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"Keeping College Within Reach: Improving Higher Education through Innovation"

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I am Pamela Tate, President and CEO of the Council for Adult and Experiential Learning, also known as CAEL. CAEL is a national non-profit organization that is focused on the adult and nontraditional learner. We work with colleges and universities on their programs and services to adults; we connect employers, public agencies, and postsecondary institutions to advance the education of the workforce; we work with states, systems and consortia on solutions for postsecondary learning and credentials; and we educate the public and public officials on what is needed to remove the barriers to lifelong learning and adult degree completion.

Thank you for inviting me here today. I have been asked to provide you with information about prior learning assessment, also known as PLA. Some definitions may be helpful:

- *Prior learning* is a term educators use to describe learning that a person acquires outside a traditional academic environment. This learning may have been acquired through work experience, employer training programs, military training or experience, independent study, non-credit courses, volunteer or community service, travel, or non-college courses or seminars, many of which are offered on-line. Some of this learning is equivalent to college-level learning.
- *Prior learning assessment (PLA)* is the process by which an individual's experiential and other extra-institutional learning is assessed and evaluated for the purposes of granting college credit, certification, or advanced standing toward further education or training.

PLA methods have been used in U.S. colleges and universities for more than forty years. So while PLA itself is not a *new* innovation, it is a tool that is growing in importance as other innovations in higher education have emerged.

The experiences of the students themselves tell the story. For example:

- A Navy veteran was able to use his military and job training to earn credit not only through American Council on Education credit recommendations, but also through a prior learning portfolio, toward a bachelor's degree in Industrial Manufacturing Engineering. To earn credit for a course in Safety Engineering, for example, he drew on learning in subjects such

as personal protection equipment and fire fighting; this is learning that he had acquired in basic training and as a Safety Observer aboard the USS Theodore Roosevelt. He earned college credit for a total of eight courses, or 24 credits, through portfolio assessment.

- A 40 year old married mother of two had never graduated from high school because she had to drop out and get a job in order to help take care of her younger siblings. She started working as a janitor at a transportation company as a teenager and worked her way up to the level of middle manager, a position in which she was responsible for managing servers and analyzing data. She got her GED in 1999, was laid off, and a few years later started taking college classes. She struggled through remedial coursework and progressed to taking regular coursework, studying on and off for 11 years while also working part time jobs. When she learned about PLA, she enrolled at a college that accepted PLA credits. Based on what she had learned from her work experience, she earned six credits from portfolio assessment for two business courses and six credits through a CLEP exam. This past spring, she graduated with a bachelor's degree in communication studies.

The timing is right for increasing student access to PLA given the strong national focus on making college more affordable, promoting degree completion and increasing educational attainment rates—to support our nation's economic competitiveness. We know from the work just released by Georgetown University's Center on Education and the Workforce that, at the current production rate in higher education, “we will fall 5 million short of the workers with postsecondary credentials we will need by 2020.”<sup>ii</sup>

PLA is a proven strategy that should be considered as one important way to support students' degree completion because it addresses two important issues: first, PLA addresses the biggest barriers to education for working adults, which are *time* and *money*; second, because PLA is a critical tool for helping mobile, working adult students who are taking advantage of the new world of higher education that is emerging.

- **Addressing the barriers of time and money.** One in five U.S. adults – over 43 million people – have some college credits but no degree.<sup>ii</sup> These are typically working adults who may have left college for a multitude of reasons but the biggest barriers are always time and money, with the money issue leading some students to incur high levels of debt. PLA saves students time and money because by demonstrating what they have learned, they can receive credit for courses in subjects they have already mastered. They do not need to spend their time in those courses, nor do they need to pay full tuition for those courses. They can advance to higher level courses sooner and accumulate the credit they need for a degree or certificate more quickly. This only makes sense: why should a student's own money or an employer's tuition program (or, by extension, the federal government through financial aid programs) pay full tuition for courses in subjects that the student already knows?
- **Addressing the new world of higher education.** PLA is also a tool that can help students who are taking advantage of the new and free open educational resources such as iTunesU; the new, massive open online courses, also known as MOOCs, offered through EdX, Coursera, Udacity and others); competency-based degree programs; and all of the other learning opportunities available to them in this new world of internet-based learning that is transforming higher education before our eyes. PLA helps by enabling students to validate

that learning for college credit that can count towards a credential or degree – at a much lower cost.

As a supporter and promoter of PLA since 1974, CAEL has seen dramatic growth in the interest in PLA in recent years – from individual institutions, state systems, employers and federal leaders. We are also seeing evidence of public support for PLA. In a recent national poll conducted by Lumina Foundation for Education and Gallup, 87 percent of Americans responded that students should be able to receive college credit for knowledge and skills acquired outside the classroom; and 75 percent said that they would be more likely to enroll in postsecondary education if they could receive credit for what they already know.<sup>iii</sup>

Yet PLA is still not available and accessible to all students, even though it should be part of every program of study for any student who has college-level learning acquired outside of traditional academia. We need two changes: infrastructure to provide PLA at scale, and federal and state policies – particularly federal financial aid policies – that support PLA.

The infrastructure problem is that not every institution offers the full range of PLA options, if at all. My organization, CAEL, has been addressing that issue by working with individual colleges to develop PLA programs and practices over the past several decades; by working with state leaders on creating policies that support and encourage PLA statewide; and by offering a national online PLA service, LearningCounts.org, in order to bring PLA to the millions of adults with some college but no degree, expanding the capacity of postsecondary education.

The main policy issue is that, currently, federal financial aid programs like Pell grants and federal loans support only traditional time-based learning. The financial aid system under Title IV is not structured for an outcomes-based and assessment-based approach to postsecondary completion. It excludes assessment of prior learning fees, even though these fees significantly reduce the student's overall student loan debt or the amount to be covered by Pell grants or other educational benefits.

In this testimony, I am providing some additional information about PLA history, current practices, quality standards, and, most importantly, evidence of its value to students in the completion of credentials and degrees. The committee will see that PLA is a proven and valid strategy for supporting mobile and nontraditional learners, and that it does not make sense that our current financial aid rules and regulations create disincentives for students to use PLA. The financial aid system needs to change so that it covers the assessment of learning for college credit or other measures of progress towards a degree—with appropriate safeguards for quality assurance. This change in policy would mean that our financial aid system would support learning, and credential and degree completion, as its goal and not time spent in a classroom.

## **A Brief History of PLA and the Adult/Nontraditional Learner**

CAEL has been supporting and promoting the use of PLA in postsecondary education since the 1970s, a time when postsecondary education began to see a surge of adult enrollment. It is probably not a coincidence that this surge began around the same time as the initial signing of the Higher Education Act (HEA) in 1965. The support from the HEA and other federal programs made community colleges and need-based financial aid available to more people than ever before, and many adults started taking advantage of that increased access.<sup>iv</sup>

Some colleges and universities welcomed adults initially because the adult enrollments helped them meet their enrollment goals, so new programs for adults began to emerge. In addition, pressure from legislatures and the public on postsecondary education to become more accountable for performance led to new approaches that assessed what students learned rather than measuring what was taught, including standardized tests like the College Level Examination Program (CLEP) which the College Board had started administering in 1967; and the New York Board of Regents' Regents External Examination Program—now called UExcel—which had been launched in the 1970s.

With funding from the Carnegie Corporation and the Education Foundation of America, the Educational Testing Service and the College Board launched a three year project in 1974 to explore the following question: “Is it possible to assess, validly and reliably, learning acquired outside the classroom for the award of college credit?” At the conclusion of that project (which also effectively served as the launch of CAEL), the findings were that yes, it is possible to conduct valid and reliable assessment of learning gained from work or life experience, with the proviso that appropriate procedures and processes for evaluating that learning are in place.<sup>v</sup>

Today's learner is, of course, very different from the learner of the 1960s and 1970s, and the educational landscape is very different as well.

- **Today's Learner.** When most people think about college students, what comes to mind is the 18-22 year old who attends college right out of high school. Yet, that college student is, in fact, the minority of enrollments these days. Today, students age 25 and older now account for more than 40 percent of all undergraduate enrollment.<sup>vi</sup> Yet age is not the only differentiator when we look at today's nontraditional students. In 2002, the National Center for Education Statistics defined nontraditional students as those who:

- Have delayed enrollment in postsecondary education beyond the first year after high school graduation
- Attend part time
- Are financially independent from their parents
- Work full time
- Have dependents other than a spouse
- Are a single parent
- Have no high school diploma or GED<sup>vii</sup>

Analysis by the NCES found that more than half of all enrolled students were financially independent, 73 percent had at least one of the above characteristics, and 56 percent had two or more characteristics. In fact, because of these remarkable statistics, there is some discomfort among some postsecondary education leaders about even using the term “nontraditional” since that group is now essentially the norm.

- **Student Mobility.** Today's learner is also more mobile than ever before.<sup>viii</sup> It is now very common for students to earn college credits from two or more institutions. In 2006, analysis showed that almost 65 percent of all undergraduate students attended more than one institution, and 26 percent attended more than two.<sup>ix</sup>

- **Changing Educational Landscape.** Student mobility is no longer just about attending more than one *postsecondary education institution*. Now, mobility of learning experiences extends far beyond the borders of what we know as traditional colleges and universities. There have, of course, always been opportunities for people to learn outside of the classroom. Public television has long offered educational programs, libraries have offered free books on a range of topics, and the workplace has given people countless ways of learning-while-doing. In recent years, however, we have seen the number and range of online learning opportunities explode. Colleges and universities offer online courses, but so do new low-cost providers like StraighterLine, no-cost providers like the Saylor Foundation, and the new entities named earlier that are offering massive open online courses, or MOOCs (many of the most well-known MOOCs are offered in partnership with the nation’s elite institutions such as MIT, Harvard, and Stanford).

We are also seeing the rapid growth of other approaches to learning such as competency-based education, which shares with PLA this important concept: that *what students know and can do is far more important than where or how they learned it*. Competency-based degree programs work this way: the postsecondary education institution defines a degree not in terms of the number of credit hours in various topics, but rather in terms of the competencies that students are expected to demonstrate for graduation. The institution then provides access to learning experiences, which can look like traditional courses or could be learning resources available for free online; finally, the institution assesses the student’s competencies. These assessments should go beyond examining whether a student has acquired knowledge by also requiring that students demonstrate how their learning can be applied.

Even more so than in the 1970s, PLA is an ideal tool for today’s learner in today’s educational landscape. Today’s learner has acquired learning through years of work and life experience and independent learning opportunities online that, if demonstrated to be at the college level, can and should count toward that learner’s education. Today’s learner is also facing dramatic changes in the kinds of learning opportunities available to them. PLA allows these learners to get credit for what they learn, without regard for how or where they learn it.

## Current PLA Practices

### ***PLA Methods***

The amount of credit (or other recognition) students can earn for their prior learning can be determined through several different types of assessments. There are four generally accepted approaches to PLA:

1. **Individualized assessments.** In this method, students prepare a portfolio of their learning from a variety of experiences and non-credit learning such as online courses. Then, faculty with appropriate subject matter expertise evaluate the student’s portfolio to determine a credit award.
2. **College faculty-developed exams,** also called “challenge exams,” allow students to earn credit by taking final examinations faculty create for courses offered at a given institution.

3. **Standardized exams** such as:
  - Advanced Placement Examination Program (AP exams)
  - College Level Examination Program Exams (CLEP exams)
  - Excelsior College Exams (UEExcel)
  - The DANTES Subject Standardized Tests, or DSST Exams
  
4. **Evaluated non-college programs.** The National College Credit Recommendation Service (NCCRS) and the American Council on Education (ACE) conduct evaluations, for a fee, of training that is offered by employers or the military. Many employers also work directly with local postsecondary institutions to evaluate their companies' training. The result of these evaluations is credit recommendations for anyone successfully completing that training.

### ***PLA and Current Practice in Postsecondary Education***

Most colleges and universities have some policy in place for awarding credit for learning that takes place elsewhere, but the policies are rarely comprehensive and they vary widely; and few institutions publicize – much less track – the extent to which credit for prior learning is awarded. In addition, the National Center for Education Statistics (NCES) does not currently collect detailed information from institutions regarding their PLA policies and practices. We do know anecdotally and from past survey research that there is great variability in what institutions do offer, when they offer PLA at all. For example, from a survey CAEL conducted of PLA-providing institutions in 2005-2006, we know that most PLA-accepting institutions accept course credits from AP exams and CLEP exams. However, a different subset of institutions accepts ACE credit recommendations, and yet another subset accepts credit through portfolio assessment.

Some institutions – particularly those whose missions focus on the adult learner – offer a full range of PLA options and some institutions have made a concerted effort to fully integrate PLA into their comprehensive approaches to serve adult learners.

Some states have established – or are working to establish – system-wide PLA policies and practices. Both the Florida and Pennsylvania state systems, for example, have policies that encourage PLA across all institutions, and Tennessee has developed statewide policy recommendations for PLA across all of its public institutions. <sup>x</sup> Vermont State Colleges has taken a different approach by offering PLA in a coordinated way among a group of institutions. These system wide approaches to PLA are noteworthy in that they formally recognize PLA's value and encourage its use within and across institutions. These states have chosen PLA as an important strategy for re-engaging adults in postsecondary education. Without this strategy, states recognize that given the changing demographics of the workforce, they will not have the credentialed workforce required for attracting new employers and fostering economic development.

### **The Value of PLA for Adult and Mobile Students – and for Our Nation's Economy and Competitiveness**

As noted earlier in this testimony, the major impetus for promoting PLA is the fact that the nation's economic future will depend upon an educated workforce. Georgetown University's Center on

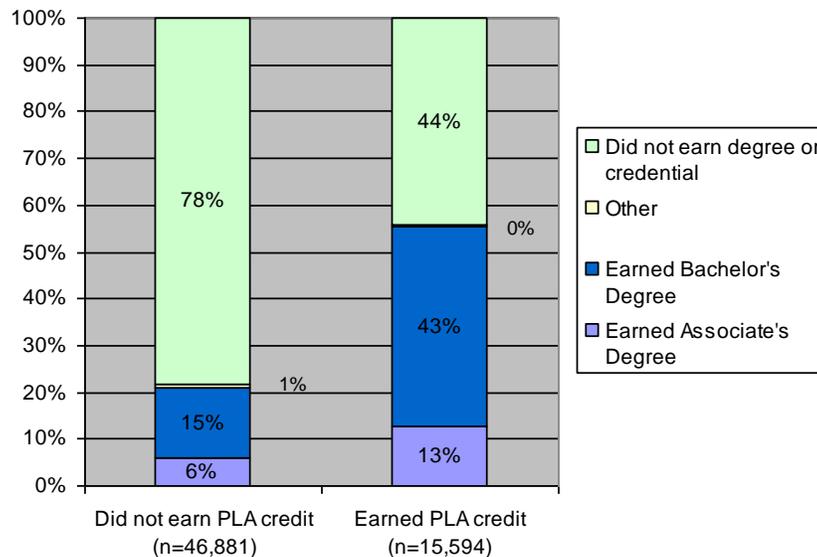
Education and the Workforce has noted that by 2020, 65 percent of all jobs in the economy will require postsecondary training and education beyond high school, and that, at current rates of production, we will be falling short of this need by 5 million workers.<sup>xi</sup> For this reason, Congress must take this opportunity of the reauthorization of the HEA to encourage greater postsecondary attainment and degree completion.

Prior learning assessment obviously saves students time and money in that the students do not need to take courses in subjects they already know. In terms of time, CAEL research of adult learners at 48 colleges and universities found that the average number of credits earned through PLA is 17, which is equivalent to more than a semester, or 4-6 months, for a full-time student.<sup>xii</sup> This time savings can be substantial for working learners who are attending school part time. We know that the longer an adult remains in college, the more likely it will be for life to “get in the way” and cause the student to drop out or otherwise stop their progress. In terms of money, CAEL research suggests that adult students who earn 15 credits through PLA can save from a low of around \$1,605 at a large public university to a high of around \$6,000 at other institutions.<sup>xiii</sup>

In addition, PLA advocates and college administrators have long professed that PLA can motivate students to persist in their studies and earn their degrees. Perhaps it is motivating because the finish line is that much closer, but there may be another factor as well. Awarding PLA credit sends students a message that not only *can* they learn at the college level, but also that they *already have* learned at the college level. That can be a powerfully motivating message to hear.

There is strong evidence of a relationship between PLA credit-earning and degree completion. In 2010, CAEL conducted a study of more than 62,000 adult students at 48 postsecondary institutions, comparing the outcomes of students with PLA credit to the outcomes of students without such credit. Over a seven year period, PLA students were two and a half times more likely to have earned a degree than students without PLA credit (56 percent compared with 21 percent) (Figure 1).<sup>xiv</sup>

**Figure 1. Degree Completion by PLA Credit-earning**



Source: Rebecca Klein-Collins, "Fueling the Race to Postsecondary Success: A 48-Institution Study of Prior Learning Assessment and Adult Student Outcomes" (Chicago: CAEL, 2010).

CAEL also examined the student academic outcomes by different demographic groups and found similar patterns of degree completion regardless of the student's age, gender, race/ethnicity, income level, GPA, size of institution, and several other characteristics. These positive findings suggest that awarding college credit for significant extra-institutional learning is an effective way to accelerate degree completion for nontraditional students.

## Quality Standards for PLA

Leading institutions offering PLA recognize that there is a need to ensure that quality standards are in place for the assessment of a student's learning that leads to the award of college credit. Many adhere to the *Ten Standards for Quality Assurance in Assessing Learning for PLA* policies and practices (some colleges know these as the "CAEL PLA Standards"). These standards were derived by Urban Whitaker from principles developed in the 1970s and published by CAEL in *Assessing Learning: Standards, Principles, and Procedures* in 1989; the standards were most recently revised in 2006 for a second edition of CAEL's *Assessing Learning* by Morry Fiddler and Catherine Marienau.

The ten standards include five academic standards and five administrative standards:

1. Credit or its equivalent should be awarded only for learning, and not for experience.
2. Assessment should be based on standards and criteria for the level of acceptable learning that are both agreed upon and made public.
3. Assessment should be treated as an integral part of learning, not separate from it, and should be based on an understanding of learning processes.
4. The determination of credit awards and competence levels must be made by appropriate subject matter and academic or credentialing experts.
5. Credit or other credentialing should be appropriate to the context in which it is awarded and accepted.
6. If awards are for credit, transcript entries should clearly describe what learning is being recognized and should be monitored to avoid giving credit twice for the same learning.
7. Policies, procedures, and criteria applied to assessment, including provision for appeal, should be fully disclosed and prominently available to all parties involved in the assessment process.
8. Fees charged for assessment should be based on the services performed in the process and not determined by the amount of credit awarded.
9. All personnel involved in the assessment of learning should pursue and receive adequate training and continuing professional development for the functions they perform.
10. Assessment programs should be regularly monitored, reviewed, evaluated, and revised as needed to reflect changes in the needs being served, the purposes being met, and the state of the assessment arts.

These standards for quality assurance in PLA policy and practice are followed by many institutions voluntarily in order to assure their students and accreditors that credit is being awarded based on a rigorous process of assessing a student's college level learning. Many postsecondary institutions attest to following these specific standards on their websites, while others customize the standards to

their specific institutional considerations. As noted by the *Assessing Learning* authors, “A conscious decision to adopt the standards – or reject them but replace them with a different set – is the most practical starting point for bringing the standards to life. Not surprisingly, this conscious decision, and the discussions or debates that come with it, provide a foundation for aligning good policies with good practices.”<sup>xv</sup>

Several of the six regional accreditors also reference the CAEL quality standards in their own policies regarding PLA.

## **Why Policy Needs to Change to Support PLA**

CAEL has spent much of the last 40 years promoting PLA within postsecondary education institutions across the country. In the process, we have come to realize that working with individual institutions, one at a time, will not bring PLA to scale, and the country can no longer wait given the urgent need to promote affordable degree and credential completion. Two things need to happen to put PLA within reach of adult learners: the availability of an on-line, large scale PLA infrastructure, and supportive federal and state PLA policy.

### ***Building Large Scale Infrastructure for PLA***

As noted at the beginning of my testimony, the infrastructure problem is that only rarely do institutions offer the full range of PLA options. One way that we have been addressing that issue is by working with individual colleges to develop PLA programs and practices, train their leadership and staff to better understand PLA, and train their faculty on best practices in portfolio assessment according to our quality standards.

We are also working to build awareness among students and employers, since many do not know about PLA or of its potential benefits.

For institutions that have not developed their own PLA programs, or who do not have the capacity to assess learning in all areas, CAEL launched and now offers LearningCounts.org, an online PLA service. LearningCounts provides initial advising to adult learners to determine whether they are good candidates for PLA and what PLA methods are appropriate. The service also offers online courses on how to develop a portfolio, and uses faculty assessors from throughout the U.S., trained by CAEL, to assess students’ portfolios for college credit. LearningCounts is not intended to compete with existing PLA services at postsecondary institutions, but rather to increase capacity where it is needed. Some postsecondary education systems are, in fact, turning to LearningCounts as a way to offer consistent PLA services across multiple colleges and universities rather than building each college’s system from scratch. Examples include the Pennsylvania State System of Higher Education and the Alamo Colleges (a community college system in San Antonio).

### ***Supportive Federal and State PLA Policy***

Large scale PLA can be implemented more quickly by a state system approach. Therefore, we have also been working with state leaders on creating policies that support and encourage PLA across multiple institutions, most notably Chairman Kline's state of Minnesota, as well as Colorado, Georgia, Indiana, Kentucky, Massachusetts, Minnesota, Montana, Ohio, Pennsylvania, Tennessee, Texas, and Wisconsin. A few states have already passed legislation or established state-wide policies for PLA, and most of this activity has been in the last two years or so.<sup>xvi</sup>

One of the biggest policy barriers, however, is federal financial aid. Some methods of PLA do not cost anything for the student, but many important ones do have reasonable fees to cover the cost of expert faculty assessment. Currently, federal financial aid programs like Pell grants support only traditional time-based learning. The financial aid system is not structured for an outcomes-based and assessment-based approach to postsecondary completion, even if those approaches have the potential to help the student make real progress towards a degree or credential at a lower cost. The financial aid system does not consider as eligible educational expenses any assessment fees. Without a fresh approach to financial aid in its treatment of PLA, adults will not have the same incentive to have their college level learning count when it matters the most.

Right now is the ideal time to examine what kind of changes need to be made to the HEA in order to support PLA as an allowable expense for federal financial aid while ensuring adherence to quality standards. A few years ago, Congress gave the U.S. Department of Education the authority to examine just these kinds of questions through the "experimental sites" initiative. Testing various models for using federal financial aid for PLA, through experimental sites, would help to inform the changes to be considered in the future reauthorization of the HEA.

Such a change in the HEA for Pell grants could be a model for other federal educational benefit programs for explicitly covering PLA-related expenses. For example, the GI Bill education benefits are unclear as to whether veterans can take advantage of PLA through the portfolio method. Similar clarity is also needed for workforce training programs under the Workforce Investment Act, many of which involve postsecondary level instruction and credentials. Further, some employers believe there needs to be clarity on PLA as an allowable expense for employer educational benefits in Section 127 of the tax code. Employers are supportive of PLA and know that it can save their employees time and money, but some are concerned about whether PLA is allowed under Section 127.

I respectfully ask that this committee recommend to the Department of Education the establishment of an experimental site for PLA, in order that we might learn how best to structure financial aid coverage of PLA. Seeing financial aid coverage for PLA in the reauthorization of HEA would have powerful impact on our country's ability to build a strong, educated and credentialed workforce. Thank you. I look forward to answering any questions you may have.

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- <sup>i</sup> Anthony P. Carnevale, Nicole Smith, and Jeff Strohl. *Recovery: Job Growth and Education Requirements through 2020. Executive Summary* (Washington, D.C.: Georgetown University Center on Education and the Workforce, 2013), <http://cew.georgetown.edu/recovery2020/> (accessed 3 July 2013), 2.
- <sup>ii</sup> American Community Survey, Educational Attainment, Table S1501, 2011.
- <sup>iii</sup> Lumina Foundation for Education and Gallup, *America's Call for Higher Education Redesign: The 2012 Lumina Foundation Study of the American Public's Opinion on Higher Education*. (Indianapolis, IN and Washington, D.C.: February 5, 2013), [http://www.luminafoundation.org/publications/Americas\\_Call\\_for\\_Higher\\_Education\\_Redesign.pdf](http://www.luminafoundation.org/publications/Americas_Call_for_Higher_Education_Redesign.pdf) (accessed 3 July 2013), 8.
- <sup>iv</sup> Thomas Brock, "Young Adults and Higher Education: Barriers and Breakthroughs to Success," *Transition to Adulthood*, 20, no. 1 (2010), <http://futureofchildren.org/publications/journals/article/index.xml?journalid=72&articleid=523&ionid=3589> (accessed 3 July 2013), 111-113.
- <sup>v</sup> Diana Bamford-Rees, "Thirty-Five Years of PLA: We've Come a Long Way," in *Prior Learning Portfolios: A Representative Collection*, eds. Denise M. Hart and Jerry H. Hickerson. (Chicago: CAEL, 2009).
- <sup>vi</sup> U.S. Department of Education, National Center for Education Statistics. *Digest of Education Statistics, 2011* (NCES 2012-001), Chapter 3, Table 200 . (Washington, D.C.: U.S. Department of Education, 2012), [http://nces.ed.gov/programs/digest/d11/tables/dt11\\_200.asp?referrer=report](http://nces.ed.gov/programs/digest/d11/tables/dt11_200.asp?referrer=report) (accessed 3 July 2013).
- <sup>vii</sup> Susan Choy, *Nontraditional Undergraduates* (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2002).
- <sup>viii</sup> See discussion in Rebecca Klein-Collins, Amy Sherman, and Louis Soares, *Degree Completion Beyond Institutional Borders: Responding to the New Reality of Mobile and Nontraditional Learners*. (Washington, D.C.: Center for American Progress and CAEL, 2010), [http://www.americanprogress.org/wp-content/uploads/issues/2010/10/pdf/degree\\_completion\\_beyond\\_borders.pdf](http://www.americanprogress.org/wp-content/uploads/issues/2010/10/pdf/degree_completion_beyond_borders.pdf) (accessed 3 July 2013).
- <sup>ix</sup> Clifford Adelman, *The Toolbox Revisited: Paths to Degree Completion from High School through College*. (Washington, D.C.: U.S. Department of Education, 2006).
- <sup>x</sup> See other examples in Amy Sherman, Becky Klein-Collins, and Iris Palmer, *State Policy Approaches to Support Prior Learning Assessment: A Resource Guide for State Leaders*. (Washington, D.C.: HCM Strategists and CAEL, 2012), <http://www.cael.org/pdfs/College-Productivity-Resource-Guide2012> (accessed 3 July 2013).
- <sup>xi</sup> Carnevale, Smith and Strohl, *Recovery: Job Growth and Education Requirements through 2020*.
- <sup>xii</sup> Rebecca Klein-Collins, "Underserved Students Who Earn Credit Through Prior Learning Assessment (PLA) Have Higher Degree Completion Rates and Shorter Time-to-Degree," CAEL research brief. (Chicago: CAEL, April 2011), [http://www.cael.org/pdfs/126\\_pla\\_research\\_brief\\_1\\_underserved04-2011](http://www.cael.org/pdfs/126_pla_research_brief_1_underserved04-2011) (accessed 3 July 2013).
- <sup>xiii</sup> Rebecca Klein-Collins, *Fueling the Race to Postsecondary Success: A 48-Institution Study of Prior Learning Assessment and Adult Student Outcomes* (Chicago: CAEL, 2010), [http://www.cael.org/pdfs/PLA\\_Fueling-the-Race](http://www.cael.org/pdfs/PLA_Fueling-the-Race) (accessed 3 July 2013).
- <sup>xiv</sup> Klein-Collins, *Fueling the Race to Postsecondary Success: A 48-Institution Study of Prior Learning Assessment and Adult Student Outcomes*.
- <sup>xv</sup> Morry Fiddler and Catherine Marienau, *The Ten Standards for Assessing Learning*, in *Prior Learning Portfolios: A Representative Collection*, eds. Denise M. Hart and Jerry H. Hickerson. (Chicago: CAEL, 2009).
- <sup>xvi</sup> Sherman, Klein-Collins, and Palmer, *State Policy Approaches to Support Prior Learning Assessment: A Resource Guide for State Leaders*.