

Helping Under-Resourced Learners Succeed at the College and University Level: What Works, What Doesn't, and Why

by Karla Krodel, Karen Becker, Henry Ingle, and Susan Jakes

In today's economy, institutions of higher education are invaluable forces of community change through both the students they educate and the engagement and advancement of the larger community. Economic forces are bringing an increasingly diverse student population to the doorsteps of these institutions. For educators to achieve maximal effectiveness in reaching these students, paradigm shifts are needed in the ways that teaching and learning are understood and actualized on campuses. This paper outlines key conditions for change, as well as strategies for success, that build upon an understanding of the theories of economic class as they relate to college students and the higher education community.

Further, this paper outlines the application of *Getting Ahead in a Just-Gettin'-By World* (DeVol, 2004) as a potential college curriculum. The *Getting Ahead* workbook was developed in the community setting in collaboration with groups of adults from poverty and is used by community agencies to equip people from generational poverty with tools essential for making the transition out of poverty. Unlike so many soft-skill training programs, *Getting Ahead* opens doors to rich areas of *academic* study related to economic class theory, language, change theory, and research into the causes of poverty. For this reason, several community colleges and universities have been adapting the semester-long *Getting Ahead* process and finding that it accelerates students' ability to reach college-level performance. Short-term outcomes and anecdotal stories are compelling enough to warrant a more intensive and intentional consideration of the approach, along with revision of the text for the college-level audience.

PARADIGM SHIFTS

As described in *America's Perfect Storm* (Kirsch, Braun, Yamamoto, & Sum, 2007), the socioeconomic survival of the United States is at stake. The convergence of low literacy levels, poverty, an aging population, immigration, and the globalization of business means that working with the growing and significant segment of the population that comes from generational poverty is no longer just a moral obligation, it has become an economic imperative. Two thirds of the students who enter higher education do not complete a degree within six years, and among low- and moderate-

income students, the statistics are even grimmer. The college readiness agenda must be supported with content and methods more relevant to under-resourced students. This will enable them to have the essential tools, language proficiency, and analytical skills that higher education often assumes is operative across all social classes in our society.

Under-resourced students have limited access to external resources, such as support systems, mentors, and money. Their lack of supports makes daily demands—like childcare, transportation, one or more jobs—develop into crises that, time and again, derail their education. Amazingly resilient, these individuals often act first to solve problems and preserve personal connections with others rather than sacrifice relationships for the sake of achievement, as their middle-class counterparts would expect. The virtually endless stress that accompanies poverty traps people in the “tyranny of the moment” (Freire, 1970), overwhelming their ability to look to the future and make abstract plans to change. Postsecondary classrooms require cognitive and language skills that may not have been developed in K–12 schools, neighborhoods, and the family. Vocabulary is often insufficient for understanding texts, class discussion, and writing assignments. Without the advantage of the intergenerational transfer of knowledge that enables students to embrace the college experience, many students feel both out of place and doomed to failure. The effect of such a dearth of resources is well-documented (Bailey & Alfonso, 2005; Bailey, Jenkins, & Leinbach, 2005; Brock & Richburg-Hayes, 2006; Brock et al., 2007; Parsad & Lewis, 2003) and visibly profiled in the demographics of low student persistence, retention, completion, and graduation rates across the country, in particular for such student groups as Hispanics/Latinos, African Americans, and Native Americans, whom the educational systems generally have not served as well as Caucasians (Hill, 2008):

- Only 30% of students assigned to pre-college level Introductory English and 20% to Introductory Math completed the course within three years.
- “Of first-time college students entering a community college in 1995, only 36% earned a certificate, associate’s [degree,] or bachelor’s degree within six years” (Brock et al., 2007).

Meanwhile, across the nation, government, business, and communities are asking for changes in the very nature and premises of higher education. In the community college systems of the country where the majority of under-resourced learners are pursuing higher education, there are even greater challenges. A recent California report indicates that too many students who are behind in their skills are not overcoming their deficiencies in the state’s community colleges, even though significant budget resources are being allocated for this purpose (Hill, 2008). Stakeholders are demanding

stronger linkages between education and jobs for a more productive economy. Accreditation bodies are convincingly arguing for more rigorous accountability standards for student learning outcomes, while at the same time calling for major curricular changes to more realistically foster greater civic engagement. There is growing interest in improving the connection between teaching and learning through professional development and the alignment of faculty incentives and rewards in order to better meet the need for new modes, media, and methods in more contemporary instructional delivery systems.

Reformulating the Premises of Higher Education

Traditional Assumptions	New Paradigms
Students	
Students prepared with internal and external resources, focused on educational priority	Under-resourced students with multiple learning barriers, less-than-ideal background preparation, and competing demands brought on as a result of highly complex life conditions
Unprepared students seen as remedial, high-risk	Under-resourced students seen as problem solvers and knowledge creators
Learning Environment	
Faculty as discipline-specific experts Unsupported, autonomous, competitive learning environments	Faculty as learning facilitators using discipline-specific expertise to engage students in supported, relational, cooperative learning environments
Didactic teaching of decontextualized and theoretical knowledge	Knowledge created through service and community engagement models involving multiple individuals from diverse backgrounds, formal planning documents, and work for a given cause
Students isolated from each other and the community in the learning tasks	Contextualized and situated learning connects students to each other and to the community in the learning tasks
Institutions	
Enrollment-driven	Student retention, persistence, achievement, and completion as top priorities
Pricing and funding	Focusing on cost and value as the instructional recipe for student success
Development of human and social capital secondary to scholarship and research	Intentional structured development of human and social capital for achievement, sustainability, and prosperity

Traditional Assumptions	New Paradigms
Institutions	
Institutional outcomes connected to self-sustainability and infrastructure	Institutional outcomes become connected to community sustainability
Accreditation based on institutional assets and fiscal resources	Accreditation based on learner outcomes
Lack of concern for accountability	High accountability

These paradigm shifts call for changes across the board—from the classroom level to student services, from accreditation standards to the institution’s partnerships. This is not to say that traditional higher education is misguided but rather that the traditional expectation that students will mold themselves to the institution’s expectations and norms is simply too big a leap for too many students. While these major paradigm shifts are occurring simultaneously and sometimes overwhelmingly, a synergy exists among them, which, if properly tapped into, can be transformational for students, staff, the institution, and the larger community.

PROMISING PRACTICES

There is no shortage of ideas for improving the effectiveness of college and university education. More than 90 interventions to improve outcomes for under-resourced students were recently funded under the *Achieving the Dream* community college program. These strategies are significantly influenced by a growing concern to address the negative effects that poverty conditions are bringing to the classroom. Most faculty and student service-driven interventions target the individual student, seek to build support around the student ... or both. For example:

- Developmental education and ongoing consistent support services for academically under-prepared students work best when delivered by full-time staff with specialized training. These are two of the most necessary interventions to get students college-ready (Bailey & Alfonso, 2005).
- Financial incentives have a positive effect on student persistence, full-time attendance, courses passed, and re-enrollment. Incentives are a concrete representation of the value of education and achievement. However, the encouraging results ended when the incentives ended (Brock & Richburg-Hayes, 2006).
- Advising, counseling, and peer tutoring are ways to provide some social capital or relationship support for students. First-semester freshman seminars, for example, are effective in teaching

students how to manage their academic work within the academic environment through orientation and direct-teaching of planning and study skills (Bailey & Alfonso, 2005).

- Student integration programs concentrate on external resources, such as supportive relationships, employment, and money as the primary causes of student retention. Scheduling to accommodate the needs of working students and creating meaningful interactions among students and teachers are effective interventions (Bailey & Alfonso, 2005).
- New media and technologies like blogs, wikis, media-sharing applications, and social-networking sites can become vehicles for informal conversations, collaborative content generation, and knowledge sharing that give learners access to a wider range of ideas and representational skills to demonstrate their learning. Creating the access to, and ability to use, these technologies is as important as developing the sites and programs themselves.
- Service learning integrates community service experiences with academic instruction as it focuses on critical reflective thinking and civic responsibility (Robinson, 1995). Students move from mediated sources of information to experiential learning in which they practice skills and roles.
- Learning communities also seek to build social capital on campus through shared academic experiences. Learning communities enroll student cohorts in clusters of courses, often around a central theme, thus promoting a deeper academic inquiry, cooperative learning opportunities, and relationships with both peers and faculty. For students with many other demands on their time, this model works well when it provides an engaging, motivating environment that does not require them to spend time in activities outside of classes. Learning communities have the most empirical evidence of success (Bloom & Sommo, 2005).

Despite earnest effort and significant resource allocation, improved outcomes are modest. A major flaw in most programs is the well-intentioned though misguided “righting reflex” (Miller & Rollnick, 2002). The righting reflex cuts directly to the corrective action, without creating an understanding of what issues are being addressed, nor explaining why the situation or condition occurred. Many programs operate without intentional understanding of what an under-resourced student is—and why this occurs—before prescribing how students should change. Being told what to do without understanding why one is doing it provokes resistance and fosters distrust of and alienation from the institution and is evidenced in high drop-out rates. As students demand greater control over their learning, institutions struggle to engage the commuter student and the working student in the extracurricular activities that create social networks of peers and mentors necessary for life’s success.

There is a need to make higher education more learning-centered so that the educational experience increases in value and promotes a more genuine learner agency that teaches autonomy, engagement, and mastery. To do this, higher education must surmount a wide range of hurdles and organizational barriers that under-resourced students experience between the real world and their academic community.

MAKING SENSE OF IT ALL AND PUTTING THE PIECES TOGETHER

A new model of integrated strategies focused on a better understanding of the pedagogy for working with the outcomes of poverty (Becker, Krodel, & Tucker, 2009) offers three components for the postsecondary environment by addressing the needs of the under-resourced student and implementing practices responsive to the changing expectations for higher education:

- I. *Getting Ahead, College Edition*—a one-semester curriculum to accelerate students' progress towards being college-ready. Adapted for the college environment, the curriculum can stand alone or be integrated into civic-engagement strategies in III below (DeVol, 2009).
- II. Teaching strategies that account for the effects of poverty and build relational and cognitive skills (Becker et al., 2009).
- III. A means of creating high-impact civic engagement that amplifies the effect of experiential learning and can generate systemic change (Becker et al., 2009).

Using the causes of poverty as framework and economic class as lens, students and faculty develop a new landscape within which to build knowledge, skills, relationships, and resources.

The model intends to transform student learning and create a vibrant, participatory environment that taps students' problem-solving skills and supports student persistence and completion. Students are no longer viewed as passive recipients of knowledge but rather as active producers of knowledge, given the social and economic reality in which they are operating, a world much different from that of their professors. The system works for today's students who seek greater control of their own learning, and it provides a context—economic class—that is relevant to everyone on campus.

This practical approach allows staff persons to apply and practice what they seemingly “already know” but had not previously given meaning to. The model exceeds the 16 Student Learning and Development Outcome Domains set forth by the Council for the Advancement of Standards in Higher Education (Dean, 2006). In addition, it can address several broad accreditation standards, including academic performance, community engagement, and diversity.

I. Adapting the *Getting Ahead* process for college

Investigating the application of the *Getting Ahead* process and workbook in a postsecondary environment revealed a strong alignment with adult learning theory. For example, the hands-on *Getting Ahead* curriculum is intensely engaging for students because it allows them to investigate and discuss with peers an all-important topic: their lives, their families, and the impact of economic class. The *content* includes the poverty research continuum, hidden rules and resources, and theories of change. The *process* takes students from the situated, concrete learning style common in under-resourced environments (Lave & Wenger, 1991) to being able to use conceptual frameworks to analyze abstract and ill-defined issues, as is expected for educational and work/life success (Brown, Collins, & Duguid, 1989).

Situated learning occurs in a context (in this case, the context of economic class) within a set of relationships and social norms (the classroom). In the beginning, the purpose is not to learn *from* talk as a substitute for meaningful participation but to learn *to* talk as the key to legitimate participation (Lave & Wenger, 1991). This participation creates a shared repertoire of communal routines, behaviors, and vocabulary (Wenger, 1999) and fosters the relationships and extra support needed to move to formalized or decontextualized education. Pedagogically, a facilitator guides the group’s co-investigation of the four causes of poverty (choices of the poor, absence of human and social capital in the community, exploitation, and political/economic structures) and their effects on individuals and society. Tacit knowledge bases—including how to use hidden rules of poverty, middle class, and wealth; how to negotiate; and how to build resources—are explored. Students translate their thinking from concrete to abstract by building mental models or paradigms. The facilitator works collaboratively to review, edit, and apply quality-assurance approaches to students’ work through learning opportunities that draw on Surowiecki’s “wisdom of learning from the crowds” theory (Surowiecki, 2005). The process creates learner-generated content that is not prescribed by teachers acting as dispensers of information but rather content discovered and created by the students as they become actively engaged in the construction of the knowledge base they perceive to be needed in their

real world. Indeed, this approach to learning prepares students for their new roles in school and society *by using life itself as the context for education rather than positioning education as the preparation necessary for life.*

Getting Ahead is designed to create spaces of cognitive dissonance where new learning can occur, then offers concrete strategies that provide a means to act upon knowledge and create a new “future story.” Long-term assignments involve assessing and planning to develop resources, learning about exploitation, and analyzing political/economic structures that influence not only wealth but all strata of economic class. Community assessment exercises encourage debate about the causes and outcomes of poverty—and strategies to address institutionalized classism—as opposed to fixating on and playing “the blame game.” Upon completion, students are likely to have moved from the concrete, situated learning approach developed while growing up in a low-resource environment to reasoning with causal models at ever higher (and deeper) levels of abstraction. Students are thereby prepared to participate at the planning tables of middle-class institutions, such as schools and businesses. This material and the investigative process lend themselves to service learning and community engagement strategies—and support new learning environments and ways of organizing higher education.

Adapting Concepts from *Getting Ahead* to the New Practices and Assumptions in Higher Education

New Paradigms	Operationalized via the <i>Getting Ahead</i> Curriculum
Contextualized and situated learning connects students to each other and the community in the learning tasks	<i>Getting Ahead</i> uses economic class as the context for a cooperative investigation that is personally relevant and evidenced in the community
Students seen as problem solvers and creators	<i>Getting Ahead</i> moves students from reactive problem solving to proactive planning, knowledge creation, and “future story”
Supported, relational, cooperative learning environments	<i>Getting Ahead</i> investigative group process provides relationships with a network of peers, faculty, and staff
Student retention, persistence, achievement, and completion as top priorities	<ul style="list-style-type: none"> • Resource assessment provides affirmation and leads to clear personal plans to build resources for academic achievement • Creates “future story” • Relational learning increases social capital • Social network provides support and linkage to services

Getting Ahead also prepares students in certain professional majors (social work, nursing, education, etc.) for work with clients and co-workers from generational poverty. Within disciplines, these theories are relevant as well (for example, in the history of jazz or certain literary genres).

II. Learning-centered teaching strategies that account for the effects of poverty and build relational and cognitive skills

More can be done to improve education by improving the effectiveness of teachers than any other single factor (Wright, Horn, & Sanders, 1997). Professional development based on an understanding of the effects of economic class transforms faculty understanding of how instructors teach—and, consequently, how students react, respond, and *learn*. That foundation then informs the application of teaching strategies for developmental education, first year, and some content courses. Two major aspects of the teaching strategies are to:

- Build bridging social capital for students (the relationships with people outside one’s personal circle who can help one achieve goals)
- Build language resources and cognitive ability, as well as other resources

Relational learning models based on the work of Greenspan and Benderly (1997) and Marzano (2007) might help instructors and staff develop the bridging social capital so essential to student success. When faculty learn to balance support, insistence, and high expectations—as well as to value students’ problem-solving abilities without diminishing standards—faculty, in turn, are rewarded with more successful students and improved teaching assessments.

Cognitive teaching strategies based on Feuerstein (1980) and Payne (2003, 2008) may help students build mental resources and “teach students how to learn.” Students actually build the cognitive structures necessary to support abstract learning at the postsecondary level. For example, mental models create bridges between the concrete thinking of home and neighborhood and the abstract thinking of school and technical/professional work. Other examples of classroom techniques include in-class assessments of student learning using integrated audience response systems during class to immediately assess student learning, providing grading rubrics when the assignment is given, and directly teaching and grading the processes needed for task completion.

Learning-Centered Strategies That Support New Paradigms in Higher Education and Improve Outcomes

New Paradigms	Teaching Strategies
Serving under-resourced students with multiple learning barriers, less-than-ideal background preparation, and competing demands brought on as a result of highly complex life conditions	<ul style="list-style-type: none"> • Teaching strategies build cognitive structures • Mental models build abstract thinking • Exploring tacit knowledge bases, such as using hidden rules and building resources, moves students toward economic stability • Relational learning models balance support, insistence, and high expectations
Accreditation based on learner outcomes	<ul style="list-style-type: none"> • Teaching strategies address cognitive deficits caused by poverty • Investigative process engages, motivates, and improves retention
Faculty as learning facilitators using discipline-specific expertise to engage students in supported, relational, and cooperative learning environments	<ul style="list-style-type: none"> • Professional development builds understanding of the hidden rules of class and how poverty affects resources, cognitive development • How to balance support, insistence, and high expectations

III. A means of creating high-impact civic engagement that amplifies the effect of experiential learning and can generate systemic change

Ultimately, education prepares students for participation as citizens in the economic/political structures that create our society—and which can be a cause of poverty. The theories of economic class offer program ideas that support service learning and civic engagement strategies in a robust and rewarding way. The framework also supports the new demands of accreditation bodies for the institutionalization of student engagement and what practitioners (Valverde, 2008) are calling the acquisition of “life journey” skills, attitudes, and mindsets that all individuals need to tap as they evolve and develop from childhood to adulthood. For example ...

Getting Ahead might be employed as the core context for a learning community. Partnering it with other courses (composition, developmental reading sociology, anthropology, etc.) that would require additional reading related to economic class improves the quality of *Getting Ahead* group discussions, which in turn would improve the student’s learning in the partnered course. A composition course affords the opportunity to translate the casual group discussion into formal register, supported by student research, thereby building language skills required for success in education and technical/professional careers.

In subsequent semesters, service learning and community engagement assignments can then be addressed by student teams drawn from these learning communities. In essence, economic class provides the conceptual framework within which to analyze and act. Using the campus as the context for the investigation of community resources could create a salutary secondary impact on the institution's student services. Students might investigate and assess the school's capacity to serve under-resourced students, thereby contributing solutions for the redesign of programs. In such an educational construct, students experientially learn skills that prepare them to "sit at the table" and participate in planning—skills, as noted previously, that are necessary for responsible civic engagement.

If the faculty and staff have been trained in theories of economic class and cognitive and relational teaching models—and students investigate economic class in a learning community that includes community engagement assignments within the campus setting—then the institution has created an environment that provides under-resourced students authentic access to the power structures that govern institutions. It also has created the conditions for constructive change.

In such a scenario, the campus itself becomes the socioeconomic case study. Students practice skills and engage in the act of planning within an actual institution. All this can happen in class or as assignments in a course with content-appropriate research topics. Meanwhile, the institution taps into the wealth of student knowledge and ideas that otherwise would go unrecognized and unused. Examples of institutional solutions offered by postsecondary students who have participated in the *Getting Ahead* curriculum include:

- Providing childcare on or near campus
- Web-based orientation and course delivery
- Accessible, student-friendly scheduling of classes
- E-mail buddies/mentoring
- Entire family outreach
- Meeting one on one with a faculty/staff adviser once every two weeks (either in person or through e-mail)
- Recorded classroom instruction available in electronic formats for review
- Availability in the library/media center of exemplary student products/completed assignments

Educating teaching and support staff in relational and cognitive teaching strategies, combined with the *Getting Ahead* curriculum and investigative process, can become a major asset for institutions adapting to shifting demographics and educational paradigms.

Adapting *Getting Ahead* Concepts to New Paradigms for Civic Engagement Practices in Higher Education

New Paradigms	High-Impact Civic Engagement
Intentional, structured development of human and social capital for achievement, sustainability, and prosperity; institutional outcomes become connected to community sustainability	<ul style="list-style-type: none"> • Teaching strategies + <i>Getting Ahead</i> curriculum intentionally teaches hidden rules of middle-class success behaviors through co-investigation • Education = economic development = sustainable communities
Knowledge created through service and community engagement models involving multiple individuals from diverse backgrounds, formal planning documents, and work for a given cause	<ul style="list-style-type: none"> • Multi-layered model incorporates <i>Getting Ahead</i> curriculum + learning community + service learning focused on the outcomes and causes of poverty; is highly relevant to communities • Students, who have been prepared as leaders and change agents, inform institutional change; graduates, prepared as leaders, drive community development and economic growth
High accountability	Students are empowered to hold institutions accountable and are prepared to participate in planning/strategizing

BUILDING THE SYNERGY

In the new postsecondary world being shaped by the emergent demography of under-resourced students, there is likely to be a continued blending of formal and informal learning. This model synthesizes the attributes of personalization, active participation, and new content creation that give value to the world of the under-resourced student, resulting in educational experiences that are far more productive, engaging, and community-based. Application of these ideas in higher education will contribute to a productive, learning-centered environment in which faculty and staff skills develop alongside the students. This framework builds beneficial partnerships and also addresses some of the more daunting issues related to accreditation.

For more information, visit www.ahaprocess.com or call (800) 424-9484. aha! Process offers approaches that can be integrated at multiple levels to improve performance; inform students, staff, and educators; and help educators adapt to new paradigms in postsecondary education.

Authors: Karla M. Krodel, M.B.A., Youngstown State University, Youngstown, OH; Karen A. Becker, Ph.D., Youngstown State University, Youngstown, OH; Henry T. Ingle, Ph.D., San Diego Community College District, San Diego, CA; and Susan S. Jakes, Ph.D., North Carolina State University, Raleigh, NC.

Bibliography

- Bailey, T. R., & Alfonso, M. (2005). Paths to persistence: An analysis of research on program effectiveness at community colleges. *New Agenda Series* (Vol. 6, No. 1). Indianapolis, IN: Lumina Foundation for Education.
- Bailey, T., Jenkins, D., & Leinbach, T. (2005). *Is student success labeled institutional failure? Student goals and graduation rates in the accountability debate at community colleges*. Retrieved July 8, 2008, from http://www.achievingthedream.org/_images/_index03/IsStudentSuccess.pdf
- Becker, K., Krodel, K., & Tucker, B. (2009). *Understanding and engaging under-resourced college students: A fresh look at economic class and its influence on teaching and learning in higher education*. Highlands, TX: aha! Process.
- Berg, J., Berquam, L., & Christoph, K. (2007). Social networking technologies: A 'poke' for campus services. *Educause Review*, 42(2), 32–44.
- Biswas, R. (2006). *A supporting role: How creditors can help promote the success of community college students*. Retrieved July 8, 2008, from http://www.achievingthedream.org/_pdfs/_publicpolicy/AccredSuccess.pdf
- Bloom, D., & Sommo, C. (2005, June). *Building learning communities: Early results from the Opening Doors demonstration at Kingsborough Community College*. Retrieved July 8, 2008, from <http://www.mdrc.org/publications/410/overview.html>
- Brock, T., & Richburg-Hayes, L. (2006). *Paying for persistence: Early results of a Louisiana scholarship program for low-income parents attending community college*. Retrieved July 8, 2008, from <http://www.mdrc.org/publications/429/full.pdf>
- Brock, T., Jenkins, D., Ellwein, T., Miller, J., Gooden, S., Martin, K., et al. (2007, May). *Building a culture of evidence for community college student success: Early progress in the Achieving the Dream Initiative*. Retrieved July 8, 2008, from <http://www.mdrc.org/publications/452/overview.html>
- Brown, J., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32–42.
- Dean, L. (Ed.). (2006). *CAS professional standards for higher education*. Washington, DC: Council for the Advancement of Standards in Higher Education.
- DeVol, P. (2004). *Getting ahead in a just-gettin'-by world: Building your resources for a better life*. Highlands, TX: aha! Process.
- Downing, S. (2003). *On course: Strategies for creating success in college and life*. Boston: Houghton Mifflin.
- Ehrlich, T. (2005, July). *Service learning in undergraduate education: Where is it going?* Retrieved July 9, 2008, from <http://www.carnegiefoundation.org/perspectives/sub.asp?key=245&subkey=1251>
- Feuerstein, R. (1980). *Interventional enrichment: An intervention program for cognitive modifiability*. Glenview, IL: Scott, Foresman & Co.
- Freire, P. (1970). *Pedagogy of the oppressed*. New York: Herder and Herder.
- Greenspan, S. I., & Benderly, B. L. (1997). *The growth of the mind and the endangered origins of intelligence*. Reading, MA: Addison-Wesley.

- Hill, E. (2008). *Back to basics: Improving college readiness of community college students*. Retrieved July 8, 2008, from http://www.lao.ca.gov/2008/edu/ccc_readiness/ccc_readiness_0608.pdf
- Kirsch, I., Braun, H., Yamamoto, K., & Sum, K. (2007). *America's perfect storm: Three forces changing our nation's future*. Princeton, NJ: Educational Testing Service, Policy Information Center.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, England: Cambridge University Press.
- Lenhart, A., & Madden, M. (2005). *Teen content creators and consumers*. Retrieved July 9, 2008, from http://www.pewinternet.org/pdfs/PIP_Teens_Content_Creation.pdf
- Martorell, F., & McFarlin, I., Jr. (2007). *Help or hindrance? The effects of college remediation on academic and labor market outcomes*. Retrieved July 9, 2008, from http://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=NASM2007&paper_id=726
- Marzano, R. (2007). *The art and science of teaching: A comprehensive framework for effective instruction*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Miller, W., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change*. New York: Guilford Press.
- O'Reilly, T. (2005, October 1). *Web 2.0: Compact definition?* Retrieved July 9, 2008, from <http://radar.oreilly.com/mt/mt-search.cgi?IncludeBlogs=27&search=compact+definition>
- Parsad, B., & Lewis, L. (2003). *Remedial education at degree-granting postsecondary institutions in fall 2000*. Retrieved July 8, 2008, from <http://nces.ed.gov/pubs2004/2004010.pdf>
- Payne, R. (1996, 2005). *A framework for understanding poverty* (4th rev. ed.). Highlands, TX: aha! Process.
- Payne, R. (2008). *Under-resourced learners: 8 strategies to boost student achievement*. Highlands, TX: aha! Process.
- Payne, R. K., & DeVol, P. E. (2005). *Toward a deeper understanding of issues surrounding poverty: A response to critiques of A Framework for Understanding Poverty*. Retrieved July 8, 2008, from http://www.ahaprocess.com/files/Deeper_Understanding_of_Framework_2005.pdf
- Payne, R., DeVol, P., & Dreussi Smith, T. (2006). *Bridges out of poverty: Strategies for professionals and communities* (3rd rev. ed.). Highlands, TX: aha! Process.
- Robinson, G. (2001). *Community colleges broadening horizons through service learning, 2000–2003*. Retrieved July 8, 2008, from <http://webadmin.aacc.nche.edu/Publications/Briefs/Documents/05012001broadening horizons.pdf>
- Surowiecki, J. (2005). *The wisdom of crowds*. New York: Anchor.
- Upcraft, M., & Gardner, J. (1989). *The freshman year experience*. San Francisco: Jossey-Bass.
- Valverde, L. (Ed.). (2008). *Latino change agents in higher education: Shaping a system that works for all*. San Francisco: Jossey-Bass.
- Wenger, E. (1999). *Communities of practice: Learning meaning and identity*. Cambridge, England: Cambridge University Press.
- Wright, P., Horn, S., & Sanders, W. (1997). Teachers and classroom heterogeneity: Their effects on educational outcomes. *Journal of Personnel Evaluation in Education*, 11(1), 57–67.