Shifting Gears: Community Colleges and Adult Basic Education

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Increasing numbers of adults seek to upgrade their skills due to the desire to earn a postsecondary credential in order to raise their standard of living by qualifying for higher wage jobs. Many of these low-skilled adults end up in community colleges as part of adult basic education (ABE) programs. There is evidence, however, that these students often do not attain the credentials they seek.

This paper explores some of the barriers adult basic education students face in obtaining postsecondary credentials. We locate community college-based adult education within the broader context of ABE and examine the outcomes of these programs. We then highlight the various challenges faced by community college-based ABE programs. Many of these challenges have their roots in the structure of the colleges and ABE within various states, and the policy landscape under which the two—ABE and community colleges—co-exist. We offer concrete suggestions to policymakers that can be used to improve the outcomes for ABE students by describing the lessons learned from three state-level policy initiatives and then providing specific suggestions for federal support of similar efforts. Finally, we conclude with recommends for an enhanced federal role in ensuring more significant ABE outcomes to benefit both students and the Nation's economy.

Strong ABE programs are critical for the economic success of a growing number of students. Today, the number of U.S. occupations paying sustainable wages and that require only a high school education is declining rapidly. Employment opportunities for individuals holding a postsecondary credential, meanwhile, are growing. Not only are there more jobs requiring a college degree, but the pay difference between what high school graduates earn and what college graduates command continues to widen. Twenty years ago the average college graduate made about 40 percent more in wages than a high school graduate; now the advantage is closer to 75 percent (Duke and Strawn, 2008).

There are, however, 25 million U.S. workers between the ages of 18 and 64 who lack a high school diploma or GED, while another 52 million adults have no postsecondary education (Crosley & Roberts 2007). Nearly half the U.S. workforce has a high school education or less (Crosley & Roberts, 2007). Moreover, these figures do not represent the increasing number of new immigrants who lack high school or postsecondary credentials. These adults are likely to feel squeezed by the educational demands of the new economy. Ensuring that they have adequate preparation for college, something that ABE can and should provide, is critical.

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What is Adult Basic Education?

Adult basic education (ABE) can encompass a variety of initiatives and programs. For this paper, we used the federal definition of ABE, programs designed for adults who are 16 years of age or older and currently functioning below the 8th grade level. These adults must be out of school, without having obtained a secondary school diploma or its equivalent, and they must be beyond their state's age for mandatory school attendance. The term "adult" itself is significant in that it defines eligibility for one to receive services under the Adult Education and Family Literacy Act, which is Title II of the Workforce Investment Act of 1998 (WIA), P. L. 105-220.

Activities generally subsumed under this definition of ABE include basic literacy education, continuing education, programs leading to the General Education Diploma (GED), and apprenticeships. At certain institutions, it may also include English as a Second Language (ESL) instruction separate from ABE. These activities are intended to improve students' literacy and numeracy skills. In 2003-04, there were 2.6 million adult learners nationwide. Approximately 40 percent of these students were enrolled in ABE programs and nearly 44 percent were in ESL programs (Bragg et al., 2007). Of these students, approximately 40 percent received some of their education at a community college (Morest, 2004).

In using the federal definition of ABE, we acknowledge that we are omitting some adult students from our discussion. Adults enrolled in ABE programs are not the only adult students in the postsecondary sector. In fact, ABE is a sub-set of a larger array of programs designed to meet the needs of "under-prepared" students, including those enrolled in developmental or remedial education. Although we do not explicitly focus on developmental programs of study since they are outside the scope of this review, many of the challenges described and policy recommendations provided in this paper apply to these programs as well.

It is also important to note that our definition of ABE includes, but is not limited to, those adult students seeking to obtain the GED. Often the terms ABE and GED prep are used interchangeably, but we would argue that this should not be the case. Only about 30 percent of GED students come through adult education courses. Approximately half of all GED recipients earn their credentials within two years of their anticipated high school graduation, meaning that they do not fit the definition of an ABE student. The remaining students attend GED programs outside of ABE's purview. Moreover, as most ABE students are functioning below the ninth grade level, they are not skilled enough to pursue a GED (National Commission on Adult Literacy [NCAL], 2008).

Thus, it is important to conceive of GED preparation as one component, rather than the major component, of adult basic education activities. This is particularly important, because the high school diploma is no longer adequate for economic sufficiency; many therefore have argued that ABE programs should lead to postsecondary, rather than high school, credentials. In fact, the U.S. Department of Education now makes this argument,

stating that ABE should serve "as a bridge to further education and training" (OVAE, 2008).

Outcomes for Adult Basic Education

Given the data presented earlier on the need for postsecondary credentials in the labor market, merely improving skills or earning a GED cannot be seen as a sufficient outcome for ABE programs. Adult learners need to be prepared to pursue postsecondary credentials, not just a secondary-level diploma. This is a daunting task. By definition, ABE students have skills far below those necessary for success in college. Thus, ABE programs must move students from very low levels of literacy to secondary-level proficiency and then into postsecondary education programs. Given that postsecondary success is low even for those adults entering ABE with relatively high skill levels (less than five percent of GED holders earn an associate's degree, according to OVAE), the challenge facing this larger, more skill-deficient group of adult students is vast.

These statistics likely mask the true extent of the challenge. How many graduates of ABE programs there are is not really known. This deficiency is the consequence of a number of data collection shortcomings. First, few community colleges report on the academic progress of students who enter their programs from adult education. Second, ABE student outcomes, when recorded, are generally only reported for the first year after program completion, not enough time to track progress toward a postsecondary credential (Morest, 2004). Third, the federally mandated National Reporting System (NRS), which is used to provide statistics on the numbers served by ABE, is not a longitudinal tracking system and is thus not designed to determine how many students are making progress toward credit college programs, or even how many complete their adult education courses.

Though these data shortcomings are beginning to be overcome as state directors of adult education use the transition to college as a measure of success, the data are not yet available. It is fair to say, however, that the five percent postsecondary credential recipient statistic cited above is a high estimate of the number of ABE-GED recipients who go on to attain a college degree. It is clear that few ABE students do so. Available state data support this conclusion. For example, the state of Washington followed the educational progress of all adults entering the workforce investment system for over a decade. Less than 3 percent of the adults who started in adult basic education moved into credit courses and completed a community college associate degree (Prince and Jenkins, 2005).

The Delivery of ABE

As we will describe, the structure of ABE programs contributes to their low efficacy rates. First, however, it is important to understand how ABE is organized and delivered in this country. Though the adult education system is federal in legislative authority, it is delivered by the states. Federal monies are allocated to the states through a formula, with

each state also making its own financial contribution. States are also required to develop a plan for program delivery and to report on student outcomes.

Most states contribute more funds than required. Due to this funding pattern and the state control over implementation, there are considerable differences in both the mission and operation of adult basic education programs across the country. For example, states often add their own eligibility requirements and outcomes indicators.

States also vary in terms of who they deem responsible for adult basic education activities. Some states, such as North Carolina, rely on the community college system, while others, such as Michigan, authorize the K-12 system to receive federal ABE funds and deliver ABE services. The trend in recent decades has been to shift authority for ABE from the K-12 system to the community college system; still only 13 states explicitly give this authority to the community college system (Duke and Strawn, 2008). It is important to remember, however, that in all states, ABE activities take place in community colleges, even if the college is not a formally authorized entity in charge of this function. Morest (2004) estimates that at least 45% of all community colleges offer some form of adult basic education.

The shift toward locating ABE within the community college is a logical one. Compared to other sectors of higher education, community colleges are the institutions of choice for adults starting their postsecondary education. They are accessible, relatively inexpensive, and offer flexible scheduling. Enrollment in community colleges reflects their appeal to adult students; over half of community college students are over the age of 23, while 30 percent of four-year students are (Horn and Nevill, 2006).

Most adults in community colleges are not ABE students, of course. Morest (2004), in surveying all 50 states, estimates that approximately seven percent of community college students are in ABE programs. Still, the similarities between ABE students and the broader community college population, in terms of age, work status, and family status, mean that colleges may be better able to meet ABE students' needs than other delivery systems.

Among states that locate ABE within their community college system, there is wide variation in delivery. For example, in North Carolina, ABE is separated from the other functions of the college; colleges maintain separate physical locations, databases, and course structures for ABE. ABE students are rarely considered part of the broader community college student body, lacking access to library cards, student services and counseling, or even occupational courses (Duke and Strawn, 2008). In contrast, Washington State integrates ABE with occupational preparation and preparation for credit-bearing courses through its I-Best program, in which team teaching contextualizes literacy skills for ABE students.

Challenges to Helping ABE Students Earn Postsecondary Credentials

As we have seen, ABE students rarely complete postsecondary credentials, even though such credentials are increasingly valuable in the labor market. This is true even for those students entering ABE with the goal of obtaining a credential and possessing relatively high skill levels, as evidenced by their earning a GED, as well as for those entering ABE in need of a high degree of remediation. What contributes to these low college transition and completion rates?

Institutional structures meet the needs of younger students, not adults. Despite the community colleges' expressly articulated "open door" policies, adult students are confronted with an institutional structure designed to provide resources and services to younger students newly graduated from high school. Models of student engagement and progress are developed from four-year college models that emphasize the need for students to be engaged in their institutions through learning communities and extra-curricular activities. It is very difficult for older students—with pressures from jobs and families—to take part in these activities. Thus, while community colleges are better suited to the needs of working adults, in terms of their flexibility and convenience, they still are not a truly "good fit" for such students.

Even the school calendar of 16-week semesters creates a challenge for adult students, as schedules are frequently geared towards more traditional-age students, and classes meet at times that are inconvenient for working adults (Strawn, 2007). For many students, the linear nature of a college degree program, in which courses are offered sequentially over many weeks, is unrealistic, as it seen as too slow and cumbersome for individuals balancing multiple demands on their time. Some colleges seek to overcome this by "chunking" coursework, offering short-term, intensive classes rather than a more traditional format.

ABE exists as one "silo" among many. We have noted how ABE is often disconnected from the other activities of the college, such as counseling. The challenge is making sure that ABE classes, which do not lead to college credits, relate to a college degree pathway in some way, and that this relationship is communicated to students. Currently, the lack of a relationship between ABE and degree-granting activities means that ABE is often insufficiently interesting to students to serve as an enticement for continuing enrollment in college. Indeed, in most institutions, there is no clear path from ABE into a degree program. This means that even students who are interested in pursuing a college degree do not know how to do so.

Compounding this challenge is that many ABE courses terminate with students taking a college placement test to determine whether they are capable of continuing on to college. Many of these students are deemed in need of additional preparation and required to enroll in one or more developmental education courses—yet another silo within the college that does not lead to college credit courses or directly to a college credential pathway (Strawn, 2007; Perin, 2006; Lewis, Farris, and Green, 1996). In essence, for ABE students, then, a path toward college-credit coursework is not clearly spelled out.

Many of them get lost along the way and never even try to earn a degree. And those who do attempt it often end up frustrated and leave postsecondary education before attaining a credential.

The separation of foundation skills and job skills. ABE students need academic foundation skills—but they also need skills that will allow them to immediately enter the labor market. This tension is often reflected in the mission and design of the program. For example, under the administrative guidelines of the current Workforce Investment Act (WIA), the emphasis has been on "work first," i.e., to complete short-term training that leads to employment, regardless of the sustainability of the wages (Jacobs, 2001). Because of this approach, the traditional measurement of success in adult education (improvement of reading, literacy or mathematics on a grade level) is often supplanted by an employment and earnings measurement. Student success often is determined by getting a job, not passing a test.

This is not necessarily a bad thing. Yet, an unintended consequence of the work-first strategy is that continued education is often ignored and, as a result, does not occur. Once ABE graduates find jobs, many do not attempt to continue their education in a college degree program. And institutions, with few exceptions, do not make efforts to convince ABE students that they should do so. Rather than help students enter a career pathway that can lead toward sustainable work, ABE programs alone often provide students with access to low-wage employment. As an example, in a Washington State study that analyzed education and labor market outcomes over five years, it was determined that a "… tipping point for students to experience a substantial earnings payoff from college was about a year of occupational credits plus a credential" (Prince & Jenkins, 2005). Yet only 5 percent of ABE students ever reached that point.

Lack of connection between community colleges and other ABE delivery organizations. Particularly in states where community colleges do not have full responsibility for ABE, transfer from ABE to degree programs is challenging. How colleges and other delivery organizations collaborate—if they do at all—is a matter of local initiative and leadership. Other providers may view community colleges as a threat to their funding stream (Michigan League for Human Services, 2007). These various types of organizations may also have competing or overlapping missions.

There are some instances where such collaboration to provide ABE students with a path to a college credential does occur. In Kentucky, for example, community colleges have developed extensive partnerships with adult education providers, and as a result students who enter the community college have a clear idea of what awaits them (Duke and Strawn, 2008). WIA has also encouraged community college personnel to work closely with WIA agencies, since the agencies do very little of their own training (Visher and Fowler, 2006). However, many of these initiatives are small and/or short-term programs, and colleges have had difficulty bringing them up to scale.

The multiple missions of the community college and their need for institutional legitimacy. As American community colleges become more widely acknowledged as

important institutions, the leadership seeks even greater recognition and prestige within the higher education community. But dealing with the working-poor ABE student does not contribute to attaining these goals, and there is much more political support and prestige in working with younger students. Concern with status thus serves to discourage community colleges from focusing on the needs of the ABE student.

A related concern is that placing too much focus on under-prepared adults, many of whom are from working-poor families, will stigmatize the college as a "trade school" and repel traditional-aged students. As colleges face increasing financial pressures, they may choose to allocate their dollars to those activities that will increase their prestige and popularity—and these activities are not ABE programs.

Budgetary pressures. It is not simply a matter of status, however, that prevents community college leadership from fulfilling their mission of adult education. Most community college leaders believe that done right, adult education costs significantly more in resources than programs geared toward traditional-age college students. The federal adult education contribution, even when supplemented by substantial state support, is still vastly less than the real costs of the program. There is a belief that adding ABE activities to the mission of the community college constitutes an unfunded mandate. For colleges in states whose populations continue to expand, such as California, Florida and Texas, where prepared students are often turned away for lack of space, it is a difficult to argue that institutional resources should go toward this group of hard-to-serve ABE students.

Reforms and Promising Practices: Lessons from Three Policy Initiatives

A number of states have sought to overcome the challenges above and to modify ABE to meet the needs of adult learners more effectively. In addition to federal and state support, funding for these initiatives also was secured from outside agencies. Though the projects vary somewhat in their scope and goals, taken together, they provide guidance for others seeking to reform the ways that community colleges can help the working poor attain jobs that offer sustainable wages. The three foundation-funded projects leading to the reforms highlighted in this section are: (1) the Ford Foundation's *Bridges to Opportunity Project,* a five-year program that focuses on new state policies to motivate community colleges to serve low-income students; (2) *Breaking Through,* funded by the Mott Foundation and designed to link ABE with credit-bearing occupational programs; and (3) *Shifting Gears,* funded by the Joyce Foundation, in which several Midwestern states worked to develop state policies supporting community college involvement in adult education. Though all three projects focused on state policies, the lessons generated can be applied at the federal level as well.

The three projects focused on four major policy areas:

1) *Creating career pathways for adults.* As we have noted, a key reason adults enter community colleges is to secure better paying and more stable work. As a result, programs need to be developed to insure that adult education is specifically tied to

careers. The term used in community colleges for such programs is "career pathways" for adults. According to the Workforce Strategy Center, a nonprofit organization devoted to strengthening the nation's economy, career pathways offer "a series of connected education and training programs and support services that enable individuals to get jobs in specific industries, and to advance over time to successfully complete higher levels of education and work in that industry" (Workforce Strategy Center, 2008). Given the disconnect between ABE and other college programs, as well as the disconnect between ABE and employers, creating such pathways is critical for elevating skill-deficient adults into sustainable jobs and careers.

To implement this approach effectively, community colleges are required to penetrate labor markets in order to find employment for their students. This requirement forces postsecondary institutions to understand the linkages between the jobs in an industry and the hiring patterns of employers. It also forces colleges to find ways of assuring potential employers that the college's graduates are ready to work.

The foundation-led efforts to create adult career pathways have clear benefits for program graduates but are hard to implement. Colleges that can work with labor markets through such pathways are in a much better position to help their graduates to access high-wage jobs (Workforce Strategy Center, 2002).

2) Applying new theories of learning to adult basic education programs. As we have noted, adult students may find the traditional structure of the academic year unsuited to their needs. Rearranging ABE schedules to meet the time requirements of the adult student can help improve student learning and success. We have already mentioned "chunking," or the replacement of semester-long courses with compressed curriculum delivery (Dins, 2005) as one strategy.

Adult students require not only new schedules, but new forms of curriculum delivery as well. For this population – so focused on immediate economic payoff from schooling and, too often familiar with school failure – ensuring that curricula are made meaningful is important. Contextualizing academic skills so that they are relevant to the career choices of ABE students is one way to help these students feel comfortable with and master the academic skills necessary for success in the labor market and further education. Some community colleges, for example, have designed contextual mathematics programs within broad career areas that have been successful in getting adults to progress to college-level classes (Bragg and Barnett, 2007). Other colleges have implemented ESL programs in which Spanish-speaking workers learn English, medical terminology, and math in order to become pharmaceutical aides.

In addition, innovations at the K-12 level targeted toward underperforming and/or minority students may also be applicable to ABE students who are also frequently from disadvantaged backgrounds. Such reforms include increasing the rigor of the curriculum, as is done in the Accelerated School Project (Levin, 1985; Levin, 1986) and including relevant, holistic, or culturally-responsive teaching practices in courses aimed at disadvantaged students (Friedlaender & Darling-Hammond, 2007).

3) Providing support services. As we have noted, in many cases ABE students are not considered "regular" college students and so are not permitted to access support services offered by the college. This is ironic, as adult students are often the ones who are most in need of such support. Colleges (and by extension, state and federal funding sources) need to ensure that adults can access support services that can help them overcome the challenges they face in completing ABE and pursuing a postsecondary credential.

Support services must include more than effective career counseling and the availability of childcare facilities. Low-income adults often face significant personal issues and must balance school, work, and family. Some have issues with the criminal justice system. For students in suburban and rural areas, the absence of mass transportation makes even getting to school a problem.

Most community college counseling services are unprepared to cope with the range of needs ABE students bring to educational institutions. Some colleges, though, have experimented with a cohort counseling system, emulating the experience of social service agencies (Bragg and Barnett, 2007). Others have established relationships with community-based organizations that have the expertise to deal with these matters. However, these interventions are far beyond the traditional preparation for the GED and, as such, require new ways of funding, staffing, and implementing ABE programs.

4) Breaking down the silos of the community college. Community colleges are now paying attention to ways in which adults can accelerate their learning experiences and cross from one institutional program, such as ABE, into another, such as a degree-bearing program, thus "crossing-over" the central institutional threshold between non-credit to credit courses (Van Noy, Jacobs, Korey, Bailey & Hughes, 2008). In such models of "silo breaking," non-credit programs are used to help students obtain work-readiness skills and, ultimately, jobs. Once this occurs, the students are permitted to enroll in a credit program. In some cases, non-credit programs are "converted" into credits once the students can meet the requirements to enter the college. Essentially, this type of program allows students to skip a stage by using ABE as the launching pad for college-credit courses, bypassing developmental education. There have been some initial successes with this model, but community colleges have yet to implement this approach on a wide scale (Baker, 2007).

Federal Policy Issues

These new approaches pose specific challenges for the development of federal adult education policy. Though a 2006 OVAE symposium of community college practitioners and policy experts provided an important start in refining the federal role in ABE, the challenges and promising practices described in this paper provide additional impetus for change. In particular, the federal government should:

• Acknowledge and support the role of community colleges in adult basic education. Although primarily symbolic, this recognition would set the tone for the community college role in ABE. Currently, ABE is governed by Title II of the Workforce Investment Act, which does not include community colleges in ABE delivery. Adding community colleges to legislative or regulatory language would acknowledge the important work they are already doing in this arena.

• *Maintain federal influence over ABE, even as it is integrated into community colleges.* One of the major challenges for meaningful federal involvement in community college-based ABE is that these colleges are state entities. As ABE activities become integrated into the broader activities of the college, maintaining federal influence over objectives and outcomes becomes more difficult. While the federal government should not discourage the blending of ABE and other activities, such as developmental education, it should find ways to ensure that federal goals are still being met. One way to do this is by requiring state ABE plans to reference federal definitions of success. For example, instead of measuring success solely by the number of adults served, indicators of success should also include achievement of goals based on federally-supported strategies and implemented by the state. This approach would tie the allocation of federal monies to broader state plans and serve to highlight the interest of OVAE in the integration of the funding within a broader area.

• Continue to expand the mission of ABE. Traditionally, GED attainment has been used as a metric of ABE success. But as we have noted, the majority of students in ABE do not earn the GED. Moreover, the labor market value of the GED is unclear, and postsecondary credentials are increasingly important for those seeking to attain high-wage jobs. Thus, measures of success need to be expanded, and the mission of ABE should expand accordingly. OVAE should therefore consider including postsecondary entrance and/or postsecondary credential attainment as desired outcomes measures for ABE programs.

• *Provide funding flexibility.* ABE is increasingly being blended with other forms of community college education, such as workforce training or developmental education. Washington State's I-Best program and other integrated ABE/occupational education programs are examples of this. But current funding of ABE does not reflect this new reality. If adult education is to be combined with workforce programs at the community college level, it would then seem advisable to dedicate some Perkins vocational funds for these programs as well. If there is a blending of workforce education and Adult Basic Education, there should also be a blending of Perkins funds and ABE funds. Funding streams should be revised to recognize the significant relationship between education and employment.

• *Support research on ABE.* One of the major roles the federal government can play within higher education is to bring more coherence to diverse local systems (Jacobs and Grubb, 2003). An important step in this direction would be for the federal government to develop (or help states develop) streamlined reporting

procedures, as well as a longitudinal database that could be used to identify ABE participants and their education and career trajectories over time. Federal support could also encourage collaborative research efforts between the ABE and developmental education. Currently, efforts to study and evaluate these two types of programs are separate, though their student populations, goals, and challenges are similar. It would be very useful for OVAE to conduct research and support practical activities to bridge these two disciplines. Indeed, attention to the issues of under-prepared adults in community colleges can serve as a good starting point for determining ways in which new learning paradigms can be used to increase opportunities for these adults.

Conclusion

Of the many federal programs dealing with postsecondary education, adult basic education has the most promise for impacting the American economy. The growing income inequality and decline of available sustainable work for adults with less than a high school diploma gives ABE new significance, because it can be an important gateway into high-wage jobs for many working poor adults. However, in order for the system to be viable, it must be more closely aligned with the reality most adults face, that is, it must be tied both to workforce education *and to* educational programs leading to academic credentials, integrating these forms of education and accelerating the process by which adults gain marketable skills. The American community college can play a unique role in this development. Focusing federal policy on clarifying and enhancing the part that community colleges play in delivering ABE will strengthen these programs in the future.

Bibliography

Baker, E. (2007). Community College of Denver, Colorado, Lumina Project Methodology and Analysis: FastStart Accelerated Developmental Education Learning Communities. Unpublished report. Community College of Denver.

Bragg, D., Bremer, C., Castellano, M., Kirby, C., Mavis, A., Schaad, D. & Sunderman, J. (2007). A cross-case analysis of career pathway programs that link low-skilled¹ Adult basic education to community college transitions symposium adults to family-sustaining wage careers. University of Minnesota: National Research Center for Career and Technical Education.

- Bragg, D. & Barnett, E. (2007). *Promising breakthroughs: Year-one* evaluation results of "Breaking Through." Urbana-Champaign, IL: Author.
- Crosley, A. & Roberts, B. (2007). *Strengthening state policies to increase the education and skills of low-wage workers*. Chevy Chase, MD: Working Poor Families Project.
- Dins, K. (2005). *Chunking professional-technical programs to create pathways to degree completion in community colleges*. Unpublished dissertation, Oregon State University,
- Duke, A. & Strawn, J. (2008). *Helping low-skilled adults enter and succeed in college and careers: An overview of state policy opportunities and challenges.* Boston: Breaking Through.
- Friedlaender, D. & Darling-Hammond, L. (2007). *High schools for equity: policy supports for student learning in communities of color*. Stanford: School Redesign Network.
- Horn, L., and Nevill, S. (2006). Profile of Undergraduates in U.S. Postsecondary Education Institutions: 2003–04: With a Special Analysis of Community College Students (NCES 2006-184). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
- Jacobs, J., & Grubb, N. (2003). The Federal role in vocational-technical education. CCRC Brief 18. New York: Community College Research Center, Teachers College, Columbia University.
- Jacobs, J. (2001). Community colleges and the Workforce Investment Act: Promises and problems of the new vocationalism. Pp. 93-100 in Brag, D. (ed.), New Directions for Community Colleges, 115. San Francisco: Jossey-Bass.

- Levin, H.M. (1985). The educationally disadvantaged: a national crisis. Philadelphia: Public/Private Ventures.
- Levin, H.M. (1986). Educational reform for disadvantaged students: an emerging crisis. Washington, DC: National Education Association.
- Lewis, L., Farris, E., & Greene, B. (1996). Remedial education at higher education Institutions in fall 1995. Washington, DC: National Center for Education Statistics.
- Michigan League for Human Services. (2007). *Fixing the leaky pipeline*. Lansing, MI: Author.
- Morest, V. (2004). *Analysis of state adult education systems involving community colleges.* Community College Research Center. New York: Teachers College, Columbia University.
- National Commission on Adult Literacy. (2008). *Reach higher, America: Overcoming crisis in the U.S. workforce*. New York: Author.
- Perin, D. (2006). Can community colleges protect both access and standards? The problem of remediation. *Teachers College Record*, 108(3): 339-373.
- Prince, D. & Jenkins, D. (2005). Building pathways to success for low-income adult students: Lessons for community college policy and practice from a statewide longitudinal study. New York, NY: Community College Research Center, Teachers College, Columbia University.
- Strawn, J. (2007). *Policies to promote adult education and postsecondary alignment*. New York: Council for Advancement of Adult Literacy.
- U.S. Department of Education, Office of Vocational and Adult Education. (2008). http://www.ed.gov/about/offices/list/ovae/pi/AdultEd/transition.html. Accessed July 26 2008.

Van Noy, M., Jacobs, J., Korey, S., Bailey, T., & Hughes, K.L. (2008). *The landscape of noncredit workforce education: State policies and community college practices*. New York: Community College Research Center, Teachers College, Columbia University.

Visher, M., & Fowler, D. (2006). *Working it out: Community colleges and the Workforce Investment Act.* Berkeley: Institute for the Study of Family, Work, and Community. Workforce Strategy Center. (2008). http://www.workforcestrategy.org/ourmodel.php. Accessed 26 July, 2008.

Workforce Strategy Center. (2002) Building a career pathways system: Promising practices in community college-centered workforce development. New York: Author.