modes for students to practice writing. This can be general or focused writing, that is, it can provide opportunities for students to dialogue and to use appropriate formal or informal writing with each other, or it can be used

to practice a particular writing skill, such as the use of a particular tense, certain new vocabulary words, complete sentences, clear, structured paragraphs, or other writing skills. Another instructional objective that might be met with chats is English writing fluency. Chat features can also be useful for student collaboration or team or project-based learning.

Portland (Oregon) Community College EL Civics teacher, Sharon Hennessy writes about using the TodaysMeet chat feature with her students who are learning about sentence fragments, in a Tech Tips for Teachers blog article at http://techtipsforteachers.weebly.com/blog/todaysmeet-guest-post-by-sharon-hennessy.

They add their own learning activities to free online videos.

Using Zaption, https://www.zaption.com/, teachers add learning activities to YouTube videos such as discussion questions, polls, and multiple-choice questions. This helps to make the instructional video richer with supportive, interactive learning activities and formative assessments. Tech Tip for Teachers Blog writer Steve Quann, the Senior Advisor for Technology in Education at World Education, Inc., describes this at http://techtipsforteachers.weebly.com/blog/a-revolution-adding-activities-to-any-youtube.

Teachers Use Shell Platforms such as Edmodo, Blendspace, Schoology, Google Classroom, Blackboard, or Moodle to Build Their Own Online Presence.

A shell platform has tools and features integrated in one website that a teacher can use to build an online presence for a blended learning or distance learning website. Teachers can post reading materials, videos, assignments, a class calendar, or use messaging and chat features within one website. A shell platform does not generally come with learning content, as it is intended as a tool for teachers or curriculum developers who want to build or add their own content.

They use Blendspace (formerly named Edcanvas) to create lessons.

In a 5/16/2013 Tech Tips for Teachers blog article, "Tech Tool of the Year, Tech skills: dragging/dropping, searching, and web navigation," http://techtipsforteachers.weebly.com/blog/tech-tool-of-the-year, the author describes how teachers use Blendspace to make engaging presentations, or to have their students make them. The author suggests this YouTube video, https://www.youtube.com/watch?v=XR5ZLMlccNM, and offers some great science lesson ideas.

They use an Edmodo discussion board feature for writing activities.

This is useful for intermediate and advanced students who may need to use written discussion skills if they go on to college and enroll in online or blended learning courses, and for students who need to improve their writing skills to prepare for high school equivalency exam writing. Christopher Bourret, an instructor with the MCPHS University's English Language Academy-Worcester (Massachusetts) program, writes about using the discussion board feature of this free online learning platform in this Tech Tips for Teachers 11/7/2014 blog article, http://techtipsforteachers.weebly.com/blog/using-discussion-boards-in-the-classroom.

They use Moodle for their teacher-developed online presence.

Moodle is a free, online platform used by many colleges, universities, and schools to host online course content. Kay Hartley, Principal, at the Fairfield-Suisun Adult School, in Fairfield, California describes their blended learning high school diploma and transition to postsecondary education or employment model that uses Moodle. "The ABE classes meet twice a week and are structured with about half of the class time being direct instruction and the remainder of the class being computer-assisted. The adult secondary classes meet five days a week and follow the same sort of structure. In addition to the in-class instructional time, ABE students can access teacher-created Moodle-based classes at home. They can review portions of the lesson on which they wish further support via the video online class. For a one-week time period the adult secondary students can earn 1 credit per class."

According to Kay Hartley, this is an open enrollment program where teacher flexibility can accommodate a range of students' short-term or longer term learning needs and learning styles. Students can work through course content at their own pace, and teachers are available either face-to-face or by e-mail.

Tutors Add an Online Presence to Their Face-to-Face Tutoring.

Tutors at a community-based adult literacy program in Memphis, Tennessee describe how they use blended learning.

Vicki Sallis Murrell, at Literacy Mid-South, a community-based adult literacy program in Memphis, Tennessee, describes how she helps the student she tutors to learn how to use a computer and the Internet while helping him improve his reading and other basic skills.

"I have always used blended learning in my teaching, in a range of different venues: in tutoring, and in classes from Pre-kindergarten to graduate and professional education. I like the flexibility. I like the ubiquitous nature of information being at the students' fingertips. I like knowing that I am helping my students learn to use technology in a way that will be beneficial to them."

"The student whom I tutor now at Literacy Mid-South, in Memphis, TN, is a 47-year old male who has spent most of his adult life in prison. I discovered early on that he had never used a computer and that he did not know how to read a map. After using paper maps to introduce map-reading concepts, we moved to the computer so that he could use Google maps. We had to begin with what a mouse is and how to use it, but once he got to an online map my student was thrilled. He was able to find places that he remembered from being in Chicago, seeing them from a street view as well as from a map view. We have also used the computer together to complete job applications. I will print these off, so that we can go through the items, and then we will move to the computer to complete them online. Most recently, my student has created an email account, which we will use in addition to texting in order to communicate between tutoring sessions."

"In tutoring, my goal is to get my student to appreciate reading, achieve the benchmarks used in the program, and eventually to get him to read past the sixth-grade level, when we will begin working with another program on HSE prep. In the college classroom, my goal is to get students to use the knowledge they have to think about how that understanding is used in their roles as parents and professionals. They also need to know how to use technology for more than posting on social media sites."

- Vicki Sallis Murrell

Yvonne Barnard, an ESL Literacy Tutor at Literacy Mid-South, describes how she adds text messaging, online games, and information searching in her face-to-face tutoring. She tutors two women who are ESL students. At the time they began, their verbal communication skills were already fairly good. She describes her use of text messaging with them this way: "Since we all have cell phones, we keep in touch by texting. I see this as an informal way to use technology to reinforce reading and writing skills… I am conscious and careful to structure my texts as full words and sentences (I do not use abbreviations, etc.) so that they are reading words that are spelled correctly and sentences that are grammatically correct."

She also describes her use of online learning games that were hugely successful with students. "We used simple children's games I found on a site called Game Classroom, http://www.gameclassroom.com/. Our favorite was Chicken Stacker, a simple game that emphasizes short vowel sounds and combining sounds to form words. I worried at first that such games might seem too childish to them. I expressed this to them so that they would feel free to let me know if they didn't like using them. But it turned out to be quite fun and engaging. They liked the visual aspect of the games, and laughing at the silliness made the concepts easy to remember. I'm sure it helped that they are both mothers, so to some extent they could share the fun with their children at home."

She adds that she introduces her students to web-based information searching. "Besides games, I have occasionally found something on the computer or web to clarify what we're talking about. For example, if a word like lobster is used in a story, I might pull up a picture of one to show what it is. Or if we're talking about states or cities, I might pull up a map of the U.S. to show where they are located."
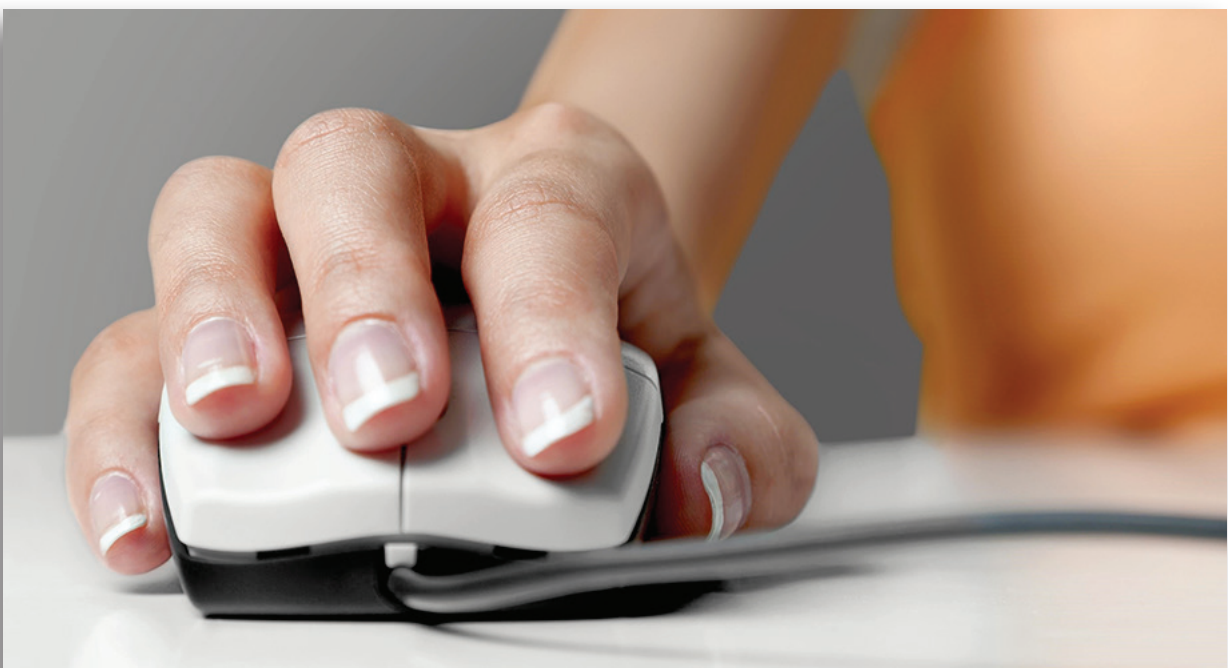
Rachel Ankney, a tutor at Literacy Mid-South, describes her approach to blended learning as organic, that is, she tries to fit technology skills in where they are most relevant to basic skills and other learner needs. For example:

> **Working with a learner** whose goal is to pass a high school equivalency exam on a computerized test, she focuses on computer skills needed for the the web-based practice tests and the exam itself.
>
> **She introduces an adult l**ooking at community college programs to college exploration websites and filling out online application and financial aid forms.
>
> **She believes,** however, that basic digital literacy skills such as information searching, using an online dictionary or thesaurus, or using a local public library website should be incorporated into lessons for all learners. For example, if a learner is using an online dictionary, she "will have the learner find the website, type in the word, and find the definition, practicing skills like using the web and interacting with a keyboard and mouse." For learners who require a lower level of digital literacy practice, she says she "might also incorporate having the learner start the computer by powering it on and locating and opening a web browser."
>
> **She adds that "introducing cell phones** and/or smartphones as an aspect of technology learning is becoming more relevant, as many adult learners increasingly have access to these devices where they may not have access to a home computer."

For tutors' own continuing professional development she recommends the "wealth of websites dedicated to adult literacy and education where tutors can find everything from reading materials, worksheets, and activities, to personal accounts from other tutors and adult learners." She says she has benefitted from Literacy Mid-South's compilation of web resources, which can be found on their website, http://www.literacymidsouth.org/ or through their free app, available to anyone.

One of the websites found in that app that she says she frequents regularly when planning for new learners is Reading Skills for Today's Adult, http://marshalladulteducation.org/index.php/reading-skills-for-todays-adult. She points out that tutors can also use technology to connect to other tutors, both locally and across the country, to find out about different ways of approaching lessons and learning. She uses the Literacy Mid-South's online Tutor Lounge that offers resources for connecting with fellow tutors. She also recommends the Literacy Mid-South YouTube channel, https://www.youtube.com/user/LiteracyMidSouth, that she says "offers helpful videos which present techniques, activities, and interviews with both tutors and learners."

Tutors use Computer Essentials to Acquire Digital Literacy.

Computer Essentials is a self-paced, online computer literacy program designed to help students develop digital literacy skills. The course addresses the nine core standards of digital literacy. Rather than teach students to become familiar with specific programs, the standards address the digital literacy skills students will need to navigate technology in its various forms.

Tutors at South Texas College Continuing Education use Learner Web, a blended learning platform, to help pre-college students acquire digital literacy.

They use two models, one that is self-paced and one that is group-paced. In the self-paced setting, there is a small tutor-led lesson, and then students are provided with the opportunity to work independently at their own pace, receiving help from the tutor on an individual basis as needed.

Juan Carlos Aguirre, Director of Continuing and Professional Education, writes, "We use 'Learning Plans' (individually-paced curricula) available in English and Spanish that were developed by the Learner Web Project at Portland State University in Oregon. The Learning Plans cover basic digital literacy skills and also broadband consumer awareness. We chose Learner Web as our blended learning online platform because of its quality and effectiveness, and to avoid having to develop the online curriculum and platform ourselves. Our tutors who use Learner Web like that it is complete, effective and functional. They were able to use it almost immediately without a lengthy training program; however we think it is useful to provide introductory professional development followed by monitoring and, if needed, helpful interventions. The tutors' students say they like being able to advance at their own pace, and also having a tutor available in the room to answer questions about the content or navigation when they face challenges. They find Learner Web easy to use."

Aguirre describes the two models, both held in a computer lab, as follows:

Model One

"*Tutor-facilitated self-paced model:* After a one-time, two-hour, face-to-face introduction by the tutor, participants access the online program and advance at their own pace when they attend training in the computer lab Monday through Friday two hours each day for a total of 20 hours over two weeks. When they need one-on-one assistance, participants approach the tutor who provides individualized instruction to get participants back on track."

Model Two

"*Tutor-controlled online instruction model:* Using the Learner Web online curriculum, the tutor provides instruction to the entire class in a cohort fashion, advancing everyone at the same pace. The class also meets Monday through Friday two hours each day, for two weeks for a total of 20 hours. This model is especially suitable for participants who are intimidated by an individualized, self-paced modality and who feel more comfortable with guided instruction."

In Higher Education, Meaningful Interaction is Created Through Online Learning.

Post-secondary writing teacher, Laurie Edwards, is especially interested in relationships and meaningful interactions in online learning. She is convinced that teachers can have relationships with students online "that are every bit as authentic as those we build with students in our 'real' classrooms, and we can help them meet their learning goals and outcomes in the same way, too…." She also believes that "Meaningful interaction also means providing students ways to connect with each other independent of the instructor. They respond to weekly discussions, leave comments on student blogs, and work on virtual group projects, thus creating the kind of collaboration and conversation that would otherwise take place in the physical classroom."

Her blog article describing this in more detail will be found at http://tinyurl.com/kyz79qt .

SECTION THREE

How to Use Blended Learning with Your Students

Let's assume that few or none your students have used a computer or the Internet, and let's assume they have little or no experience with online learning.

> How could you introduce them to blended learning in a way that encourages, not intimidates, and that builds basic competence and comfort in using digital devices and doing online learning?

> How could blended learning be accessible, easy-to-use, engaging, convenient, flexible, and substantive?

> Using blended learning, how could your students spend more time on task, enjoy it more, build their sense of community with other learners, make learning progress more quickly?

> How could your program meet the new higher College and Career Readiness standards in adult basic education?

> How could you as a teacher gradually increase your use of blended learning in ways that fit the technology knowledge and skills you have and the amount of time you have to prepare for what you do with students?

How to Introduce Blended Learning to Your Students.

There are many ways to introduce blended learning depending on what technology and web access you have available in your classroom, and what kinds of technology and web access students have available at home, work, at their public library, community computing center, or elsewhere. Let's look at some scenarios of classes that have the least technology available and then look at those that have increasingly more opportunities. We can't cover all the possibilities, of course, but you may recognize scenarios that are reasonably close to your own situation.

First, take a close look at your students' web access outside and inside class. To do this, look at Table 1 on the next page. In the left column are five descriptions (A through E) of students' access to

the web outside of class. Which ones best describe your students' situations? You may want to poll your students (orally or in writing) to find out how many (or what percent) have access to the Internet outside of class by asking them to indicate which descriptors best portray their own situations. Then record the number/percentage of your students for each row in the first column.

Next, put check marks in the cells in each row that best describe computer and web access at your school or program. Start with Row A, checking each cell (1,2,3,4 and/or 5) that applies, and then repeat those check marks in rows B through E.

Table 1: Web Access at Home, Work, or Elsewhere and Web Access at your School or Program

	School or Program Web Access					
	#/% of students	1. No web access, and possibly no computer lab at program of school	2. Web accessible computer lab	3. Computers in class with web access	4. Multi-media project or in the class	5. Student portable digital devices used in class for web access
Web Access outside the program or school						
A. No web access at home; web access available only from library, at work, community computing center or from mobile device.						
B. Family Computer with web access						
C. Student has own computer with web access						
D. Student has tablet with web access						
E. Student has smartphone with web access						
Notes						

Below is an example of a completed Table 1.

	School or Program Web Access					
	#/% of students	1. No web access, and possibly no computer lab at program of school	2. Web accessible computer lab	3. Computers in class with web access	4. Multi-media project or in the class	5. Student portable digital devices used in class for web access
Web Access outside the program or school						
A. No web access at home; web access available only from library, at work, community computing center or from mobile device.	15/25 %		x		x	x
B. Family Computer with web access	18/30 %		x		x	x
C. Student has own computer with web access	12/20 %		x		x	x
D. Student has tablet with web access	3/5 %		x		x	x
E. Student has smartphone with web access	12/20 %		x		x	x
Notes				Only 1 computer and no classroom web access	Can borrow the program projector	Only 20% of students have smartphones (with web access)

First, from the data in your table, construct a description of your technology situation. Then look at the three technology scenarios below as examples of what might be possible, even in the most technology-restrictive situations, as well as settings with greater technology opportunities.

A Worst-Case Technology Scenario:

Little or no web-accessible technology at your school or program. Although in this scenario your program or school might have no computer lab and no web access, if you have a computer or tablet at home you can prepare an online presence that your students who have web access at home, or elsewhere, can use.

Teaching them how to use this could be a challenge without a lab or web access at your program. However, if you have a portable device such as a laptop, Chromebook, electronic tablet, or smartphone through which you can access the web (see Appendix for information about the *Everyone On* program through which adult education students and teachers can get very low-cost Internet access), and you have, or can borrow, a multimedia projector for a couple of weeks, you can demonstrate how to use your online presence. As a group students can experience the supplementary assignments and learning resources (links to instructional videos, readings, quizzes, etc.) that you have created.

Another possibility, if some of your students have their own web access through their smartphones (or tablets) is to form small groups in your class with one device per group. You could give directions for how to do these digital literacy tasks::

> **Get** a unique education email address, e.g. Gmail
> **Access** your online web page with assignments and learning resources
> **Log** on to the web page for the first time
> **Navigate** to assignments or relevant learning resources
> **Find** this week's assignments, learning resources, and assessments

You could also prepare printed handouts for your students that have screen-captured images demonstrating each of these operations.

A More Typical Technology Scenario:

A web-accessible computer lab, and a web-accessible computer in your office, but no computers or web access in your classroom. In this scenario, introducing your students to online learning is somewhat easier and likely to be more effective, particularly if your students can get access to the computer lab several times a week for two to four weeks.

Prepare your "web presence," (your online learning site) from the web-accessible computer in your office and/or from your personal computer at home. It could include assignments and web-based learning resources in a simple, online filing system such as Evernote, Pinterest, LiveBinder or Dropbox (described in more detail in **Section Two:**

What Does Blended Learning Look Like on page 22). With each of these tools you can upload text, audio or video instruction, or quizzes which you can assign to students who will be able to access these from any computer, and possibly from portable digital devices such as electronic tablets and smartphones.

Your web presence could also include a free or inexpensive learning platform such as Schoology, Edmodo, or Moodle with an online curriculum that is available to you and your students to upload. It could include a fully developed online proprietary curriculum such as GED Academy™ or USALearns®.

Familiarize yourself with how the online filing system, platform, or curriculum works. Prepare assignments and learning materials. Register your students, and organize them by class. Then, when you are prepared, use your time in the computer lab to teach them how to do the digital literacy tasks described on page 34.

A Better- or Best-Case Technology Scenario:

You have several desktop and laptop computers in your classroom. You also have a full classroom set of web-accessible electronic tablets and software to manage them from a classroom computer or electronic tablet. Your entire school or program has high-bandwidth Internet access. You have multimedia projectors and electronic whiteboards, so that it is easy, if you plan ahead, to access one for your class. Most of your students have a smartphone or tablet, and they bring these to class.

Few who read this scenario will recognize it as a description of their own program or school, but this is the goal of many adult basic education programs. Some larger programs, for example, the Hubbs Center in St. Paul Minnesota, the Picknelly Adult & Family Education Center in Holyoke, Massachusetts, the Adult and Community Education Center in Baldwin Park, California, the Carlos Rosario International Adult Public Charter School in Washington, D.C., and others, have reached or nearly reached this level.

In this scenario, much more is possible. Students can reliably access the web presence any time in class from any number of devices. A teacher, holding a tablet in his or her hand, can control and interact with (for example draw over) a web page projected on an electronic whiteboard. There can be a reliable management information system of which assessments and quizzes are a part.

In these programs, the software immediately compiles and grades students' responses to assessments, and teachers can immediately get individual student and class reports on their

learning progress. Students can have real-time or asynchronous text-based discussions that can be recorded for their or their teacher's future reference. Because of the high bandwidth, showing an online instructional video in class (that can also be seen outside of class) is easy and reliable. In this scenario the technology becomes normal, automatic, invisible and is in the background while the rich text, audio, video, and multimedia instructional content, and the tools for teaching and learning, are in the foreground. When most or all students have their own portable electronic devices, they can easily do constructivist (project-based) learning where, individually or in small groups, they create documents, and present multimedia reports based on their own research.

How to Help Your Students Get Comfortable with Using Your Online Learning Software or Platform in the Classroom.

Even if some of your students have basic digital literacy/digital readiness skills, for example if they can e-mail, word process, use a spreadsheet, use social media, search for and evaluate information or videos on the web, or other basic digital literacy skills, it is likely that most have not been introduced to and are not comfortable with online learning. Online learning skills are an important sub-set of digital literacy skills that are not yet widely taught in adult basic education. Fortunately, they are not hard to learn if you can provide an environment where students can practice while help is available if needed. Three ways that adult education teachers have found to do this include using:

> **An Internet-accessible computer** (electronic tablet, or possibly even a smartphone) **and multimedia projector** in the classroom. With this you can demonstrate the features of the online learning presence yourself, and/or have students demonstrate sections, or present it and ask students to suggest how to navigate it and offer suggestions where they are stuck. Adult education teachers who do not have Internet access in their classrooms may be able to inexpensively purchase a device that will connect their computer to the Internet (see Appendix, page 74, for information about the Everyone On Program).
> **A** (web-accessible) **electronic whiteboard** in the classroom, or
> **An Internet-accessible computer lab** (ideally one that also has a teacher computer and multimedia projector).

There are many good ways to introduce students to online learning. Each approach uses a well-designed online learning presence that is relatively intuitive to navigate and that does not have frequent and frustrating technology glitches. Many teachers prefer to dive right in to using an online software application, website, or learning platform, to combine learning the content with

learning how to use the web site or web-based software or learning system. They model how to use it for the students, showing them: how to log in, how to find out what features are there, and how to use each of the features. Some teachers, knowing that their students will eventually use other learning platforms at work or in training or post-secondary education, have organized a set of online learning topics to cover, such as:

How to use a web browser

How to log in to the learning site or system, including how to remember one's password

Parts of the learning system or site and how to navigate it, such as:

- Assignments
- Lessons and Learning Resources
- Answering and analyzing the results of online polls
- Threaded discussions
- Real-time chatting with other students
- Assessments and progress reports

How to read text online

How to watch instructional videos

How digital badges demonstrate accomplishment. The digital badge is a recent concept developed by the Mozilla Foundation, maker of the Firefox browser, that is gaining attention. These are web-based micro-credentials that in some circumstances can also lead to larger, recognized education or occupational credentials. One example of digital badges in adult basic education is the free, Northstar Digital Literacy Assessment https://www.digitalliteracyassessment.org/ (See their FAQ section items: "About Badging." A good short introduction to digital badges will be found in a Digital Life and Learning article, "Finding Bilbo Badgins" at http://digilifelearn.com/finding-bilbo-badgins/).

Acceptable Use Policy and Netiquette

Practice is essential. After modeling the functions of the online presence and how they are used, ideally the students will practice using them on computers or tablets in the classroom or in a computer lab. If this isn't possible, students will need to practice them outside of class – at home, work, or at a public library. While most public libraries offer free computers with Internet access, often they limit the user's time to a half hour or less as there are often many people waiting to use the service. Most adult education teachers have found that if they provide their students with a letter to the library asking that their student be granted permission to use the computer for an hour for education-related work, libraries will respect the request. Often companies will also honor such requests made by their employees. Sometimes students have friends or family

members who have computers with Internet access who will agree to let them use a computer with Internet access on a scheduled basis.

What if students are practicing their online learning outside of class, and they run into a problem with the technology or with the content on the online presence? To whom can they turn for help? This can be a challenge. Typically libraries do not provide this kind of help. Libraries that offer digital literacy training may offer help with some online platforms that they provide for patrons' use. During the online learning training period you can begin each session by asking students if they had any trouble with the assignments, and then offering suggestions yourself, or asking others in the class to offer suggestions.

What if I have no idea how to solve the problem? That sometimes happens. Although you will want to anticipate problems, and be prepared to answer them, you are not expected to be a technology expert. You may want to say this directly to your students. It is possible that there are students in your class who are experts in using the Internet, and even in online learning. Your students may be able to help each other. You probably have a technology leader or computer lab leader at your program or school. Perhaps s/he can help. Your state may have an adult education professional development center with people who may be able to help. If you seek advice from a computer technical assistance person, whether for yourself or for a student, be prepared with the following information: the make and model of the desktop or laptop computer, electronic tablet or smartphone (e.g. iMac purchased in 2012), the operating system software (e.g. OSX Yosemite, version 10.10.1) the version of the web browser—Internet Explorer, Chrome, Firefox, Safari, etc. (e.g. Firefox 34.0.5), the application (e.g. Schoology), and what you were, or the student was, trying to do at the time and what did or didn't happen.

What are some different ways my students and I can use an online presence, such as a web page, a web-based filing system, or an online learning platform?

There are probably hundreds of ways that teachers have found to use their online presence accessed by students in class or outside of class. Here are a few:

Homework

- Teachers assign practice of new skills, exercises, or assessments that require applying knowledge or skills to new contexts
- Teachers provide students with more challenging supplementary problems or ways to extend learning
- There is a new kind of online "homework" referred to as "flipped learning" in which students are asked to watch an instructional video or other presentation, or a modeling of skills before coming to class and often are asked to take a quiz to see if they have mastered the learning objectives. The teacher looks at the results of the quiz before class. Then, in class, the teacher focuses on students who need help; those who have mastered the objectives move on to the next video in the classroom or they are asked to help students who did not master the objectives.

Make-up lessons: Some teachers prepare a lesson for the classroom that can also be archived online for students who could not attend the class. This could be a video of the teacher's presentation or modeling of skills, practice exercises that are put online, an assignment to be responded to in an online threaded discussion, or recorded report-outs from small groups of students solving problems and making recorded video or audio presentations about their solutions.

Alternative modes for new knowledge and/or skills introduced in class (print, video animation, screen-capture video demonstration, annotated YouTube videos, etc.). Some students learn best by listening, some through watching instructional videos, some from text. Over time, a teacher who has created her own web presence can increasingly add alternative ways to help students master the content or learning objectives.

A platform for flipped learning where students watch a presentation, usually online outside of class, and then in class work one-on-one or in small groups with the teacher for help or enrichment, described more fully in Section Eight, page 67.

A portfolio of progress and recognition of progress (e.g. using online certificates or digital badges, described in Section Seven, page 63.

SECTION FOUR

Deciding On and Implementing an Online Learning Platform that Fits Your Needs

Deciding on an online learning platform that fits your needs does not begin with the question of what learning platforms are available and which ones have the technical features you need. It begins with a broader, more important question: what do you want your students to learn? The answer to that question may already be spelled out in the curriculum you use, but if it isn't, or if you are greatly dissatisfied with your curriculum, then consider looking at and revising or changing your curriculum first before you make a decision about a learning platform.

If your online learning platform is going to be a part of an integrated blended learning model—not separate, unrelated supplementary, exploratory, or experimental instruction—then it has to fit or align with, or at least enhance, your students' face-to-face learning. What has determined or driven what you do in class? Are your lessons or learning activities chosen or designed to help you achieve specific learning goals or objectives? Are they part of a program- or school-determined curriculum? Are they part of your teacher-designed curriculum? If so, how do you feel about that curriculum? Do you like it as it is, want to revise it, or hope to scrap it and create a new one?

If you are not satisfied with your curriculum, you may want to choose a platform that has content in place that will help your students reach their learning goals. Assuming you have a curriculum that you are generally satisfied with, or possibly that you like a lot, here are some questions to think about:

What Does Your Curriculum Include?

Is it based largely on an existing commercial product? On several commercial products? If so, which one(s)? Is your curriculum specifically designed for your program or school, course, or class? If so, does it use all original lessons and learning resources, or does it include commercial and/or lessons and resources made by other teachers? Or is your curriculum only in your head? It might be useful for you (and others) to write a short description of your curriculum that answers these (and possibly other) questions, especially if you are involved in a team effort to explore or strengthen your program or school's blended learning and if you want to know what other teachers think about the state of curriculum at your program or school.

Are you considering creating or finding a new curriculum or making big changes in your existing curriculum?
If so, you may want to finish that process first as this has implications for what online platform you use, and how you use it. If not, proceed with choosing an online learning platform.

How important is it to have the online content aligned to your face-to-face classroom curriculum and/or to state content standards?
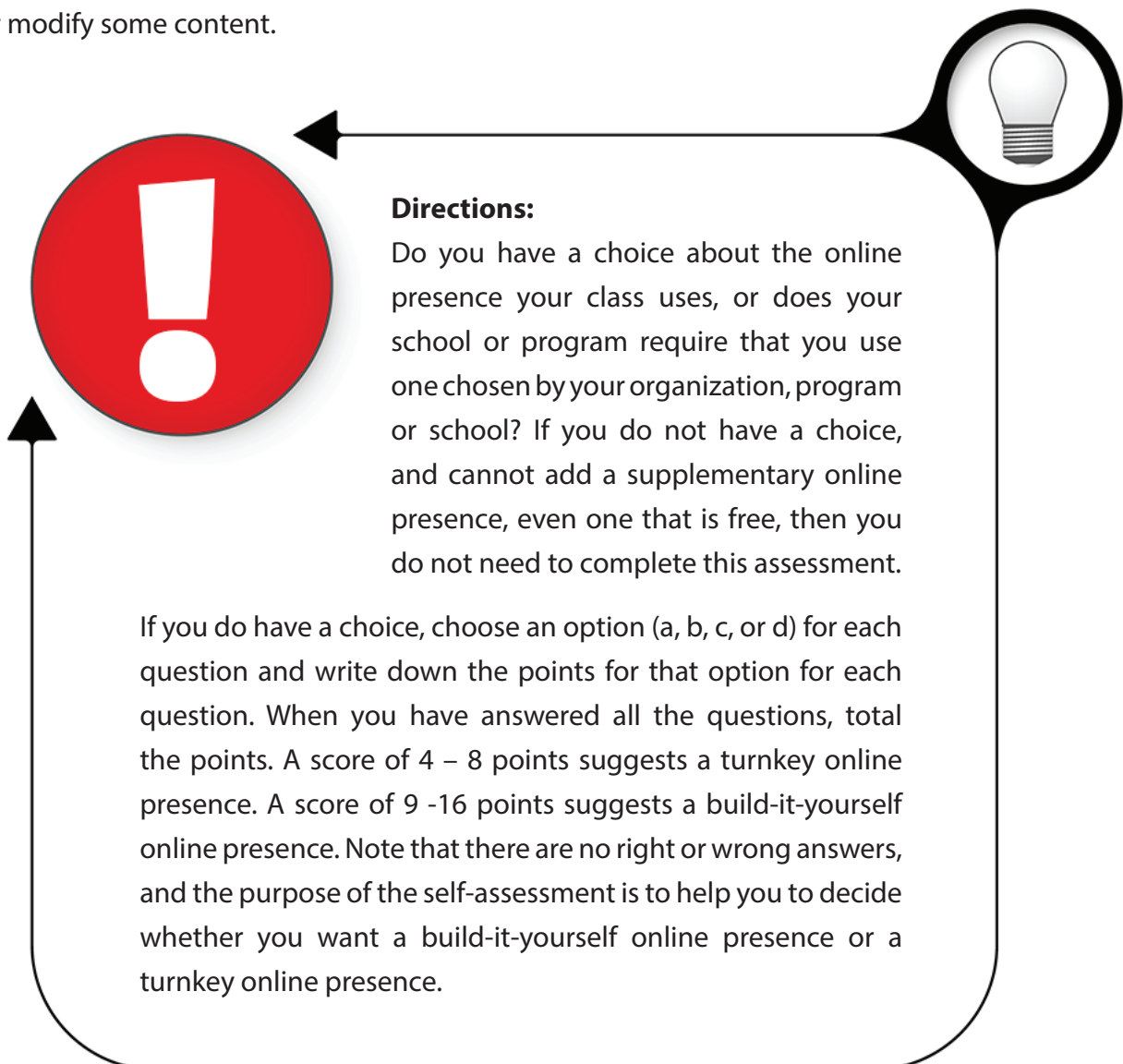Many states are now requiring that publicly-funded programs have a curriculum that aligns with the College and Career Readiness standards for Adult Education (Susan Pimental, 2013), http://lincs.ed.gov/publications/pdf/CCRStandardsAdultEd.pdf. Other states may require alignment with their own state content standards. If you are aligning your face-to-face curriculum with these standards you may also want your online curriculum to be aligned to the same standards.

We have developed a quick blended learning assessment to help you determine if the best choice for you is a turnkey online presence in which all the content is already in place, or if you want a build-it-yourself online presence that allows you to choose and align online content with your existing curriculum and/or state adult education content standards. After you have completed it, depending on which path you choose, you will

be guided to different materials and platform choices. If you chose a turnkey online presence model, go to . If you chose a build-it-yourself online presence model go to .

BLENDED LEARNING SELF-ASSESMENT

The purpose of this short self-assessment is to determine if the best choice for you and your class, program, or school is a turnkey online presence in which all the content is already in place, or if you want a build-it-yourself online presence that allows you to choose and precisely align online content with your existing curriculum and/or state adult education content standards. Depending on which path you choose, you will be guided to different materials and platform choices. Note that within the build-it-yourself option some of the choices are quick and easy, some are more complicated and may require an individual instructor or team of instructors to commit a fair amount of time to create. The turnkey option may lead you to some online curriculum products that allow teachers to add or modify some content.

Directions:

Do you have a choice about the online presence your class uses, or does your school or program require that you use one chosen by your organization, program or school? If you do not have a choice, and cannot add a supplementary online presence, even one that is free, then you do not need to complete this assessment.

If you do have a choice, choose an option (a, b, c, or d) for each question and write down the points for that option for each question. When you have answered all the questions, total the points. A score of 4 – 8 points suggests a turnkey online presence. A score of 9 -16 points suggests a build-it-yourself online presence. Note that there are no right or wrong answers, and the purpose of the self-assessment is to help you to decide whether you want a build-it-yourself online presence or a turnkey online presence.

Questions

How important is it to you to design your own curriculum that aligns what you do in class exactly with what students do online?

    a. Very important (4 points)

    b. Important (3 points)

    c. Somewhat important (2 points)

    c. Not important (1 point)

How many hours per month could you devote to curriculum development, designing lessons, and/or finding good learning resources for your students?

    a. More than 20 (4 points)

    b. Between 16 -20 (3 points)

    c. Between 6 – 15 (2 points)

    d. Less than 5 (1 point)

How soon do you need to have an online curriculum in place?

    a. I have plenty of time (4 points)

    b. in the next 12 months (3 points)

    c. In the next two months (2 points)

    d. Immediately (1 point)

Typically the cost of a full, online (turnkey) curriculum is determined by a cost per seat or per slot. Often, the more students who use it, the lower the cost per slot. The cost per slot can range from as little as $0 (for example for USALearns, an adult ESL/ESOL online model, to upwards of $50 per slot per year. Is an online turnkey curriculum something, with planning, your program or school can afford?

    a. No (4 points)

    b. Yes (1 point)

    c. Maybe (2 points)

A score of 4 – 8 points suggests a *Turnkey Online Presence*. Jump to .

A score of 9 -16 points suggests a *Build-it-Yourself Online Presence*. Jump to .

TURNKEY ONLINE PRESENCE

1. Decide what kind of online curriculum/a you need (you can choose more than one):
- Adult basic education (beginning or intermediate)
- Adult secondary education/high school equivalency exam prep
- ESOL (beginning, intermediate, or advanced)
- Work-specific skills for job readiness training, career pathways preparation or for a particular career
- Other (what kind?)

2. Search for suitable online curricula that could meet your need.

3. Once you have chosen the online curriculum product(s), ask for a demonstration.

Typically an online curriculum vendor will provide this free for a limited period of time in which you can try it out.

4. If you can:

Pilot your choice with a small number of representative students for three months to one year.

5. Then:

A) If a product meets your needs, purchase the slots you will need to meet the number of students you want to serve with it.

B) If the product doesn't meet your needs, search for, review, and pilot a different online curriculum.

BUILD-IT-YOURSELF ONLINE PRESENCE

1. Do you need an online presence that can be accessed asynchronously, in real time, or both?

If you chose the Build-it-Yourself Online Presence model, consider if it needs to be both asynchronous and real time, or only asynchronous? An asynchronous model does not have to be accessed and used at a scheduled time. It is up to the student when to go online to learn, although sometimes a teacher will ask students who have access to the web in class to also go to the online presence during class time. A real-time model allows or requires students to all log on to the online presence at the same time. They could log on in class, at home, at work, or anywhere that they have web access, but they are all online at the same time, and may be participating in the same learning activity or in different ones. If you need an online filing system or learning platform that allows students to log on asynchronously and in real time it will be important to keep this in mind as you decide what online platform or online filing system to choose.

2. Do you need an online filing tool or an online platform for your online learning presence?

An online presence can be free and simple, requiring very little time to set up and use. For example, you could decide to use an online filing tool such as Pinterest, Evernote, Scoop.it, Dropbox, LiveBinders or Google Drive. The first three allow online organizing and filing of web-based resources; the others allow creating an online filing system for documents, audio files, videos, presentation slides, and more. This solution is an appealing way for some teachers to begin building an online learning presence because it does not require an investment of money or much time.

An online learning presence can be more sophisticated, and can include an online learning platform. There are two kinds of online learning platforms:

1) A shell platform such as Schoology, Edmodo, Google Classroom (available if you have Google Apps for Education, a free suite of productivity tools including Gmail, Google Drive, and Google Docs), Moodle, Blackboard or Blendspace (formerly named Edcanvas). A shell platform does not yet have learning content. Teachers and/or a program curriculum developer must add the content that they find or create.

2) Free or proprietary online learning platforms that already include content, such as GED Academy,™ USALearns®, and others. Proprietary online learning platforms are

products created by professional curriculum developers/teachers and are designed to include all the needed content.

If you have an online content filing tool or platform choice, review your options and choose and implement a tool, combination of tools, or integrated platform. Consider the following desirable features, organized as a checklist, for an online platform for adult basic skills learning.

ONLINE LEARNING PLATFORM FEATURE CHECKLIST

How to use this checklist:
First put a check next to each item that you think is useful. Then review the checked items and circle the check mark for any that are "must haves" for you. Then, using the checklist, explore different platforms to see which one is the best fit.

Checklist

Accessibility and User-friendliness
_____Ease in setup and maintenance
_____Intuitive, user-friendly interface
_____Accessible by multiple devices: PC and Apple computers, iPad and Android electronic
tablets, iPhone and Android smartphones, online game systems, and e-readers

Class Administration
_____Ability to easily create and update a class roster
_____Automated online attendance records
_____Ability to create student assignments and post them
_____An online drop box within the platform for students to submit assignments
_____A calendar in which to record class activities, events, and deadlines

Student Collaboration
_____Threaded student discussion area(s)
_____Student (and teacher) group collaboration workspaces

(Online Learning Platform Feature Checklist - Continued)

Lesson Content Creation

_____Ability to add and file content: documents, images, audio files, videos, presentation slides, education games or simulations, etc., to embed these (as opposed to adding links to them) in lessons or modules, and to organize these into units

_____Ability to create online lessons quickly

_____Ability to add learning resources to the platform while surfing the web

_____Ability to align content, assessments, and rubrics to state content standards, or other standards

Assessing and Monitoring Student Progress

_____Ability to track student progress in online courses

_____Formative assessment (e.g. quiz) creation tools within the platform

_____Assessments within the platform, ideally linked to a learning management information system

_____Ability for students to build online student portfolios

_____A management information system to record and manage students' learning progress

_____Customized digital badges, certificates, and/or progress bars within lessons or modules to reward completion of learning modules or units

_____Ability to track which students in your classes have viewed or not viewed each online lesson

Communication

_____Built-in internal message system to send individuals or groups of students alerts, reminders, or feedback on completed assignments

_____Internal tool to send students SMS text-messages to their cell phones and/or e-mail

_____A way for students to provide feedback on a lesson, e.g. to tell you privately which parts of a lesson are confusing or to give you a "thumbs up" for activities or lessons they like

Teacher Collaboration

_____Built-in tools to collaborate with other teachers in producing, re-purposing, or adapting lessons

When you know what (combination of) tools and/or online platforms you think you want to use, since you have chosen the Build it Yourself model you will need to design or find (and possibly revise or re-purpose) high quality online content. This includes lessons, or commercial or open education resources, such as:

- Readings
- Exercises
- Digital videos
- Digital slide presentations
- Podcasts (audio files)
- WebQuests
- Education simulations or serious learning games
- Education apps that align with your class(es) and curriculum

You will need to learn how to save (and help students to save) and curate relevant web sites and videos using free online content filing tools or an integrated blended learning platform. Depending on what online tool(s) or platform you choose this can be done in different ways.

There are many options for finding content, including:

COABE Adult Educator Resources   The COABE Adult Educator Resources site, http://adultedresource.coabe.org, is a free, web-based, searchable database of online resources for adult basic education, adult secondary education, and adult transition to higher education teachers and curriculum developers.   The resources are teaching and learning materials that you may freely use and reuse at no cost. Unlike fixed, copyrighted resources, the COABE Adult Educator Resources have been authored or created by an individual or organization that chooses to retain few, if any, ownership rights. That means you can download a resource and share it with colleagues and students.
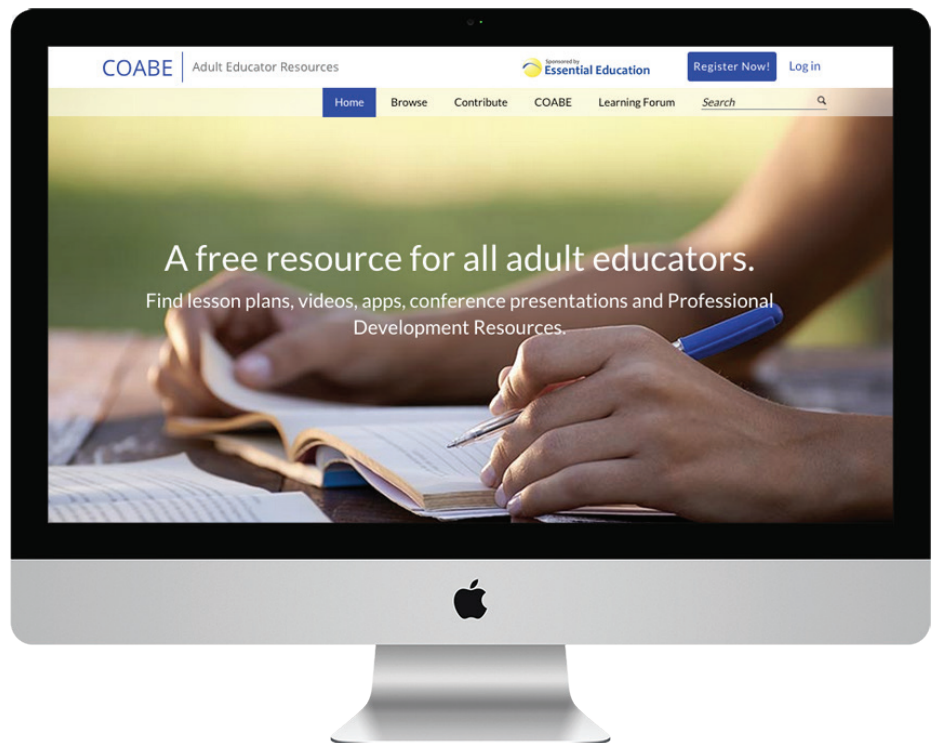
Anyone can contribute to COABE Teaching Resources. You can submit lesson plans and notes, assessments, videos, apps, presentations and slideshows, professional development, and training materials, lecture notes, reference materials, and content from texts that meets the Creative Commons Licensing guidelines. Publishers can contribute sample materials if the content meets the Creative Commons Licensing guidelines. All content is free to the user.

Open Education Resources (OER) Open Education Resources are free, and each resource is accompanied by a level of permission for how it may be used. In OER Commons https://www.oercommons.org/, for example, there are four different levels of permission for using a resource:

The most restrictive level, "Read the Fine Print," describes specific conditions for using the resource, for example that it may only be used for educational purposes, that the author must be credited, or that it may not be revised or re-purposed.

"Share Only" level allows the resource to be shared but not re-mixed.

"Re-mix and Share" allows you to make certain kinds of changes.

"No Strings Attached" allows you to do what you want with the resource without requiring permission.

OER Commons is a sophisticated, searchable database of teacher-made learning resources including: learning activities and labs, assessments, audio lectures, case studies, data, full courses, serious learning games, simulations, homework and assignments, images and illustrations, instructional material, interactives, lecture notes, lesson plans, primary sources, readings,
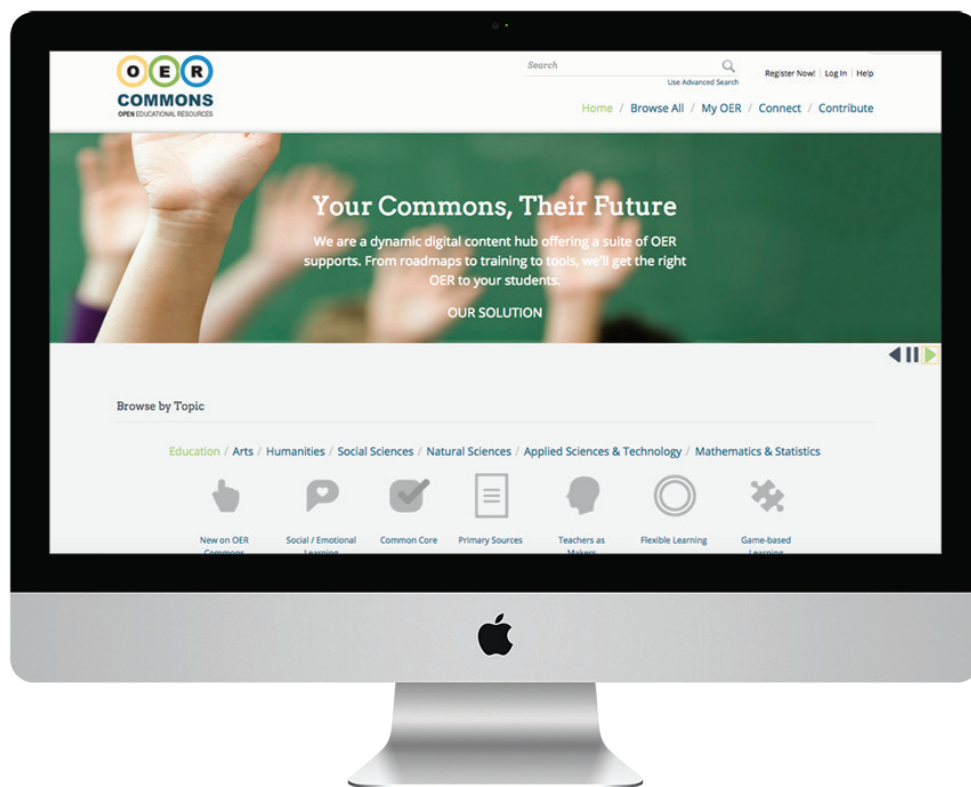
references, resource reviews, specimens, student guides, syllabi, teaching and learning strategies, textbooks, units of study, video lectures, and more. It is searchable by education level, including by "Adult Education." It can also be searched in other ways, for example by the four conditions of use, the primary user (student, teacher, administrator, etc.), and by the media format among others. It has a lot of resources. In a recent search there were 864 mathematics and statistics adult education resources and 2,875 adult education science resources. A good introduction to OERs by Minnesota adult education and technology expert, Jen Vanek, can be found in her blog article on the topic at http://techtipsforteachers.weebly.com/blog/open-educational-resources?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+TechTipsForTeachers-TechTips+%28Tech+Tips+for+Teachers%29 , or for short, http://tinyurl.com/n7uyeud

Other sources of free adult basic education-focused online content:

There are many other sources of free adult basic education (including all levels and subjects and English language learning) content. For example, for many years the author of this guide has been building a large collection of these, most suggested by adult basic education teachers, in a document known as The Literacy List, https://docs.google.com/document/d/1kiWa4nj8_j8YaJU71NbjMYPfMUJ8xax29CTFdy-yveA/edit?usp=sharing . This includes a range of web-based learner, teacher, and tutor resources.

> **A good source for online reading materials for adults** by difficulty level (easier, medium, and harder) is the Center for the Study of Adult Literacy free online library, http://csal.gsu.edu/content/library.
>
> **A good (free for the time-being) source for health-related short videos** and texts in multiple languages (that can be read out loud by a built-in text reader) is Healthy Roads Media, http://www.healthyroadsmedia.org/.
>
> **There are several websites that offer** free, short courses or lessons for adult basic skills learners in a range of subject areas. Among them are:
>
> - GCFLearnFree: http://www.gcflearnfree.org
> - Alison: http://alison.com
> - Khan Academy: http://www.khanacademy.org

If you are looking for free video resources suitable for adults, you might want to look at one of these lists of adult learning instruction and information videos:

> **Writing Videos:** *Adult Secondary Education and Transition to College Writing Videos,* https://dl.dropboxusercontent.com/u/6715575/ASE%20Writing%20Videos%2010.22.13.docx. Teacher reviews of some of these videos can be found at https://docs.google.com/document/d/1B9_b_rWsMMzZlq1gE003c9kj_KthZo5XJqFr2szvJ8g/edit?usp=sharing.

Math/Numeracy Videos: *The ABE and ASE/HSE Math Videos List*

The *Adult Basic Education and High School Equivalency/GED Math Videos* list is available free as a Dropbox document at https://dl.dropbox.com/u/6715575/ABE%20AND%20ASE_HSE_ GED%20Math%20Videos%208.21.12.docx.

Science Videos: *Science Instruction Videos for Adult Learners 11.10.14*

The science instructional videos list can be found at https://docs.google.com/document/ d/19F-_A7T-HcwwCCctxDoGFN0fyrryfKE1I_jG6-sLt1g/edit# and adult education science teacher reviews of some of the videos will be found at https://dl.dropboxusercontent. com/u/6715575/Science%20Video%20Reviews%208.17.14.docx.

Job and Career Information Videos Collections Links:

http://www.careeronestop.org/Videos/default.aspx

http://www.careeronestop.org/Videos/CareerandClusterVideos/career-

and-cluster-videos.aspx

http://icould.com/watch-career-videos/by-job-type/

http://www.gadball.com/articles/videos/

http://www.iseek.org/careers/careervideos.html#prettyPhoto

Integrating OERs with a Proprietary System

GED Academy™ is a proprietary system that provides students with online preparation for the GED® test and other high school equivalency exams. Students are assessed to determine placement at an appropriate level. The results of the assessment are used to create an individualized learning plan that students can complete at their own pace. It includes teaching lessons, practice exercises, practice tests, books, and other resources. Instructors can check students' progress, generate reports at the student or classroom level, and assign specific lessons to individual students based on that feedback. Instructors can use the program as a self-contained course, or as a complement to face-to-face instruction and OERs.

Integrating apps with online content filing tools, and integrated platforms.

Let's take one example of an online filing tool, Scoop.it, http://scoop.it. Suppose you are interested in collecting smartphone and electronic tablet apps in the area of Adult Reading and Writing. You know that some of your students have access to Scoop.it on a smartphone or tablet, some have access on a home or work computer, and others can access the apps from tablets in your classroom. Eventually you hope to build lessons around some of these apps but for now you just want to collect and curate them. To see what this might look like in Scoop.it visit David Rosen's

Adult Reading and Writing Apps Scoop.it collection at http://www.scoop.it/t/adult-literacy-apps?_tmc=h8pB6k12S6TFHCOJoeqaZU-JlIBHBbFZAZavQIcwdug.

After you have loaded what you believe to be enough content into your online presence, when you have practiced using it as if you were a student, and when you are ready to pilot or use it with your students, there are several things you will want to do before students begin to use it:

> **Survey your student**s (orally or in writing). You can develop your own survey, or use or adapt an open source survey developed by David Rosen that you will find at http://tinyurl. com/ovntxsv. Your goal in surveying your students is to learn:
>
> - How they access the web – from computers at home, at your program or school; in a library; from smartphones or electronic tablets, and what kinds?
> - If they have email and, if so, how frequently they use it.
> - What basic digital literacy skills they have and need.
>
> The results of this survey could be used to plan so that every student has regular access to the Web, to determine which students need to get e-mail addresses and to practice using e-mail, and to determine some of the basic digital literacy skills they will need to learn (you will find other digital literacy skills assessments listed in the Appendix, page 74).
>
> **If you also want to survey your students specifically** about their cell phone use, you will find this open source survey useful, http://tinyurl.com/yjzqxy6. The results of this survey could be used to determine if having students bring cell phones to class for instructional purposes is feasible. Note that not every student needs to have a cellphone; if needed, you can create small groups of two or three students where there is one cellphone available in each group.
>
> **In class, demonstrate and provide practice opportunities** for students to use your online presence until they are comfortable in accessing and using it on their own. Depending on the complexity of your online presence, and your students' computer and online learning skills, this might take only or a session or two or it could take many sessions over several weeks.

SECTION FIVE

Teaching Tools for Students Using Blending Learning

HOW YOUR STUDENTS ACCESS YOUR ONLINE PRESENCE

In the past, adult basic education students have accessed online learning from computers in a program or school computer lab, and increasingly from home, libraries, and work. Now, some also access the Web from their portable digital devices such as smartphones or electronic tablets. This makes designing your own online presence a bit more complicated, especially if you want students to be able to access it from any device. It also makes your choice of a proprietary online presence a little more complicated because you will want to be sure it can be accessed from all the digital devices your students will use.

If you are designing your own online presence, and are looking for simple solutions, use only text, or possibly text and images, and of course, links to web pages that may have other features. However, try to access the links from a variety of IOS (Apple) and Android portable digital devices to be sure they are easy to use. If not, put a warning after the link that it may be best to use this only from a computer. You can be reasonably sure, incidentally, that YouTube and Vimeo site videos are easy to see and use from any digital device. Other websites, for example that have accompanying assessments, exercises, simulations, or games may or may not be easy to use from a portable digital device.

Uses of E-mail

There are many ways that you and your students can use e-mail to support blended learning. Of course, first every student needs to have an email address, and as their teacher you need to have them all in a format that allows you to easily send individual and group and possibly sub-group messages. Many proprietary online platform products have an in-system e-mail that will do this for you. Most cell phones and computers have contacts lists or address books that allow you to send an email to an individual, group, or sub-group.

One issue that some teachers have is that they don't want students to know, or reply to, their regular personal or business email. They get a new email address (Gmail, Yahoo, Hotmail, or

another free email account) for this purpose. If you plan to use other Google features, it might be a good idea to choose Gmail, as you and your students may need this for some of the other Google features such as Google Drive, and Hangouts.

Here are some ways you can use email in blended learning:

Notifications or reminders to students, for example, when a homework assignment is due, or when and/or where a special event is taking place

Questions e-mailed as assessments for something recently learned, to be answered by e-mail

Homework assignments, perhaps with links to web-based exercises or assessments

Updates to class web pages

Announcements, with hyperlinks, of polls that students should respond to before the next class.

Tools that Will Help Build an Online Community of Learners.

There are numerous free and proprietary tools, and more being developed all the time, that you can use to build and enhance an online community of learners. Among those are: threaded discussion, instant messaging, instant phoning—and screen sharing. For example, using free Join.Me screen sharing with phone or VOIP voice communication, or using free Google Hangouts or Skype for small video-conferencing sessions allows you to talk to (or with) students while they view the content on your desktop. The challenges are not so much finding useful tools, but rather being prepared for instances such as when a tool is discontinued, was originally free but now has a fee, or where the free version is no longer sufficient. An additional challenge to keep in mind, when you are using several different tools, is how to integrate them seamlessly for your students and yourself. For this reason, some administrators and teachers choose integrated learning platforms where all the features you wish to use are already in place. An integrated learning platform may be all the help you need, at least until you decide you want to add other features provided separately by software outside the integrated platform.

Threaded Discussion

Threaded discussion refers to an online application or feature that allows a group of people to hold discussions that are automatically organized by the software into topics or "threads." Your students could have threaded discussions in each subject area, and on specific topics within the subject area. They could practice their English writing skills. They can also get comfortable with a discussion medium that is now widely used in blog article responses and in other online formats. To see an example of what a threaded discussion on

blended learning looks like with adult educators as participants, use the following link, https://community.lincs.ed.gov/discussion/blended-learning. You will see that some of the ideas for this guide were influenced or reinforced by this discussion. If you are not already a member of the LINCS community, you will need to join by going to http://lincs.ed.gov. If you are a member, you will need to log in.

A few examples of free platforms for threaded discussions include:

> **Wiggio**: http://Wiggio.com
> **Google Groups:** http://groups.google.com
> **Nicenet:** http://www.nicenet.org/
> **Yahoo Groups:** http://groups.yahoo.com/ and
> **Muut (Moot):** https://muut.com/
> Other examples, where you can build your own discussion board from scratch, include:
> **Moodle:** http://moodle.org/ and
> **Phpbb:** http://www.phpbb.com/

One consideration in selecting a threaded discussion board or platform is its optimization; ideally it should be easy to use on any computer or mobile device. Another consideration is whether or not it can be embedded in your existing web presence (website, platform, etc). A third consideration, for free threaded discussion boards, is whether or not they have advertising, as some kinds of ads are distracting to adult learners. Google Groups, Nicenet and Wiggio do not have ads.

Instant Messaging (one-on-one, real-time chatting or texting):

> **IM+ Instant Messenger**, free smartphone app in the Apple App store
> **WhatsApp** (smart phone app), https://www.whatsapp.com/. This app allows you to use your smart phone to create a group with your students' cell phone numbers and send a group text message, voice message, photo, or video. WhatsApp is supported on most Android, BlackBerry, iPhone, Nokia, and Windows smartphones.

Broadcast text or voice messaging:

> **Remind,** https://www.remind.com/, (also see a short Tech Tip for Teachers blog article about how adult education teachers use Remind at http://techtipsforteachers.weebly.com/blog/a-reminder-about-remind-101).
> **Google Voice,** http://voice.google.com (also, see an article on how to send students free text messages using Google Voice at http://www.jasonrhode.com/howtosms).

Screen sharing and virtual meetings:

Join.me, https://join.me. Join.me basic model (up to 9 other participants) is free, and the professional version, relatively inexpensive, is $15 per month. It allows you to share a screen, chat, talk to an individual or the group, send a message or file, and share control of you computer with another participant. Students can access it from a web-accessible computer or smart phone or tablet. There's a good (independent Algonquin College) introduction to the free basic model at https://www.youtube.com/watch?v=rWciOeo1tAc and introduction to the professional model at https://www.youtube.com/watch?v=Bgcd1eTaxfc.

Video conferencing: Skype and Google Hangouts

How, you might wonder, would video conferencing play a role to build community in a blended learning class? Many adult educators have faced the frustration that students who were engaged and doing well in their face-to-face class suddenly can no longer attend because of a change in their work schedule, or an unforeseen family responsibility that makes it difficult or impossible to attend class. These students have to "stop out," that is, although they plan to return to class, in the short term they cannot attend until their family or work challenge is resolved. This inevitably means that when they do return to class they have lost ground. Unless, that is, they continue to learn online through your class's blended learning model.

The problem, however, is that if they do all their learning asynchronously, even if they participate in threaded discussions with other students, they still have lost the real-time discussion with other students whose faces they can see. This is where video conferencing can be useful. Periodically, perhaps monthly, you may be able to schedule a short evening or weekend Skype or Google Hangout real-time meeting with your students where you can hold a discussion in real-time and where students can at least see their pictures if not actual live video of them talking at their computer or from a smartphone or tablet.

Both Skype and Google Hangouts are free videoconferencing applications. Skype allows up to 25 people; Google Hangouts allows up to ten people to videoconference chat at the same time.

> **Skype,** http://www.skype.com
> **Google Hangouts,** http://www.google.com/+/learnmore/hangouts/

Finding and Using Free Online Videos for Instruction.

Many adult learners watch YouTube videos, not just for entertainment, but increasingly to learn new things. If you do a search on YouTube for "GED" you will find a bewildering number of videos, nearly 200,000, many of them designed for the GED® 2002 series that are now out of date and as a result, misleading. Nevertheless, there are many reasonably good or even excellent instructional videos on YouTube, and in many other places on the web. What adult educators need are services where videos are vetted and reviewed. Fortunately, there have been a few projects that have done that, and we can hope there will be more.

Working with adult educators in three different online projects, David Rosen, co-author of this guide, has put together lists and reviews of instructional videos suitable for adult basic education learners in:

Numeracy/Math:

https://dl.dropbox.com/u/6715575/ABE%20AND%20ASE_HSE_GED%20Math%20Videos%208.21.12.docx

Science:

https://docs.google.com/document/d/19F-_A7T-HcwwCCctxDoGFN0fyrryfKE1I_jG6-sLt1g/edit#

https://dl.dropboxusercontent.com/u/6715575/Science%20Video%20Reviews%208.17.14.docx, a 20-page version of science video reviews, a few of the videos from this science videos list

English Adult Secondary Education Writing:

Videos and review of videos, respectively at https://dl.dropboxusercontent.com/u/6715575/ASE%20Writing%20Videos%2010.22.13.docx, and https://docs.google.com/document/d/1B9_b_rWsMMzZlq1gE003c9kj_KthZo5XJqFr2szvJ8g/edit?usp=sharing

Science, via Open Education Resources:

An Open Education Resources Science Area on OER Commons that includes over 100 science videos as well as other kinds of Open Resource instructional resources and lesson plans, that can be filtered specifically for adult education, https://www.oercommons.org/browse/general_subject/science-and-technology?batch_size=20&sort_by=title&view_mode=summary&f.sublevel=adult-education&f.material_types=video-lectures

Free Online Listing of Instructional Videos for Job and Career Exploration:

http://tinyurl.com/kzpgk83 Scroll down the page to find the Career Pathways Instructional Videos.

There are many ways to use online instructional videos with your students. For example, you can show a video in class, assign it for homework with follow-up discussion and/or assessment of learning in class, or assign it as homework before class (see the section on **Blended Learning and Flipped Learning** on page 67).

Before showing an instructional video to your students or assigning one, however, preview it yourself, even if it has been recommended by someone whose judgment you trust. If the video is on a website, also preview the related interactive learning activities on the site. After previewing, consider how the video can best be used, for example to introduce a topic, as an alternative explanation, as enrichment, or for reviewing a topic. Before assigning a video and related interactivities, you will need to have surveyed your students to find out if and how they have access to the web outside of class. If your class has a web site, and students can easily access it, you could have a section for video assignments with links to the videos to be watched and the dates the video assignments are due. If you don't have a class website, but students do have an email address and/or cell phone, you can email or text them their video assignments.

SECTION SIX

Blending Learning and Formative Assessment

WHAT IS FORMATIVE ASSESSMENT?

Evaluators and teachers have two categories for describing student learning assessment: formative and summative. The purpose of summative assessment, usually done at the end of a learning program, is to determine if the learners have met the program's (and their own) learning objectives. Typically summative assessments are written tests or exams, although in some cases they might include a final ("capstone") project as evidence that certain objectives or criteria have been met.

The high school equivalency examination is an example of a summative assessment that most adult educators are quite familiar with. Formative assessment has a different purpose; to provide the learner and instructor with information on students' learning progress, both individually and by group or class. The purpose of formative learning assessment, a process of gathering and using data for decision-making, is to help the learner improve, or based on learning progress data for a group of learners, to help the teacher to make changes in instruction to improve the learning outcomes for the group. Formative assessment data or other information can be used by a learner to make changes in learning strategies, to focus on skills or knowledge areas that need strengthening, to try different learning strategies, or to increase time on learning tasks. Formative assessment data for a class might be useful to a teacher in making adjustments to curriculum, specific units or lessons, or teaching strategies.

Formative assessment is extremely important in any instructional or coaching environment. Several years ago, English researchers Black and William defined formative assessment in a very general way as "all those activities undertaken by teachers, and/or by students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged." Their study of learning

[2] Black, Paul; Wiliam, Dylan(1998). "Assessment and classroom learning". Assessment in Education: Principles, Policy & Practice 5 (1).

environments for schoolchildren in England found that formative assessment, practiced well, made a huge difference in students' learning progress, and that, integrated with instruction, formative assessment helped students to learn more effectively.

Many adult education teachers would agree that knowing exactly what each student is learning, on a daily or weekly basis, is very useful; however many would quickly add that it is very difficult to collect and process that information in a traditional classroom.

In a blended learning environment, formative assessment is also extremely important, and particularly when a teacher uses an online integrated learning management system, getting formative assessment data for each student is no longer a difficult challenge, and may not be time-consuming for the student or the teacher.

In the GED Academy™, for example, instructors are able to view real-time reports that show a teacher how much time a student has spent on a lesson or assessment, how the student performed on that lesson or assessment, and what other lessons or resources within GED Academy™ can be assigned to increase a student's proficiency in that skill. Instructors can assign lessons from within the LMS, or teach a face-to-face lesson to complement the lesson within GED Academy™ for the skill or skills the student is attempting to master. As well, with extended responses, instructors can view detailed feedback that is specific to each response that a student makes to a prompt. Instructors can use that feedback to help students learn how to construct an extended response, as well as which specific conventions of modern English they need to improve to strengthen future submissions.

Students also receive immediate, instructional feedback to tell them their overall progress, as well as explanations for exercises that they answer incorrectly. They can decide to repeat lessons or add additional lessons until they reach mastery.

SECTION SEVEN

Online Learning Portfolios for Blended Learning Assessment and Recognition of Progress

WHAT IS AN ONLINE LEARNING PORTFOLIO?

Online portfolios (sometimes called e-portfolios) are useful to adult learners as a way to see growth and progress, and also as a way to demonstrate accomplishment to their friends and families, prospective employers, or college admission officers. Online portfolios are useful to teachers as a way to observe and measure learning progress, and to help both teachers and learners make decisions that ensure progress.

There are two kinds of learning portfolios:

> 1) A learning progress portfolio or a writing portfolio that is used for formative assessment.,
> 2) A summative portfolio, often a refined learning progress portfolio that demonstrates, through best examples of a student's work, what s/he can do.

The summative portfolio, sometimes called a product or performance portfolio, is a gleaned collection of student work designed for a prospective employer, a college admissions officer, or possibly as part of a competency-based secondary education credential such as the National External Diploma Program, https://www.casas.org/nedp. They can be useful to employers, for example, to see authentic examples of how an applicant writes, how s/he solves problems, and because in this case it is an online portfolio, how s/he uses technology. Like an artist's portfolio, the students collect and curate the best evidence of what they have learned and can do.

A portfolio can take many forms, but it is always more than a collection of test results; the learner generally participates in selecting the contents, especially of the summative portfolio (the formative/progress portfolio typically includes everything or nearly everything that the student writes or makes); and often the student(s) and teacher periodically review and reflect on the portfolio in one-on-one or small group meetings in which, based on their review, they may together outline some next steps in the student's learning plan.

WHAT DOES AN ONLINE PORTFOLIO LOOK LIKE?

Some proprietary integrated learning systems have their own internal student learning portfolio system, but it is also possible for students to build portfolio websites using free online tools or apps such as:

Evernote: https://evernotefolios.wordpress.com/

Weebly: https://www.youtube.com/watch?v=0ePJWIM8f3M

Google sites: https://www.youtube.com/watch?v=ackoOsIGvhA

iBooks: https://www.youtube.com/watch?feature=player_embedded&v=nBQ5IEEdt1Q

LiveBinders: https://www.youtube.com/watch?v=t7NNihJTPTo, https://www.youtube.com/watch?v=KKeerEStwco

Wordpress: https://wordpress.com/

Other Ways to Recognize Learning Progress Online.

There are many ways to recognize online learning progress. For example, some proprietary integrated learning systems have progress bars on their content web pages that show how much of a module or unit has been completed. Some offer internal certificates or other ways of recognizing student progress when a module or unit has been completed. Teachers can, of course, create their own certificates that can be digital or hard copy.

In the past few years there has also been a growing interest in another way to recognize online learning, called digital badges. These are online badges, not badges one can wear on clothing, so they are ideal for including in a digital portfolio. One advantage of digital badges for adult learners is that they can be issued for small increments of learning. They can also be aggregated into collections that add up to certificates or other credentials that may be recognized by employers, occupational training programs, or education institutions.

Digital badges typically store information about the meaning of the badge, for example: who issued it, the credentials of the issuing authority, what learning or competencies the badge stands for, and what it says about the person who holds it. If employers or education institutions want to know what the badge stands for, or want to know about the issuing organization, they can easily click on the badge to find out. Adult learners could provide a portfolio link with digital badges they have earned, or could provide a link to a "badges backpack" (private webpages where digital badges may be stored) to prospective employers as evidence of their qualifications, or to a human resource department where they are employed as evidence of qualifications for job advancement.

Digital badges were launched by the Mozilla foundation in 2011 with "An Open Badge System Framework," a paper authored by Peer 2 Peer University and The Mozilla Foundation. The paper describes badges as digital images or symbols that indicate an accomplishment, skill, quality, or interest.

Later that year, the Mozilla Foundation announced a plan to develop Mozilla Open Badges, http://openbadges.org/, a system for issuing, collecting, and displaying digital badges on instructional sites (also see the Mozilla Open Badges Wiki, https://wiki.mozilla.org/Badges).

To see who is already issuing Open Badges, go to http://openbadges.org/participating-issuers. To learn more about the Mozilla Foundation Open Badges project, watch this MacArthur Foundation Video, "What is a Badge?" at http://www.macfound.org/videos/395/.

SECTION EIGHT

Blended Learning and Flipped Learning

WHAT IS FLIPPED LEARNING?

Flipping a class, or flipped learning refers to an instructional model in which a teacher's class time activity shifts from lecturing, presenting, or demonstrating to working one-on-one or with small groups of students who most need the teacher's help. Class time can also be used for engaging group projects. The presentations of new content take place outside of class, usually on video, and are assigned as homework before class. Students can watch the presentations as many times as they wish from a computer at home, work, a public library, or in the program or school computer lab. Increasingly, students who do flipped learning are also watching the instructional videos from portable digital devices such as smartphones or electronic tablets.

A more extensive definition of flipped learning, created by the Flipped Learning Network, can be found at http://flippedlearning.org/domain/46.

Since flipped learning often uses videos to explain new content, here is a short video that explains flipped learning. Although it focuses on flipped learning in post-secondary education, some of it is relevant to adult basic and secondary education. Its content area focus is science, https://www.youtube.com/watch?v=26pxh_qMppE&feature=share&list=PLB4C7262E8DBEF24D.

If you prefer to learn about flipped learning from books, adult secondary education (ASE) instructor Karen Condit recommends: *Blend: In seven days or less successfully implement blended strategies* by Dr. Jenny Hooie; and Sams' and Bergamann's book, *Flip your Classroom, Reach Every Student Every Day*.

Why is Flipped Learning Useful in Adult Basic Education?

Flipped learning, at this point, is too new for adult educators to know how useful or effective it may be. There is experimentation, but no research on it yet in adult basic education. Nevertheless, some of the experimentation, for example in a 2014 group of thirty or so adult education teachers

teachers in the U.S. Department of Education's LINCS Region II, who began to experiment with a flipped learning approach, is well documented. The teachers participated in initial professional development, whose approach was itself modeled on flipped learning. Several also commented in a LINCS discussion that begins with a post from the group leader, professional developer Duren Thompson, https://community.lincs.ed.gov/discussion/flipped-learning-approach-how-can-it-meet-adult-learners%E2%80%99-needs. One of the more interesting posts, also from Duren Thompson, on outside-of-class activities can be found at https://community.lincs.ed.gov/comment/7080#comment-7080. There is also a comment by World Education's Steve Quann, about linking flipped learning and adult learning for vocabulary development for adults, https://community.lincs.ed.gov/comment/7361#comment-7361. For more information see https://community.lincs.ed.gov/comment/7108#comment-7108.

ABE and ASE teacher Irene Cook recommends this article: "*The Flipped Classroom Strategy: What Is it and How Can it Best be Used?*" by Natalie B. Milman, http://www.highbeam.com/doc/1P3-2809524121.html.

A few adult education teachers have flipped their classes for an entire semester or term; more have been experimenting with flipping for example, one or two days a week. David Rosen, co-author of of this guide, has created an adult education group on the Flipped Learning Ning for teachers who are flipping or experimenting with flipping their classes. If you would like to participate in this adult educators' group on flipped learning, email djrosen@newsomeassociates.com for an invitation to join.

How Can Blended Learning Make Flipped Learning Possible?

Although it might be possible to flip learning without the use of any technology, for example by assigning readings before class, an online learning presence makes flipped learning considerably richer, and very likely more engaging for learners. Since in flipped learning a teacher spends face-to-face time in class working with individuals and small groups, not presenting or demonstrating new information to the class, those presentations can be:

- **Video presentations** or demonstrations, including screen capture videos, made by the blended learning teacher, recorded on video, edited, and hosted on the class website
- **Slide presentations** (e.g. PowerPoint slides) made by the blended learning teacher or by another teacher and archived on the web
- **Virtual field trips** on the web
- **Audio files** (podcasts) prepared by the blended learning teacher or already available on the web
- **Others' videos,** available on the web.

Another intriguing possibility is to flip an online learning system such as GED Academy™, where there is organized content and a management information system. The blended learning teacher could assign content to the whole class or a sub-group of the class to be introduced on GED Academy™. The teacher could review the results from the assessments before class and group those who had difficulty and provide additional face-to-face tutoring or small-group work. Alternatively, for students who had mastered the GED Academy™ material, the teacher could provide supplementary instruction in class that provided opportunities for using the new knowledge and skills in other contexts.

SECTION NINE

Blending Learning Combined with Mastery and Competency-Based Learning

Mastery Learning is a term created in 1971 by University of Chicago Education Psychology Professor Benjamin Bloom, best known for his Taxonomy of Educational Objectives. His theory of Mastery Learning, first articulated in 1968, presumes that all children (or students) can learn (i.e. master specific, well-defined learning objectives) if provided with appropriate learning conditions, such as high-quality instruction, and especially, if given enough time. Mastery Learning has also been used as a model for accelerated learning for students who can demonstrate mastery of some learning objectives from the outset, or who can quickly master new learning objectives and content. Mastery Learning can take many forms: teacher-facilitated group instruction, one-on-one tutoring, or self-paced learning. It may include direct instruction, small group collaborative learning, or independent learning, and now, include online learning. The learning objectives are organized into specific, sequentially organized units. Most teachers would agree that Mastery Learning, while a good theory, has been difficult to implement in practice because of the difficulty in managing each student's individual learning plan related to the specific learning objectives and units. However, because of innovations in online learning systems, many educators now use Mastery Learning, including adult basic education teachers.

RESEARCH ON MASTERY LEARNING IN ADULT BASIC EDUCATION

As early as 1977-1979 evidence was available on the effectiveness of Mastery Learning as a supplemental model for adult basic education students. For example, an experimental design study by Buckley and Rauch of Great Neck New York Public Schools' [CS1] [DR2] ABE Mastery Learning program found that the "use of CAI [Computer-Assisted Instruction] led to significant, cognitive and affective growth."[1] A 1979 study of the individually-paced Basic Skills Learning System that employed Mastery Learning in eight demonstration projects in ABE centers, corrections, and public schools in Minnesota, Texas, and Maryland found that when using this Mastery Learning

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[1] Buckley, Elizabeth, and Rauch, David. "Pilot Project in Computer Assisted Instruction for Adult Basic Education Students. Adult Learning Centers, The Adult Program, Great Neck Public Schools, Great Neck, New York. Final Three Year Report (2/77-6/79)." ERIC Research in Education Report. Retrieved 2.18.15 from http://eric.ed.gov/?id=ED197202

program learners gained an average of one year years' growth in reading and one and a half year's growth in math. They also found that the dropout rate was less than 5%.[2]

A 1985 study by HE Shrum of prison inmates in an ABE numeracy class found that "The treatment resulted in higher posttest and retention test scores."[3] A 1990 "meta-analysis of findings from 108 controlled evaluations showed that mastery learning programs have positive effects on the examination performance of students in colleges, high schools, and the upper grades in elementary schools."[4]

How Mastery Learning has Grown through Online Learning Systems.

Since the development of Bloom's Taxonomy of Education Objectives, still a useful way to organize basic skills and higher order thinking skills, we now also have the Common Core State Standards (CCSS), and the various assessments for children and adults based on them. Many adult educators are aligning their curricula to Adult Education College and Career Readiness standards, based on the CCSS. As well, many publishers, including publishers of online instruction systems for adults, are basing their instruction on these standards and competencies. This can make the job of an ABE or ASE teacher who wants to use Mastery Learning strategies much easier. Typically, these online learning systems include the following features to help teachers:

- **An easy way** to enroll students by class in the online system
- **A set of learning objectives**, based on CCR standards
- **Formative learning assessments** that allow students to "test out of" certain units of instruction orparticular learning objectives, and that also measure learning progress.
- **Instruction tailored to the learning objectives** that a teacher can assign for students whose assessments show they need it
- **A comprehensive management** information management system that allows a teacher to easily see a student'soverall and unit-specific learning progress, useful for assigning new objectives and lessons, and helpful data for teacher conferences with learners.

[2] Caldwell, Robert M. and Rizza, Peter J. "A Computer-based system of Reading Instruction for Adult Non-Readers". AEDS 1979. Taylor and Francis Group. Abstract retrieved on 2/18/15 from http://www.tandfonline.com/doi/abs/10.1080/00011037.1979.11008249#preview
[3] Shrum, Harvey Earl. "A Modified Instructional Strategy for Accelerative and Mastery Learning of Basic Arithmetic by Male Incarcerated Adults." ERIC Research in Education report. 1985. Retrieved 2.18.15 from http://eric.ed.gov/?id=ED277580
[4] Kulik, Chen-Lin C., and Kulik, James A. "Effectiveness of Mastery Learning Programs: A Meta-Analysis" University of Michigan. 1990. Abstract retrieved on March 31, 2015 from http://rer.sagepub.com/content/60/2/265.short

GED Academy™ as an Example of an Online Learning System that leads to Mastery Learning.

GED Academy™ is an example of an online learning program that supports Mastery Learning in Reading, Writing and Language, Math, Science, and Social Studies. The program, designed specifically for adult learners, consists of a leveled curriculum that is aligned with the CCR Standards and the standards of commonly used high school equivalency exams. Students must complete an Initial Assessment Test, or a Self-Assessment to be placed into one of the three levels (Pre-GED® Test Level, GED® Test Prep Level, and Advanced GED® Test Level). GED Academy™ creates an individualized learning plan based on the data from the initial assessment. This process accelerates learning for students who have already mastered the basics, and places all students at the appropriate level.

Each level within GED Academy™ consists of a series of units comprised of interactive lessons and practices. A feature of the program that supports Mastery Learning is that the student has the ability to test out of a unit if they feel they have the skills to do so. In a blended classroom where an instructor teaches on a particular unit, some students may understand the content and skills well enough to test out of a unit, while others may need more time, or a different instructional approach, and the lessons within GED Academy™ provide that. After a student completes each unit in a level, they progress to the next level.

Students receive immediate feedback after each lesson, unit, and level. Instructors can check student progress in real time at the individual lesson or unit level, and can also view reports at the student or class level. The data from these reports allows teachers to tailor instruction, or assign additional lessons, for each individual student based in his or her needs.
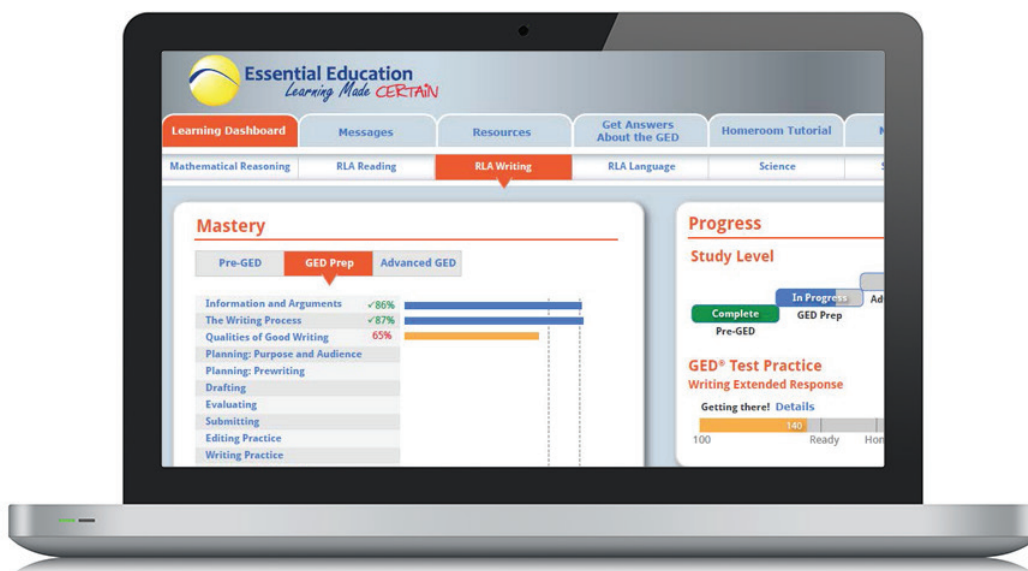
SECTION TEN

A Vision of Blended Learning in the Future

Although blended learning is a promising approach for teachers and learners, and may eventually prove of great benefit, it is not an education panacea. If done well, it is not necessarily less expensive. It also requires teachers who are willing to learn how to use new technologies, both hardware and software, and who see portable digital devices as a way to expand their students' time on learning tasks, not as a classroom distraction. It also requires that they and their students have good hardware and software and that the teachers have multiple and flexible opportunities to learn, practice, and reflect on how to do blended learning well.

For significant education reform, blended learning should be linked with other adult basic education reform efforts such as:

- **Integrating new technology** in the classroom
- **Use of mobile** learning and portable digital devices in the classroom as well as outside the classroom
- **Revitalization** of competency-based education in adult education. Adult learners need ways to decrease and increase the intensity (hours per week) of their learning based on what is happening in their lives and competency-based education and flexible scheduling help to accommodate those needs
- **Revitalized, more engaging, in-depth professional development** and teacher training
- **Seamless opportunities** for adult learners to master content and achieve their learning objectives, whether online or face-to-face. Both modes have advantages, and taken together, create greater opportunities for all adult learners to make progress.

Many teachers, those who are blending learning now and those who are curious, wonder where this is going; what blended learning will actually look like in the future. The future in education is notoriously difficult to predict; so many exciting predictions have failed to materialize, and so many unpredicted events and technologies have actually shaped education and education environments. While predicting what blended learning will look like ten, fifty, or more years from now might be in the realm of futurism or even science fiction, it is safe to predict that a blend of face-to-face and online learning is in the future of most learning and teaching.

APPENDIX

Below you will find resources for adult basic education (including English language learning) teachers, tutors and program administrators who want to try out or expand their use of blended learning. The Appendix can be used as a quick index to resources mentioned in the guide and/or to explore additional resources.

Low-cost access to the Internet for adult basic education students and teachers through the Everyone On program

The Office of Career, Technical and Adult Education at the U.S. Department of Education offers a program to adult educators and to adult basic education students that provides low-cost monthly Internet access (approximately $10/month), inexpensive desktop and laptop computers, and for teachers, an inexpensive router to provide broadband access in their classroom, everyoneOn.org/adulted.

1. Surveys of Student Technology Use

- **Basic digital literacy skills, web access and e-mail** Survey your students (orally or in writing). You can develop your own survey, or use or adapt an open source survey developed by David Rosen, co-author of this guide, that you will find at http://tinyurl.com/ovntxsv
- **Cell phone use.** Survey your students specifically about their cell phone use, with this open source survey. http://tinyurl.com/yjzqxy6
- **Mobile Learning** (Cell Phone Survey and ways to use cell phones for English Language Learning Instruction) by Susan Gaer. http://tinyurl.com/nmpbgol

2. Computer and Digital Literacy Skills Assessments and Lessons

- **The Literacy List**
  https://docs.google.com/document/d/1kiWa4nj8_j8YaJU71NbjMYPfMUJ8xax29CTFdy-yveA/edit?usp=sharing
- **Computer Essentials**
  Increase students'computer literacy through self-paced lessons that build confidence and mastery ofcomputing skills. The lessons teach how to find and utilize Internet-based information and understand principles of digital citizenship. http://www.essentialed.com/adult-education-products.php

- **Curriculum Planning and Development Resources: Planning a Curriculum.** For practitioners who decide to develop a new curriculum or to do major revisions to their existing one, a curriculum map may be a useful planning tool. http://askatechteacher.com/2015/03/31/how-to-create-a-curriculum-map/

- **Free Online Curricula and Curriculum Resources**

  For teachers who are developing their own web presence, who wish to supplement a proprietary online curriculum product, or who need online resources for their flipped learning online instruction, these websites may provide some useful free or inexpensive content.

  Online Curricula
  - USALearns an online curriculum for adults learning English http://www.usalearns.org
  - Khan Academy https://www.khanacademy.org/

  Online Content and Learning Resources
  - **OER Commons Open Education Resources** are free, and each resource is accompanied by a level of permission for how it may be used https://www.oercommons.org/
  - **Curriki:** http://www.curriki.org/
  - **iTunesU:** https://www.apple.com/education/ipad/itunes-u/
  - **TedEd:** http://ed.ted.com/
  - **ASE Writing Videos:** A list of free, online instructional writing videos suitable for adults https://dl.dropboxusercontent.com/u/6715575/ASE%20Writing%20Videos%2010.22.13.docx Teacher reviews of some of these videos will be found at http://tinyurl.com/njs5qpg
  - **ABE AND ASE_HSE_GED Math Videos:** A 21-page list of free, online numeracy and mathematics videos suitable for adults, organized by math content topics. It also includes an introduction with some context about how instructional math videos should or shouldn't be used, what they offer and what they lack. http://tinyurl.com/18r
  - **Science Instruction Videos for Adult Learners:** A list of free, online science instruction videos suitable for adults, https://dl.dropboxusercontent. com/u/6715575/Science%20Instruction%20Videos%20for%20Adult%20Learners%208.11.14.docx

and a list of reviews of some of these videos by adult education teachers of science. https://dl.dropboxusercontent.com/u/6715575/Science%20 Video%20Reviews%208.17.14.docx

- **Open Education Resources** science area on OER Commons includes over 100 science videos, as well as other kinds of Open Resource instructional resources and lesson plans, that can be filtered specifically for adult education. To filter for only adult education videos, in the left-hand column, choose "Education Level," then "Adult Education." http://tinyurl.com/ knhhtpb

- **Jobs and career information video collections links** http://www.careeronestop.org/Videos/default.aspx
    - http://tinyurl.com/jwghoyy
    - http://icould.com/watch-career-videos/by-job-type/
    - http://www.gadball.com/articles/videos/
    - http://www.iseek.org/careers/careervideos.html#prettyPhoto

- **Free Reading Library for Adults who are Learning to Read:** A good source for online reading materials for adults by difficulty level (easier, medium, and harder) is the Center for the Study of Adult Literacy free online library. http://csal.gsu.edu/content/library-resources

- **Health Literacy Online Readings:** A good (free for the time-being) source for health-related short videos and texts in multiple languages (that can be read out loud by a built-in text reader) is Healthy Roads Media. http://www. healthyroadsmedia.org/

- **Websites with free, short courses** or lessons for adult basic skills learners in a range of subject areas. Among them are:
    - GCFLearnFree www.gcflearnfree.org
    - Alison http://alison.com
    - Khan Academy http://www.khanacademy.org

- **The Literacy List,** a comprehensive list of reading, writing, numeracy math, science, English language learning, career pathways and other

websites and online learning resources for adults. https://docs.google.com/document/d/1kiWa4nj8_j8YaJU71NbjMYPfMUJ8xax29CTFdy-yveA/edit?usp=sharing

– HSE/GED Videos list http://tinyurl.com/lo256tn

- **TV411 is a free website** of short, professionally-made videos and accompanying interactive learning materials, including print materials, that has been designed for adult basic skills learners. http://www.tv411.org/

Proprietary (commercial) Online Curricula

- **GED Academy™:** http://www.passged.com/, a personalized, online learning program designed specifically to prepare adult learners for high school equivalency exams, college entrance, and college and career readiness. The program diagnoses student learning, creates a customized individual learning plan, and provides immediate feedback on learner progress to students and teachers.

- **HiSET® Academy:** http://www.essentialed.com/products/hiset-academy.php, an adaptive learning program that assesses students' skill level at entry, then tailors lesson plans to increase knowledge by subject area. Diagnostic reports show instructors where to remediate.

- **TASC Prep Academy:** http://www.essentialed.com/products/tasc-prep-academy.php, an engaging, interactive learning experience designed to accelerate student learning in reading, writing, math, science, social studies, and computer skills. TASC Prep Academy allows for diagnostic assessment of a student's skills, over 200 hours of instruction, and the ability for instructors to manage learning in real time.

- **Burlington English:** http://www.burlingtonenglish.com, a proprietary adult and young adult blended ESL/ESOL program that offers a wide range of interactive online English courses at all levels, including many career specific English courses.

- **Core Skills Mastery:** https://www.csmlearn.com

- **LexiaCore5:** http://lexialearning.com/product/core5, an online reading program that provides "explicit, systematic, personalized learning in the six areas of reading instruction, and delivers norm-referenced performance data and analysis without interrupting the flow of instruction to administer a test."

- **Edmentum:** This K-12 content is built from the Plato program. The broad content provides teachers with access to remediation. http://www.edmentum.com/

- **Skills Tutor** is an online basic skills program that provides math and reading help to K-12 students. The program has been adapted for use in adult education programs. The content is broad and teachers must assign lessons to students. The system does not adapt to the learner. https://www.myskillstutor.com/login.jsp

3. Free Online Filing Tools, Shell Platforms, Learning Platforms, and website builders for Creating a Web Presence

Online Filing Tools

- **Pinterest** is a free, easy-to-use web-based filing system that can be used used to collect and curate instructional web pages, online instructional videos, or other learning resources or learning assessments for students. It can also be used for individual or collaborative learning projects. https://www.pinterest.com/
- **Evernote:** http://evernote.com
- **Livebinders:** http://livebinders.com
- **Dropbox:** http://dropbox.com
- **Google Drive:** https://www.google.com/drive/
- **Scoop.it:** http://www.scoop.it/

Shell Platforms

- **Blendspace** (formerly named Edcanvas): https://www.blendspace.com/
- **Google Classroom:** https://classroom.google.com/
- **Edmodo** is a free online, secure social learning platform that allows teachers to create online classes or other groups of students, assign homework, hold real-time or asynchronous discussions, schedule quizzes, host a class blog, and manage learner progress. Only their students, whom they invite to join, can see the class Edmodo web page. https://www.edmodo.com/
- **Schoology** is a free online learning management system with which a teacher can manage daily teaching tasks such as organizing courses, posting assignments, posting instructional content, hosting interactive discussions, offering online quizzes and tests with immediate scoring and analysis, recording grades, maintaining a class events calendar, and communicating by email -- all from one platform and in a streamlined way. Students can also submit their assignments in an online drop box, where a teacher can provide comments and track revisions. https://www.schoology.com/home.php

Learning Platforms

- **Moodle** is a free, online platform used by many colleges, universities, and schools

use to host online course content. https://moodle.org/

- **Blackboard:** http://www.blackboard.com/

Website Builders

- **Weebly** is a relatively inexpensive, easy-to-use online tool that many teachers use to build their own class websites. With Weebly, a teacher can add assignments, graphics, links to instructional videos or audios, or online assessments. http://education.weebly.com/

4. Other Tools and Apps Useful for Adult Blended Learning

Polling and classroom response software

- **Poll Everywhere**
    - Using Poll Everywhere to create a free, one-question poll. https://dl.dropboxusercontent.com/u/6715575/Use%20Polleverywhere.doc
- **Classpager:** https://www.classpager.com/
- **Kahoot:** https://getkahoot.com/

Adult Reading and Writing Apps

- **David Rosen's collection** will be found at http://www.scoop.it/t/adult-literacy-apps?_tmc=h8pB6k12S6TFHCOJoeqaZU-JlIBHBbFZAZavQIcwdug

Vocabulary Building

- **Words2Learn:** Academic and health career vocabulary for English language learning. Words2Learn is an app designed to increase vocabulary for adults preparing to enter postsecondary education and technical training. Students are given five words per session, followed by multiple exposures to each word or concept in different formats. http://www.worlded.org/WEIInternet/us/project/display.cfm?ctid=na&cid=na&tid=40&id=14021
An online article, "LinkingFlipped Learning with Mobile Learning: Findings from the Words2Learn Project" reports that teachers found that the approach, the apps, and the learning management system (LMS) supported learning of vocabulary. http://www.collegetransition.org/about.currentprojects.mobilelearningproject.html

Student Reminder Software

- **Remind** allows a teacher to keep student cell phone numbers and email addresses and to write one message that can be sent to any or all students as an email and/or as a text message. The teacher can broadcast an email message to a whole class without students viewing their classmates' contact information. https://www.remind.com/

- **Classpager:** https://www.classpager.com/
- **WhatsApp:** (smartphone app) https://www.whatsapp.com/
  This app allows you to use your smart phone to create a group with your students' cell phone numbers and send a group text message, voice message, photo, or video. WhatsApp is supported on most Android, BlackBerry, iPhone, Nokia, and Windows smartphones.
- **Google Voice:** http://voice.google.com

Real-time chatting, screen sharing and video-conferencing

- **Today's Meet** is a free education chat feature that students can join in class, from home or elsewhere. https://todaysmeet.com/
- **Join.me :** Using this free screen sharing app with phone or VOIP voice communication allows a teacher to talk to (or with) students while they view the content on the teacher's desktop. The Join.me basic model (up to 9 other participants) is free. The professional version, relatively inexpensive, is $15 per month. It allows sharing a screen, chatting, talking to an individual or group, sending a message or file, and sharing control of your computer with another participant. Students can access Join.me from a web-accessible computer, smartphone or tablet. There's a good (independent Algonquin College) introduction to the free basic model at https://www.youtube.com/watch?v=rWciOeo1tAc and introduction to the professional model at https://www.youtube.com/watch?v=Bgcd1eTaxfc. https://join.me
- **IM+** is a free Instant Messenger smartphone app in the Apple App store. It can be used for Instant Messaging (i.e. one-on-one, real-time chatting or texting).
- **Skype or Google Hangouts:** Both Skype and Google Hangouts are free videoconferencing applications. Skype allows up to 25 people; Google Hangouts allows up to ten people to videoconference chat at the same time.
    – Skype: http://www.skype.com
    – Google Hangouts: http://www.google.com/+/learnmore/hangouts/

Free or inexpensive Threaded Discussion Platforms

- **Wiggio:** http://Wiggio.com
- **Google Groups:** http://groups.google.com
- **Nicenet:** http://www.nicenet.org/
- **Yahoo Groups:** http://groups.yahoo.com/ and
- **Muut (Moot):** https://muut.com/
  Other examples, where you can build your own discussion board from scratch if

you are so inclined, include:

- **Moodle:** http://moodle.org/ and
- **Phpbb:** http://www.phpbb.com/

Adding interactivity to Videos

- **Zaption** allows teachers to add learning activities to YouTube videos such as discussion questions, polls, and multiple-choice questions. https://www.zaption.com/

Formative Assessment software

- **Socrative:** http://www.socrative.com/

Online Learning Portfolio Resources

- **National External Diploma Program:** https://www.casas.org/nedp
- **Evernote:** https://evernotefolios.wordpress.com/
- **Weebly:** https://www.youtube.com/watch?v=0ePJWIM8f3M
- **Google sites:** https://www.youtube.com/watch?v=ackoOsIGvhA
- **iBooks:** https://www.youtube.com/watch?feature=player_embedded&v=nBQ5lEEdt1Q
- **LiveBinders:** https://www.youtube.com/watch?v=t7NNihJTPTo , or https://www.youtube.com/watch?v=KKeerEStwco

Using Cell Phones for Adult Learning

- **Susan Gaer's Top Ten Cross Platform Apps** for Integrating Bring Your Own Device (BYOD) Into Instruction. http://tinyurl.com/nmpbgol
- **Strategies** from several adult basic education practitioners who use cell phones for learning. http://mlearninginadulted.wikispaces.com/
- **Using the Camera in a Cell phone:** Lesson Ideas http://mlearninginadulted.wikispaces.com/Camera+Ideas