

Educating Philadelphia's Job Seekers for 21st-Century Jobs

By Judith Rényi | February 2015

The Desperate Need for a Basic Adult Education System

An estimated one in two adults in Philadelphia are not able to read, write, do mathematics, or use technology at levels expected by employers for entry-level 21st-century jobs (Help Wanted: Knowledge Workers Needed, Philadelphia Workforce Investment Board, June, 2009). Philadelphia has among the highest unemployment and poverty rates, and lowest workforce participation rates among the nation's largest cities (U.S. Bureau of Labor Statistics, 2014 data). The city's crime rates have fallen significantly, but the city still spends more on public safety than on any other category of expenditure. We can draw a straight line between low literacy and all of these issues, adding up to a struggling economy and reduced quality of life for all who live and work in Philadelphia and the region.

Literacy services in Philadelphia, as in most large cities in the U.S., are provided to adult learners by a myriad of small, woefully under-funded, community-based organizations. People generally find these services through word of mouth recommendations. Callers to The Mayor's Commission on Literacy invariably say, "I need to get my GED®; I need a class." Most call because they need the credential to improve their chances of finding a job. Sometimes they call because a judge has ordered them to improve their education as a condition of parole. Many call because they want to do better for the sake of their child.

Our response to those callers until a year ago used to be to refer them to a few literacy-providing agencies near their homes. Then we'd hang up, never knowing what became of the callers, if they followed up on the referrals, or if those referrals resulted in an enrollment or not. We based referrals on informal phone surveys of dozens of literacy providers carried out several times a year. They based their estimates of interest in receiving referrals on their best hopes for funding to run classes and numbers of learners who might find their agency in the months ahead.

Sometimes, for lack of a system to track the results of our referrals, we got irate calls from agencies complaining that we'd sent someone back to them whom they had sent to us in the first place. The agencies, meanwhile, were amassing lengthy waiting lists with hundreds of names on them, but each agency was ignorant of whether some on their list were also on six other waiting lists, or possibly enrolled elsewhere. Worse, just to get on the waiting lists, many adults would have to take standardized tests to determine their education levels repeatedly at each of those six agencies. Most agencies didn't know what had happened to people after they tested them, or after they dropped out of a class, or after they completed one.

Neither The Mayor's Commission on Literacy, nor the dozens of literacy providers, nor the learners themselves had access to the same information, education history, or attainment. Each agency collected its own, often paper-based, demographic information on each learner. For the lucky few who were enrolled in classes at a state-funded agency, their academic progress data was shared with the city's six state-funded agencies, but not with the dozens of others who were funded by other funding streams. When learners showed up for intake and orientation at an agency, they could not always remember where they had last been enrolled, or what the class was supposed to have covered.

It got even worse. I attended numerous "completion ceremonies" celebrating learners who had taken courses at one or another of the literacy agencies. At one such celebration, certificates were handed out just to two or three people out of the dozen or more who had started the course but dropped out before completing it. With seats so hard to come by, the fact that an instructor had been paid to teach twelve or more students and within weeks of the start of the class was only teaching two, was an appalling waste of resources.

Worst of all, since the agencies' class enrollments were made up of people who walked in off the street or happened to hear about the agency from a friend, most of the classes offered—including classes called "GED® Preparation"—were nothing of the kind. They were "multi-level" classes, meaning people with a wide range of education levels sat together, ranging in ability anywhere from 4th grade reading through 9th. In a class with such enormous differences in learning levels, no one can advance very much, and teaching coherently is a nightmare.

Unpredictable funding as well as random intake of adult learners meant that a regular and predictable set of courses was hard for agencies to organize. Some classes lasted eight weeks, others as much as fifteen, and class starts might be at any time through the year, depending on grant awards. Some organizations use "open enrollment," meaning the classes do not follow a syllabus that proceeds sequentially or covers a specified set of learning objectives.

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Cohort-based, facilitated, online learning is highly efficient for adults who rarely can commit to attending classes for months on end on particular days of the week, or during the work day when most literacy classes are offered. Online learning can be done whenever and wherever the learners can fit it into their schedules, as long as they meet their weekly deadlines and requirements. This is why online degree programs are so successful: they are based on the needs of busy adult learners with many other obligations to work, family, faith and community. Online courses based on best theory and practice also suit the adult learner, since they usually have a short duration of about six weeks, a term length during which adult learners can postpone some other obligations without hardship. Longer courses invite dropping out, when personal and work needs simply can't be put off.

The Problems We Set Out to Solve Using Information Technology

We had several massive problems to solve:

- **Severely Inadequate Funding** - The populace to be served is enormous, and the available funds to teach them are scarce. Nationally, 36 million Americans are functioning significantly below the educational levels required for entry to the workplace, but public funding (Federal and State) provides only slightly more than 2 million classroom seats each year (Time for the U.S. to Reskill?: What the Survey of Adult Skills Says (OECD Publishing, 2013). We don't know how much private funding is available for this cause either nationally or locally, but it is certainly not enough to make much of an educational difference. In Philadelphia, only \$4.3 million in Federal and State grants have been awarded in each of the past four years, paying for only 3731 seats (FY 2013 data derived from the WIA Title II annual report to Philadelphia Works, Inc., November, 2014).
- **Inadequate Attention to Digital Literacy as a Fundamental Adult Literacy** - Digital literacy is a fundamental literacy. It is critical for any adult searching for job openings, communicating their credentials to potential employers, and receiving invitations for interviews. Once on the job, keeping up with the digital and information revolution is critical to building a career. The digital and information revolution continuously changes jobs, careers, and whole industries. To lack digital skills is to exist outside of our economy. While digital literacy can be taught in as its own subject matter, these skills are best improved and extended in the context of work or study. It is the practice of these skills and the extension of practice that occurs with frequent use that improves such skills.
- **Inefficient Instruction Wastes Precious Funds and Time** - We can't afford to waste a dime of the funds available for adult education; we can't afford to waste a moment of learners' instructional time; and we can't afford to let learners' desire for learning be squandered on long waiting lists, in tedious or ineffective classes, or on programs that don't lead to a clear and valuable result in employment or a credential. The lack of system from start to finish in adult basic education wastes everyone's time, motivation, and funding.
- **Adult Basic Education Needs to be Based on Researched Practices and Systems to Produce Education Results** - It is not necessary to invent entirely new systems of any kind, but it is necessary to adapt existing, high-functioning systems and researched methods to the adult low-literate population, to increase efficiency, share information, and provide a clear set of steps toward each participant's learning and employment goals.

In short, adult literacy in Philadelphia needed to use 21st-century systems and methods to produce adults ready for 21st-century jobs and careers.

The myPLACE™ Innovation

In 2013 the Commission set out to create a city-wide system that would increase the opportunities to learn for the adults who needed it while increasing the efficiencies and efficacy of the instruction available in all of the literacy agencies. The first step was to introduce the use of the same kinds of systems that higher education uses to register new students and enroll them in classes. We envisioned The Mayor's Commission on Literacy as the central "registrar" of a multi-campus, city-wide "open university" for low-literate adults.

We envisioned electronic learning accounts for all adult learners that administrators and teachers at each of dozens of participating literacy agencies. The agencies could use the system to track potential students as well as their own enrollments. By entering data such as attendance, grades, and course completions, agencies are not just creating a record for their own purposes; they are also creating a mobile transcript of attainment for the learners. The innovation we introduced was to use standard registration and enrollment management systems for a completely non-standard student body. The system for registration and enrollment management is called a Student Information System, or SIS.

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In short, adult literacy was a hand to mouth business for the literacy providers, and there was no system of any kind to create records on the learners and their learning outcomes across agencies. Most low-literate adults languished untaught, precious classroom seats went unfilled, multi-level classes spent instructional time inefficiently for all of the learners in the room, and no one knew what was happening to the learners after they completed a class or just dropped out of sight.

If The Mayor's Commission on Literacy was going to fulfill Mayor Nutter's charge to it to help adult citizens become employable, and if the Commission was going to spend public funds to upgrade adult education, we needed to do a lot better than this.

The Field of Adult Literacy Needed a Demonstration of High-Performing Instructional Technology

When I was appointed by Mayor Michael A. Nutter to lead the Commission on Literacy in 2011, I was fresh from creating higher education online degree programs that accelerated adult learning, and from national work as a grantmaker and dean funding and creating innovations in education at both the pre-collegiate and higher education levels using information technologies.

My research revealed that the field of basic adult education was unaware of the research and development work in high-performing adult online education. There were few online materials for low-literate adults below the level of GED[®] preparation (high school level), and what was available online as well as in print was proprietary, costly, and showed little evidence of using best practices for online learning. The adult basic education literature was then, and still often is, characterized by several negative—and untested—myths about the use of information technologies for instruction.

The first myth was that only “blended” learning would work for adult low-literate learners. In higher education, “blended” or “hybrid” courses are those that alternate in-person with online learning. In adult basic education, the term “blended” is generally used to describe classrooms that are fundamentally in-person at all times, but in which teachers use Internet-based or computer-based tools for some of the instruction. The chatter in the online forums and in the literature in adult basic education repeatedly asserts that “these” learners are highly needy of in-person support, and that a completely online environment would be unsuitable for them.

The only completely or mostly online learning opportunities I was able to find in the U.S. typically looked like online learning from the early 1980s: electronic workbooks that learners were meant to page through, with rather dreary exercises page after page. Nothing I saw took advantage of Web 2.0, and no one was using well-defined approaches to online learning that have been highly successful with adults in facilitated, cohort-based virtual classrooms. See, for example, Peer Review 13, no. 1 (AACU: Winter, 2011) and Terry Anderson, *Theory and Practice of Online Learning*, 2nd ed. (Edmonton: AU Press, 2008).

Even the more glossy online programs available commercially designed to help people prepare for the GED[®] tests were mostly souped-up versions of the electronic workbook. The field of adult literacy simply had never seen examples of well-wrought online courses that engaged adults in virtual cohorts. Many individual teachers used a variety of online tools for specific lessons or parts of lessons, often with considerable ingenuity, but no one had created a coherent curriculum that used high-functioning learning management systems, or built digital skills into academic learning.

Online learning is needed in the severely underfunded field of adult basic education for several reasons:

- Online cohort-based learning can accelerate learning;
- Online cohort-based learning is cost-efficient, and
- Well-designed online courses guarantee the quality and consistency of the instruction.

The online medium also captures all of the student work, allowing instructional staff to focus on each learner's needs while simultaneously moving a unified, socialized cohort through a specific set of competencies.

Accelerated learning occurs in cohort-based online classes if the curriculum is designed to ensure that each learner engages with the work and with each other several times a week. Each learner “talks” in class, and each learner does every exercise, as contrasted to in-person classes where the teacher does most of the talking, and only one class member talks at a time. In addition, all learners online read all of the other class members' shared texts, analyze, and respond to them. Well-constructed online classes enable the cohort to build a body of texts together, thereby themselves building meaning and knowledge. This kind of online learning is truly “learner-centered.”

The more each learner engages with the subject matter, the more and faster he or she will learn. By analogy, a runner who watches others run, or a violinist who listens to others play, may learn something through observation, but will not improve her own speed or ability to play until she practices herself. This is as true of reading, writing, and math as it is for sports or music, and it is why the online environment promotes all class members' frequent and lengthy contributions to problem-solving, analysis, argument, and production of work product.

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In addition, the Commission set about demonstrating how to use information technologies to advance adult learning based on everything we know about teaching adults in general, teaching online in general, and most importantly, teaching in the context of best practices recognized by both the U.S. and Commonwealth of Pennsylvania departments of education and labor. Our goal was our Mayor's goal: increasing the employability of the city's adults. The innovation was the use all of these researched practices to discover if they would work to advance learning for a non-standard population, the adult low-literate learners.

Registration and Enrollment Management: Documenting Adult Learners and Their Achievements

The vision was to create a city-wide electronic registration and enrollment management system that would in time be used by all adult literacy learners and providers in Philadelphia. The Commission's role is to manage the electronic infrastructure of a multi-campus or multi-department education institution. Each agency in the city is like a separate campus or department, providing particular kinds of classes, but sharing in the student body. Everyone who presents himself or herself at any of the campuses is enrolled in the same electronic system just once. When an account is created, the individual's demographic information is entered in full. If the individual has already registered, there is no need to collect that information again (except for updates), since every literacy agency will be able to access it from their own computers.

The registration creates an electronic account that includes a transcript, much like those in use at any college or school, including test scores, enrollments (active enrollments, and prior enrollments), attendance and grades (Pass, Incomplete, Withdrew, e.g.).

This first step is critically important, and the most significant social innovation we have introduced to adult literacy in Philadelphia. By sharing learner data among qualified education organizations, we are also establishing durable and unique learning records for each individual. Since inception one year ago, 3962 individuals have been registered in the SIS.

Assessment and Learning Coaches: the Creation of the myPLACE™ Campuses

To assure that all learners in the city get placed in the best class for them, we need to know their ability levels. Because not every literacy agency has professional staff able to administer standardized tests of ability levels, the Commission contracted with three outstanding agencies in the city to become city-wide intake, assessment, and case management campuses. We call these *myPLACE*™ campuses. Located strategically in three different parts of the city, they include *myPLACE*™ @ Community Learning Center (West Philadelphia), *myPLACE*™ @ Congreso de Latinos Unidos (North and Northwest Philadelphia), and *myPLACE*™ @ District 1199C Training and Upgrading Fund (South Philadelphia).

All calls to the Commission result in an immediate creation of a learning account in our Student Information System (SIS) and an "enrollment" in an appointment at one of the three *myPLACE*™ campuses. When the learner turns up at the assigned campus, he or she will be assessed, will complete the registration with full data on education and employment history, and other information pertinent to the ability to learn. The learner will also be assigned to a learning coach, and then, usually on the same day, enrolled in the first class.

The appointments are certain, and not guesswork. The appointments are listed in the SIS as if they were classes. While Commission staff is on the phone with the caller, that first and only time, we are looking at the SIS appointment "class" lists, to find the first available vacancy at the caller's campus of choice. I overhear conversations where staff might say, "I can't get you into your first choice of campus before a month from now, but this other campus can get you in next week; would you consider going there?" While on the phone, our staff set up the bare bones of the new learner's account, including name, address, phone, and date of birth, enough information to uniquely identify the individual.

The assessments used at the three *myPLACE*™ campuses are standardized tests that are approved for adult education by the Pennsylvania Department of Education, Division of Adult Basic and Literacy Education.

The scores are entered in the SIS for each individual, and the learning coach's interpretation of the scores (at what level the learner should be enrolled in the first class) is also entered in the transcript.

Enrollments

The data we enter in the learning accounts are vital to placement in classes. The Commission currently has 23 *myPLACE*™ partner literacy providers that list their courses in the SIS "course catalogue." Each of the partners and the three campuses can view the information in the system.

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This means no one needs to be tested more than once on intake, and no one needs to be on any waiting lists other than the SIS list, which will in time become the record for all adult learners in the city.

The advantage of a registration and enrollment management system is the ability not only to share data on individuals in real time with all the partner literacy providers in the city, but also to share data on available courses city-wide. This works just like a registration system that is used by any college or university. The 23 partner agencies have among them listed 701 classes in our SIS at this writing, and 2340 of our registered learners have enrolled in their classes through the *myPLACE*TM system since July, 2014.

The courses are listed by type and level recommended by the National Reporting System (NRS). These levels are the adult equivalent of elementary and secondary grade levels. For example, "Low Intermediate ABE," is the equivalent for adults of 4th- and 5th-grade adult basic education; "Pre-GED[®]" is the equivalent for adults of 7th- and 8th-grade studies. Each of the partner agencies lists their courses, locations, start and end dates, days and hours for class sessions, a brief course description, instructor's name, the course's NRS level, and the number of open seats. Any of the learning coaches in the *myPLACE*TM campuses can locate a course of a type and level with an open seat that is the best next step for the learner whose tested levels have just been interpreted.

In addition to the appropriate level and kind of course best for the learner, the learning coach also considers the geographical convenience and required hours and days of attendance that will work best for each person. Some courses are restricted to youth up to a certain age, while others are restricted by funders' requirements regarding poverty levels. The demographic data we collect during the registration process allows us, the campus learning coaches, and the receiving literacy providers, to assure that learners are being matched to available courses in all of these important ways. The genius of the system is that it takes all the guesswork out of getting the right course for the learner at times and in places best for them.

Another distinct set of advantages for the literacy providers is that they are guaranteed full classes of learners appropriate for their courses. A "GED[®] Preparation" class can now be guaranteed to include only learners functioning at a high 8th-grade or higher level. Even better, agencies can, and have, looked in the system and found large numbers of learners at, for example, below 3rd-grade level, and organized new classes just for them. Funding permitting, we are at last moving to a system that enables the literacy agencies to work in concert and leverage their funding sources to address the needs of learners city-wide rather than just serving as best they can those who happen to walk into their agency. This will in time reduce the number of "multi-level" classes city-wide, improve instruction for everyone, and focus course offerings on city-wide needs.

No More Waiting: A Guaranteed Class for Everyone Who Comes Forward for Adult Education

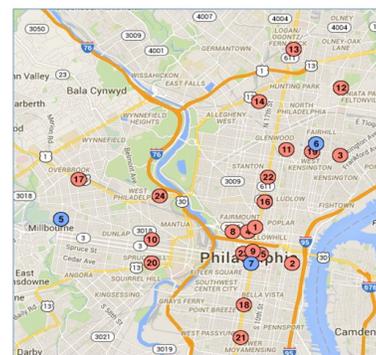
Momentum is critical for the low-literate population, as it is for all adults who return to learning at any level. Getting up the courage to ask for help, and even seeing oneself going back to school, are major steps which we don't want to waste with delays or waiting lists. Courage can dissipate rapidly when would-be learners lose heart at being placed on waiting lists for months on end.

This is why the Commission created an online course for almost all adult learners that they can enroll in immediately after the intake and testing is over, without waiting. The course, *Introduction to Adult Learning and Careers*, is a prerequisite for adult learners who score at least at the 4th-grade equivalent level on their assessments and for English language learners at the low advanced ESL level.

These are levels at which they are reading English well enough to do an online course. The course takes the place of the lengthy in-person orientations almost all literacy providers run, and guarantees that everyone who completes it has the same set of learning skills already in their mental tool-boxes.

Introduction to Adult Learning and Careers accomplishes the following goals:

- An **immediate enrollment**, no waiting, and guaranteed. This is a self-paced online course, allowing each learner to enter it at any time, and over as long a period of time as the learner needs to work through it. The learners take the course in their home *myPLACE*TM campus computer lab, with lab assistants on call to provide help, and where learning coaches can observe learners' skills and barriers to learning first-hand. These observations are important guidance to the subsequent enrollments for each individual.



3 myPLACETM campus and 23 partner agency locations February, 2015

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- The contents begin with a simple self-assessment of **computer skills**, which directs each learner to at least three lessons that advance from the self-assessed level. Exercises later in the course continue to add new computer skills, including use of various features of Word, email, and Internet search skills.
- **Adult study skills:** learners plan when and where to find time in a busy adult life for the 10-15 hours a week they will need for learning. This part of the course is fundamental to helping adult learners understand the seriousness of the learning they are embarking on, and results in considerably improved retention in all subsequent courses. One of the myPLACE™ campus agencies has used the entire assessment and introductory course process for all of their new learners, and is seeing an uptick in learner retention of as much as 25% in their subsequent face-to-face courses (as reported to The Mayor's Commission on Literacy at their February 3, 2015 meeting).
- **Job search and career exploration:** Using a variety of online tools that are also used in the local one-stop employment centers, each learner begins to think about career options based on previous or current employment, skills and interests
- Creation of a **professional résumé** uses the computer and research of earlier parts of the course, and is saved to the learner's new online file storage. By creating a learning account in our learning management system, we are also providing each enrolled learner with cloud storage for documents essential to their successful job search.
- Creation of a **learning plan and career pathway plan**, which learners are shown how to submit as an assignment in the course and save in their learning account file storage. This document is an all-important tool both to guide the learner's enrollments over the coming year, and the work of our partners in the one-stop employment centers as they assist our learners to find jobs and job training.

The course also teaches learners to read, analyze and apply written directions, and encourages learners to complete their work in a timely manner. All of these skills are basic to both learning and employability. An employability skills rubric is used to guide the learners' work in the course and to analyze each learner's performance in the class. The rubric is based on the newly published (2014) [Employability Skills Framework](#) created by the U.S. Department of Education's Office of Career and Technical Adult Education: <http://cte.ed.gov/employabilityskills/index.php/framework/>

Learners' responses to the course in their course evaluations are highly positive, with the majority of learners ranking highest the outcomes of improving their computer skills, learning the importance of gaining computer skills, producing a professional résumé, widening their horizons through the career search, and growing confidence in themselves as learners. Some learners who were referred to the Commission after performing poorly on community college placement tests, returned to retake those tests after completing only this introductory course, and gained entry successfully (data available upon request from The Mayor's Commission on Literacy).

Upon completion of the *Introduction* course, the learner is enrolled by the learning coach in the next appropriate content course at the level indicated by the assessments and the coach's observations of the learner's ability to work independently. Learners have been placed in classes at either their home myPLACE™ campus or at one of the 23 myPLACE™ literacy partner institutions around the city. We have not had to turn away learners, and while there may be a brief wait until a class begins, the learner *knows* that he or she has a place in that class. Learners who successfully complete the *Introduction* course emerge from it with tremendous gains not only in skills that are meaningful to them, they are very proud of their new, professional-looking résumés, their horizons have broadened from just a job to the idea of a career with a future that matches their interests and talents, they understand that learning is work that they must and can do, and they have a new confidence in themselves as learners. These are skills and attitudes to their own work product that are fundamental to their success in learning and in life.

The Online Option and Why We Had to Do It

The majority of adult learners are familiar with face to face instruction, lack confidence in their own abilities to learn, and are gun-shy about education as a result of a lifetime of negative learning experiences. While *Introduction to Adult Learning and Careers* is designed to help these adults see themselves as capable learners, including becoming comfortable with digital skills and online learning, learners also worry that their skills are inadequate to taking courses online and prefer the familiarity of an in-person classroom setting. Nevertheless, a growing number recognize the convenience of taking online classes, and the benefits of continuing to improve their computer skills while at the same time learning to read, write, and do math. We have steadily increased enrollments and in the most recent term these jumped from 33 to 48. Since July, 2014 383 adult learners have enrolled in fully online reading, writing and math courses.

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The Commission created online courses to meet several needs:

- Online courses can enroll learners in a **unified cohort** by level of ability regardless of where they live or work. All they need is a device—even a smartphone—and the Internet or a data plan, to access their courses.
- Well-designed online, cohort-based courses work well for adult learners because of the **convenience** of doing the coursework at times of the day and in settings most convenient for them. Shift workers, people who cannot attend classes held during working hours, and adults with family and community responsibilities all have difficulty attending weekly classes at set times for months at a time. In general, a missed class can be a serious setback for any adult learner, who may drop out for fear of being too far behind to ever catch up again. **Online classes can be “made up” much more easily** than in-person classes, and prepared for easily, through a discussion with the facilitator. Online learning is always “there,” and cannot be “missed.” The worst that can happen is a small point penalty for late submission of work.
- Online courses can be **fully designed according to specific needs and best practices** as models for adult education.

The most important need we saw was the need to instruct adults at the Intermediate level as defined by the National Reporting System for Adult Education Programs (NRS). The NRS Low Intermediate level is the equivalent of low 4th-6th grade reading, writing and math, and High Intermediate is the equivalent of 7th- 8th-grade. By the time we had recorded assessment scores of adults city-wide for six months, we had enough data to prove what we'd always suspected, that 67% of the adults who came for help were testing at the Intermediate level, and mostly at the lower end of it. We had city-wide data for the first time in the Commission's 26 years in existence.

Of all the 3115 people tested over a ten-month period in 2014, the Commission found only 5% reading at the low secondary level or higher, and only 3% doing math at that level. Most funders of adult basic education want to see a concrete education gain, preferably attainment of the GED®, entry into post-secondary education, or employment within a one-year grant period, but only this tiny percentage of about 4% of the populace are in a position to fulfill such requirements. The 67% were going unserved, while many funded agencies were scrambling to find learners at the highest—and scarcest—levels.

No high-quality online instruction was available in the U.S. for adult learning at the Low Intermediate level of 4th-6th grades where the vast majority of our learners needed instruction. It should be no surprise that most adults faltered over fractions and decimals when they were in elementary school and never developed confidence in their ability to handle this or higher levels of math. In reading and writing instruction, as well as math, we needed to look ahead to the common core standards for adults, called *College and Career Readiness Standards for Adult Education* (U.S. Department of Education, Office of Vocational and Adult Education, Washington, D.C., 2013). This document was published in April, 2013, just before The Mayor's Commission on Literacy began designing our online curriculum, and which we therefore used to frame the learning outcomes for our courses.

The standards, known as CCRS, are critically important to adopt as a curriculum framework because the new 2014 GED® tests abilities that are defined in CCRS. Adult learners must be able to demonstrate applications of concepts as described in CCRS in all subjects. Education that leads learners from 4th grade levels to low secondary levels (when they begin to prepare for the GED®) must look very different from what has been taught in adult basic education until now. For example, algebraic and geometric concepts are taught along with arithmetic starting as early as 4th grade levels. Approaches to reading, analyzing, and responding to complex texts similarly are taught beginning at the earliest levels and gaining in complexity and expected accomplishment throughout.

Adult learners will be expected to perform at a high level on the GED®, and will have a great deal of difficulty preparing for those tests if they have not learned the concepts and applications of those concepts all along.

Our course designers were challenged to create courses at 4th and 5th-grade levels that would allow the learners to produce work demonstrating their achievement of the standards in Level C (Low Intermediate) of the CCRS, and to do so in two, six-week courses for mathematics and another two, six-week courses in reading and writing. Based on a very small sample of post-testing done to date, plus analysis of the learners' work product in the courses, we have achieved this goal. Learners have shown full-year gains in as little as one, six-week course. A broader evaluation based on post-testing is under way at this writing, which will cover all enrollments in all of our online courses at the conclusion of the current term (March, 2015). We hope to publish a follow-up notice here in the *Philadelphia Social Innovations Journal* when those data have been collected and analyzed.

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The online courses, all of which were piloted prior to July, 2014, are offered six times annually in regular six-week terms. They are:

- Foundations of Reading and Writing 100 (first half of Level C, CCRS; NRS level 4.0-4.9)
- Intermediate Reading and Writing 101 (second half of Level C, CCRS; NRS level 5.0-5.9)
- Foundations of Mathematics 100: Number Sense (first half of Level C, CCRS; NRS level 4.0-4.9)
- Intermediate Mathematics: From Fractions to Decimals (second half of Level C, CCRS; NRS level 5.0-5.9).

The NRS equivalents have more to do with how we interpret the assessment scores than the contents of these courses, which go considerably beyond what the NRS levels expect in these subjects. This is why we expect to see full-year gains after as little as six weeks of study.

We also see those gains for several other reasons, among them the intensity of the work expected from each learner and the learner-centered instruction; the outstanding quality of the facilitators and learning coaches, who reinforce learners' successes and keep their motivation at high levels; and the fact that the instruction is always there, online, in the learners' accounts, for them to go back and review at any time, unlike instruction that only exists during a face to face class.

In addition to the innovation of using a higher education online course model for adults who are low-literate, we also apply other aspects of "andragogy," or the philosophy of adult education, in our curriculum. Adults tend to be impatient of instruction that is not obviously of immediate, practical value. All of our courses therefore contextualize instruction in applications to the world of work in three major industry clusters that have substantial numbers of entry-level jobs in the Philadelphia region based on research by the local workforce investment board, Philadelphia Works, Inc.

Each lesson and exercise is offered with examples, readings, and problems contextualized either in the health care, manufacturing, or logistics and transportation industries. Learners can select which of the readings or problem sets to do based on personal preferences; all learners, however, are learning the same reading, writing, or math concepts, regardless of their choice.

We introduced a major innovation in the courses that we believe is unique to our online curriculum, which is that both in writing and especially in math, what is important is not finding the correct answer, but how the learner arrives at the result. The unique contribution to online math instruction provided by our math courses is that the learners are able to "show their work," and not just the answer. No other online math instructional programs that we researched allow the students to show their work so they can be guided toward success, yet this is the essence of effective education.

"Showing the work" is repeated in the math courses both in the problem sets, quizzes, and end-of-module challenges every week and throughout both courses. "Showing the work" in the reading and writing courses is repeated each week as well, through facilitator feedback, in all of the discussions, and peer review.

All four of the courses also continue to teach computer skills and Internet research skills. Before taking their very first online course, all of our online learners must take a short, self-paced online course called *Online Learning Skills*. This course allows learners to explore the learning management system we use, including navigation, how to submit their work, how to store work in progress as well as finished submissions in their personal course files, how to interact in discussions, and how to seek assistance from their facilitators and each other.

In addition, learners plan when and where they are going to study online (whether at public computing centers, libraries, or at home if they have the right equipment and broadband). The reading, writing, and math courses also provide standard apparatus at their start that reviews these matters.

The four content courses constantly extend the learners' ability to use basic office applications, assuming Microsoft Office is available on the computers they use. If not, they also receive information on substituting other open source, business-standard programs. Part of what they are learning is to become familiar with the applications in use in most business settings, a set of skills they will find of great value no matter what kind of job they apply for or get in the end.

We even use features of Word as teaching tools. We teach learners how to use spell check and grammar check not only on their final drafts of work to be submitted for grades, but also before posting in the discussions.

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Educating Philadelphia's Job Seekers for 21st-Century Jobs (continued)

The highlighted grammar and spelling programs identify the errors and allow the learners choices for corrections. Learners must think about which choice best represents what they meant to say, and through this process both learn to recognize the problems and their possible solutions. Learners who heed the constant reminders in the courses to use spell check and grammar check show demonstrable lessening of errors.

All of the exercises in the courses are graded, and major exercises, usually end-of-week products, are graded based on rubrics. We teach the learners to review the rubrics prior to the start of their work, and again as a tool for revision prior to handing in their work. Rubrics are a valuable tool for learners to self-assess whether they have addressed all of the features on which they will be graded and the characteristics required for highest-scoring grades. This also teaches learners to understand the value of revision and helps them internalize working towards excellence in their work product.

Learners earn points for each piece of completed work in each course for 80% of their final grade. The remaining 20% of the grade is based on employability skills. These are skills that are highlighted on the *Employability Skills Framework* (U.S. Department of Education, Office of Career and Technical Adult Education, first published 2014, <http://cte.ed.gov/employabilityskills/index.php/framework/>).

The rubric we created for the employability skills features those employability skills that are taught through practice in our content courses and the *Introduction to Adult Learning and Careers*, including completeness and promptness of work, taking responsibility for the quality of the work, professional interactions with their colleagues (discussions and group problem solving, peer review, e.g.), and reading, analyzing, and applying directions. These skills are demonstrated throughout the courses by the learners' submitting work on time several times a week and every week, and their ability to do the assignments fully and correctly.

Learners' responses to each other's discussion posts, which are required, are carefully guided in every discussion and throughout all the courses. Learners are asked to write a particular number of sentences to introduce their initial posts, in the body of their posts, and in the conclusion, and they are asked to address specific kinds of information in each of those sentences. When responding to other posts, they are guided to "say something positive about the other learner's post, and address the writer by name," and then asked either to comment, add something to what the other person said, or ask a question (or all of the above). These guided discussions result in substantial writing exercises that build teamwork, professionalism, and learner-generated knowledge into the cohort's interactions with each other. Since the directions are basically repeated eighteen times per course, learners quickly internalize how to structure their posts into coherent paragraphs and logical, expressive essays. The results are clearly visible in contrasting Week 1 discussions with Week 6 in each course. Most of the writers begin with posts rife with sentence fragments, poor diction, run-on sentences, and lack of organization, but end the course with well-formed paragraphs and essays.

To date, 383 adult learners have enrolled in the online content courses. In the reading and writing 100-level courses, we are seeing an average pass or pass with distinction rate of 64% of those who complete, and an average of 50% with the pass or pass with distinction in math. A pass is a grade of 80% or higher. In the 101 level reading and writing classes we have seen even higher pass rates, including a term in which a cohort achieved 100% passes or pass with distinction (90 or above). More in-depth data will be forthcoming based on larger sample sets.

The myPLACE™ Innovation Works, It is Cost-Effective and It is Scalable

One of the beauties of online instruction and an online registration system is that all data are captured and available at all times. Even though we have not yet post-tested learners on a large scale, we have the evidence of learner work, learner evaluations, facilitator and learning coach feedback, and the actual learner work products as the basis for our analyses.

As described above, setting learner discussion posts side by side from the first week and final week of each reading and writing course shows striking advances made by all online learners who complete their assigned work. In the math courses, the careful construction of the course allows us to see that those who started with place value at the beginning of the first course are able to solve for x , measure angles, and do multi-operational math at the end. Learners in the 100-level writing course tell us often what this learner said:

I would like to become a better writer, within the last six weeks I've learned the basics of writing, but I know I can do way better. I had a lot of help from my peers and instructors. Following the directions to each course was kind of difficult at first but I got the hang of everything, and it was very helpful for my future.

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Educating Philadelphia's Job Seekers for 21st-Century Jobs (continued)

And most importantly, learners demonstrate they have acquired the most important learning of all: review, revise, and improve before submitting.

The registration system also provides real-time and very valuable data about retention and persistence of learners. In our first year of operation, 21% of online learners persisted to a second online course, and of those 16% persisted to a third, of whom 71% persisted to a fourth. We do not expect a learner to exclusively do either online or face to face classes, but we are very encouraged that these data show that learners are experiencing success and choosing to continue online. Our goal going forward is to track and improve persistence from course to course for all learners, both online and face to face.

Strikingly, 64% of online learners completed their courses, while in face to face managed enrollments (meaning courses that have a set start and end date), the average retention is only 40-45%. And, most strikingly, along with the *Introduction to Adult Learning and Careers*, our innovations have increased the number of publicly-funded "seats" for adult literacy by 39% and at less than half the cost (\$625 per enrollment, vs. \$1155 for comparable state-funded face to face instruction: based on WIA Title II funding in Philadelphia as reported to the Philadelphia Works, Inc. Board of Directors, November 2014). As more learners enroll in online courses, the cost per enrollment will continue to drop

The registration system and learners' experiences in the courses tell us everything we need to know about improving instruction and access to education, and helping learners achieve not just the goals they brought with them when they first called us, but the life-changing goals they develop as they become more knowledgeable, more confident learners.

myPLACE™ has transformed adult education in Philadelphia. By adapting instructional technology to the adult low-literate needs in Philadelphia, we have gone from ignorance to firm knowledge of who the learners are, what they need, and how to best serve them to keep them engaged in education until they can move ahead with their lives.

We are in the process now of creating *myPLACE™* in the Philadelphia Prison System (PPS), to assure that those who return to the community will do so with their education advances inside prison recorded in their SIS transcripts. We will re-enroll as many as possible upon their release. We are also in the process now of linking *myPLACE™* initial registration for assessment in the one-stop employment centers and assuring that all job seekers who would benefit from an education boost are enrolled.

In development at this writing is a High Intermediate (CCRS Level D) course that will focus on reading, writing, and math skills that will boost learners at this level on concepts that are tested by employers in a variety of industries, and entry tests for apprenticeships, job training programs, and placement for community college entrance. Fully 39% of the registered learners in our system have the high school diploma or equivalent, but either never learned the concepts on these high-stakes tests, or have forgotten them. The new course will be self-paced, with each individual guided to complete a specific group of its modules based on diagnostics and the type of high stakes test they will encounter. Our goal with this course is to improve success rates on the tests, and ultimately to use the course in place of some of these tests. We will also use the course to bridge to GED® preparation courses.

We look forward to working with other cities, counties, and systems anywhere in the country who would like to create a *myPLACE™* @ "*TheirPLACE*." The program concept, the online curriculum, and the software can expand to accommodate sub-users; all aspects of the program can also be tailored for specific users.

For example, the courses have all been scrubbed to accommodate the security needs inside the Philadelphia Prison System, resulting in special versions of the courses to offer there. Locales that might want new industries featured in the course readings and assignments aligned with their local job openings will spur us to enrich our curriculum with new choices for their learners and our own. The program is not a package deal, but highly flexible and adaptable. The beauty of it is also that the cost per person of raising education levels will continue to go down as the enrollments grow. There is no theoretical limit to how many people can be educated using these systems.

Every single adult whose improved knowledge and skills results in employment and a career will return the investment we make in them to their families, their communities, and to national productivity.

View this article at: <http://philasocialinnovations.org/journal/articles/what-works-and-what-doesnt/712-educating-philadelphia-s-job-seekers-for-21st-century-jobs>