In Brief

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Measuring Success: David Conley's College Readiness Framework and the Illinois College and Career Readiness Act

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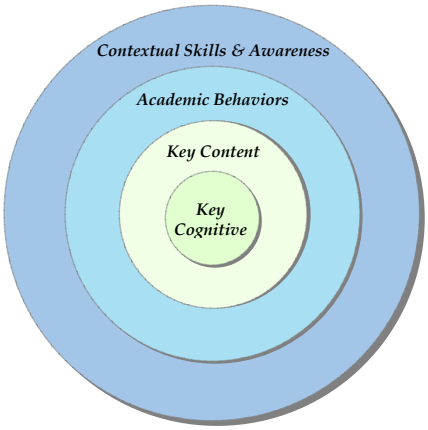
The issue of college readiness is receiving increased attention and financial backing from various institutions and funding agencies, both public and private. As states move toward the adoption of college and career readiness standards, it is vital to better define what is meant by college readiness. As noted educational researcher David Conley (2010) argues, the idea that students should graduate from high school with the knowledge and skills necessary to successfully pursue college and career is not a novel concept. What is new, however, is the systemic shift to preparing all students for formal learning opportunities beyond high school. Paramount to achieving this goal of having every student graduate high school ready to pursue college and career is measuring the impact of college readiness programs and policies on student transition beyond high school, and finding useful models and frameworks that can help the state and local institutions (secondary and postsecondary) to guide this important work.

Like a growing number of scholars and policy makers, Conley (2007) defines college readiness as the level of preparation a student needs to succeed without remediation in credit-bearing coursework at the postsecondary level. A collection of instruments and measures can be used to determine whether a student is adequately prepared to enroll in postsecondary level course work, including the high school grade point average and class rank percentile, standardized test scores, and performance in particular high school college preparatory courses such as advanced placement (AP). However, as Conley (2007, 2010) argues, high school graduation requirements often serve as a poor indicator of postsecondary preparation and future performance because they are not aligned with college curriculum and instruction. A key indicator of this misalignment is evident in the number of remedial courses high school graduates must complete when they arrive on college campuses.

College readiness (or the lack thereof) can be measured by the number of remedial courses students must complete at the college level, and student enrollment in these courses is rising (Atwell, Lavin, Domina, & Levey, 2006; NCES, 2000, 2004). According to Conley (2010) a growing number of states' initiatives are emerging to reduce the number of students enrolling in remedial coursework by working to align high school graduation expectations with the requirements of college and careers. As such, educators and policymakers are searching for frameworks to guide the development of college and career readiness programs and measure their effectiveness. This exploration is not without challenges, however, because the emerging standards for college readiness can be difficult to establish and maintain (Callan, Finney, Kirst, Usdan, & Venexia, 2006). Determining what every student needs to know to be successful in college and careers is a complex undertaking, and Conley's research indicates that a sole concentrated focus on content mastery falls short of adequately preparing students to be college ready.

Figure 1: Facets of College Readiness



Instead, Conley (2007, 2010) proposes a college readiness model predicated on the contextual nature of college success by stressing the importance of students' cognitive capabilities and behavioral attributes. In addition to content knowledge in core academic subjects, Conley argues that students must be well versed in critical thinking and problem solving, and must also possess knowledge about how to navigate the collegiate landscape. His college readiness model consists of four interactional components that students must possess in order to successfully complete credit-bearing coursework: key cognitive strategies, key content, academic behaviors, and contextual skills and awareness. When taken together, these elements create a model by which to interpret programs and policies in the name of college readiness (see Figure 1).[1]

[1] Conley, D. T. (2009, Spring). Rethinking College Readiness. *Update on Research and Leadership, 20*(2). Champaign, IL: Office of Community College Research and Leadership, University of Illinois.

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The purpose of this brief is to understand the Illinois College and Career Readiness (CCR) Act in light of Conley's college readiness model. Although not mentioned specifically by the Illinois statute, evaluation results gathered by our Office of Community College Research and Leadership (OCCRL) show alignment between a number of programs and services that Illinois' CCR pilot sites are implementing and Conley's framework. There are also areas where Illinois' pilot sites are not aligned, suggesting opportunities to explore what is meant by college and career readiness and consider whether adopting additional dimensions of Conley's model would help the state move toward the goal of preparing all students for college and careers. This brief is derived from the first- and second-year evaluation reports, both available on the OCCRL website at *http://OCCRL@illinois.edu*. A description of our evaluation methods is provided at the end of this *BRIEF*.

College and Career Readiness Act of Illinois

Concerned with the rising remediation rates among high school graduates entering college, the Illinois General Assembly passed the College and Career Readiness Pilot Program (Public Act 095-0694) in 2007. The intention of this legislation is to ensure that students are prepared for successful transition from high school to college. The Act states:

> [T]here is a direct and significant link between students being academically prepared for college and success in postsecondary education. Many students enter college unprepared for the academic rigors of college and require noncredit remedial courses to attain skills and knowledge needed for regular, credit course work. Remediation lengthens time to degree, imposes additional costs on students and colleges, and uses student financial aid for courses that will not count toward a degree.

The goals of Illinois' CCR Act include assisting students to improve their college readiness skills, to create collaborative partnerships between high schools and community colleges to align standards, and to develop evaluation processes to measure the effectiveness of the emerging CCR programs. During the initial years of the CCR program, the pilot sites have implemented various strategies to address the goals of the CCR Act, but implementation is still early. More opportunities to implement CCR exist.

Conley's Model of College Readiness and Illinois' CCR Pilots

In considering various strategies employed by Illinois' CCR pilot sites, our evaluation found several similarities between the local initiatives and the dimensions of Conley's (2007) college readiness model. For example, development of **Key Content Knowledge** is at the core of all current initiatives to enhance students' college readiness. Key content knowledge includes skills, concepts and principles foundational to the academic subject. Since year one of Illinois' CCR Act, formal remedial instruction has been offered by all of the pilot sites (see Table 1). While the length of this instruction has varied from a two-week intensive remedial workshop to a semester-long program, the general goals of these courses are consistent: to remediate basic concepts and principles and bring the student to college level in the core academic subject of math or English, or in some cases both. All of the pilot sites use a diagnostic test to assess what students know and then place them in the remedial course that is consistent with their test performance and the community college's placement policy. Given the high number of students who place into developmental math and the perceptions of many of the local practitioners that the diagnostic test in math is a fairly valid and useful means of placing students, most pilot sites focused their energies on math. However, a few community colleges focused on English including one community college's English faculty developing its own reading and writing diagnostic instrument. The survey results from our evaluation indicated that students felt that these remedial courses had helped to improve their understanding of key concepts. Also, although results are still preliminary, pre- and post-test scores reveal an overall increase of students' skills in several of the sites.

An important part of developing the Key Content Knowledge dimension is working to align the curriculum between high school and community college. Most pilot sites are facilitating conversations between high school and community college faculty, and all sites plan to provide additional support and spaces for these important conversations in the future. At one pilot site, high school math faculty took the ACT COMPASS test so that they could better understand their students' experiences as college-placement test takers. After the test, an instructor remarked that he now understood how the test works and he planned to modify his syllabus accordingly. At another site, high school and community college faculty graded a set of papers from a 12th grade English class and these evaluations were discussed by the joint faculty to determine the extent of commonality in assessment and grading across the levels. Administrators commented that the faculty who were involved in these discussions reported very positive perceptions of the alignment activities, including seeing improved communications across the secondary and postsecondary levels that have contributed to the establishment of closer faculty-to-faculty relationships.

A second facet of Conley's college readiness model is **Academic Behaviors**. Academic behavior includes the ability of a student to be organized, possess study skills, and work within a group dynamic. Our evaluation found a few examples of Illinois' pilot sites addressing academic behaviors, including coaching on academic behaviors to compliment the subject-based content courses. Lessons in study management, note-taking, and utilizing study groups were formalized and mandatory at some pilot sites and informal and optional at others. Formalized instruction was often led by an academic professional from an advising or student development office and students were given one college credit for completing a course that addressed this facet of college readiness, similar to 'College 101' courses found at many postsecondary institutions. Based on feedback from a small group of students interviewed at each site, as well as results from survey data that we gathered from all students,

Table 1. Alignment of College and Career Readiness (CCR) Pilot Site Activities with Conley's (2007) College Readiness Framework

CCR Site	Pilot Activities Addressing Students' College Readiness	Key Content	Contextual Skills and Awareness "College Knowledge"	Academic Behaviors	Key Cognitive Strategies
John A Logan	ASSET testing at high schools for college placement and remedial diagnosis	X			
	Spring workshops – "Get Ready for College" boot camp for high school juniors and seniors (5 Saturdays, 2 hours per day)	X			
	High School summer interventions for high school juniors and seniors (format varied by high school)	X	X	X	
	JALC summer intervention for juniors and seniors (10 days, 5 hours per day during summer school)	X	X	X	
	CCR Guides for high school juniors and seniors		X	X	
Moraine Valley	Information sessions targeting three high schools in District 218	X			
	Summer Experience Program for AY09 high school graduates [students integrated into three developmental math courses, plus College 101 (1-college credit) as part of summer school]	X	X	X	
Shawnee	ACT Test Prep Workshops for students entering senior year and recent high school graduates (Egyptian - 6 weeks, 2 days for 2 hours; Meridian – 1 week, 3 days during spring break)	X			
	High School Math Enrichment program (format varied by high school)	X			X
	Developmental Math (041 - Algebra) – summer program	X	X		
	Combined Developmental English I and II – summer program	X	X		
South Suburban	The AIM Program – 8-week remedial math and English/reading cohorts (students select to participate in one cohort), plus group guidance counseling and Structured Learning Assistance (SLA) – 3 school districts; 6 high schools	X	X	X	
	Work-study experience		X	X	
Southwestern Illinois	College Success Intervention (CSI) Program – 5 high schools	X	X	X	
	Student workshops – 3 high schools		X	X	X
	High School Writing project – Writing Ambassador Program (2 high schools)			X	
	High School Math project – Junior COMPASS testing (5 high schools)	X			
	High School Senior Math project (1 high school)	X			

students enrolled formalized courses on academic behaviors appreciated the courses and they attributed an enhanced self-perception of their own readiness for college to these courses.

A third component of Conley's college readiness model is **Contextual Skills and Awareness** and what Conley refers to as "college knowledge" (p. 72). This particular dimension represents the information about the campus system and norms necessary for successful academic and social navigation. Similar to the dimension on academic behaviors, contextual skills and awareness was sometimes integrated into 'College 101' courses offered by the community college partner involved in the pilot site. Through classroom observations, we witnessed some instructors providing information about navigating the college culture, including specifics about degree programs, the number of credits needed to graduate and/or transfer, and the mission of various departments and offices on campus. Students participating at pilot sites that offered this course indicated having this information before they started college in the fall semester after high school graduation boosted their confidence. Contextual skills and awareness provided not only academic confidence, but social confidence as well. Students discussed how they became the 'go-to' person for information among peers who did not participate in CCR, and they served as a guide to specific academic and cultural knowledge not available to many students during their initial entry into postsecondary education.

The fourth dimension of Conley's college readiness model is **Key Cognitive Strategies.** Cognitive strategies include intellectual development over a period of time that leads to capabilities essential for college-level work. Examples of these key cognitive strategies include problem solving, interpretation, precision, and accuracy. Our evaluation results suggest this dimension of Conley's model is least evident of all four dimensions in Illinois' pilot sites. Whereas a few instructors associated with CCR programs pointed to instructional goals and classroom strategies that emphasize critical thinking skills, none of the CCR program leaders cited cognitive strategies, including critical thinking, as a primary goal to their CCR pilots. Our team noted that a few instructors aligned academic knowledge with critical thinking, but we heard few references to this idea from program leaders or students during our site visits. The lack of attention to this facet of Conley's model is reflected in students' survey results wherein they rated confidence in their development of critical thinking skills lower than their comprehension of key academic content and concepts.

Possibilities for A Multidimensional College and Career Readiness Approach in Illinois

Most of Illinois' CCR pilot sites, unknowingly in some cases, established meaningful connections to some facets of Conley's college and career readiness model. As this paper shows, most sites adopted one or two dimensions, and some even more. However, none of the pilot sites set out to implement all four dimensions in a deliberate way. As the state of Illinois moves forward, it would be useful to consider ways for Illinois' sites to implement Conley's model, including the four dimensions of college and career readiness, and measure the progress the sites make to create a comprehensive approach that could be scaled up state-wide.

Our evaluation suggests the core of Illinois' CCR efforts is focused on key content knowledge, and we concur that this is a good place to start. However, as the initiative moves forward, it will be useful to examine and promote connections between key content knowledge and key cognitive strategies. Subject-based courses such as math, English, and science that the state is considering adding to its CCR initiative should emphasize the active engagement of students in opportunities to develop knowledge and skills within a particular problem-solving context. This could include using examples from students' lives in developing narrative math problems or English writing assignments, thereby enriching the relevance and application of the knowledge to students' own experiences and interests. Application of this knowledge to career exploration and career development would enhance career readiness, which is an aspect of CCR that is often overlooked.

Also, according to Conley (2007), the dimension of key content knowledge is useful for students because it often produces short-term successes. By building upon content knowledge, the focus can shift to key cognitive strategies that emphasize long-term results through the development of strategic thinking and practical application, a strong asset for students as they move through remedial courses and towards college-credit classes. As a result, students may be attracted to a comprehensive approach to CCR that includes but also moves beyond the introduction or reintroduction of key content knowledge. Moreover, infusing the subjective, diverse experiences of students with the objective, formulaic concepts that are often evident in math and English (for example, grammar), may stimulate students' interest and engagement and foster both short-term success in initial remedial courses and long-term success as students move closer to and enroll in college-credit courses.

Moreover, improved methods of evaluating student progress are needed in the form of longitudinal data collection that provides a comprehensive assessment of the influence and impact of CCR programs on student success, beyond pre- and post-testing. To their credit, Illinois' pilot sites are beginning to track CCR students and evaluate their short-term gains, but more work needs to be done to align local and state data systems to gather longitudinal data and measure students' long-term outcomes.

In addition, if a common College 101 course that emphasizes academic behaviors and contextual skills and awareness could be implemented consistently by all of the pilot sites, it would be possible to evaluate its impact on Illinois' evolving CCR model. A course that allows students to infuse academic habits with key content knowledge and cognitive strategies may offer students' immediate advantages in terms of their readiness for collegiate studies. For example, consider the potential of an English instructor emphasizing the use of the Writing Center in English 100 at the same time an academic professional is introducing the mission of Academic Support Services. This aligned, comprehensive

approach could help students to make connections between their current level of mastery of content in their remedial courses and the level of mastery they need to enroll in college-level coursework. The approach attempts to counteract the problems that students experience when the sole focus is on enhancing academic behaviors with little attention to the introduction of institutional practices and norms that can enhance students' future success in college. As a result, students may feel marginalized – consider the frustration we all feel in having tools without a map – and withdraw from CCR programs that are not addressing their comprehensive needs. No doubt, an intervention that weaves together individual academic responsibility with 'college knowledge' does not guarantee persistence, but it has the advantage of providing students with the opportunity to be co-facilitators in their learning and development.

While there is great potential for Conley's model to improve CCR in Illinois, we suggest that the framework would be enhanced with an explicit acknowledgment of the varied cultural references and experiences held by diverse student populations. This acknowledgment is necessary as it challenges a standardized, one size fits all, approach to CCR initiatives. Just as knowledge of postsecondary contexts is important for students, teachers and administrators must recognize the varied experiences of students. We suggest incorporating culturally responsive teaching to improve instructional delivery associated with key content knowledge and cognitive strategies. Gay (2002) defines culturally responsive teaching as using the cultural knowledge and prior experiences of diverse students to make learning more effective. Culturally responsive teaching is based on the premise that "when academic knowledge and skills are situated within the lived experiences and frames of reference of students, they are personally meaningful, have higher interest appeal and are learned more easily and thoroughly" (p. 106). Further, every subject matter has a place in culturally relevant teaching; for example, math lessons embedded in everyday contexts or readings that reflect the social history of the community. In particular, for students coming from unsuccessful experiences in traditional pedagogical methods, culturally relevant teaching may be particularly valuable and spark proactive engagement.

Conclusion

In 2007, the state of Illinois undertook the daunting task of attempting to reduce remediation that is offered by community colleges. There is no question that Illinois' investment in the CCR Act has produced diverse intervention strategies in communities across the state, and that the pilot sites that have stepped forward to pioneer these strategies should be commended for their initial efforts. By continuing to implement and evaluate these interventions, the pilot sites will continue to evolve in their efforts to assist students to be college and career ready when they complete high school. One means of furthering the state's efforts even more is to consider incorporating a theoretical framework such as the one proposed by David Conley (2007, 2010) to promote college and career readiness. In particular, Conley's model reveals the complexity of developing successful approaches to college and career readiness; it clarifies the range of issues to consider as institutions design, implement, evaluate and readjust program initiatives; and it offers ways to define core concepts that require systematic evaluation to determine students' short- and long-term outcomes.

Additionally, adopting a model such as the one proposed by Conley may encourage systematic reform that spread from the CCR pilot sites to state-wide implementation. With increased attention being paid to college and career readiness, institutions participating in Illinois' CCR Act have a unique opportunity to connect current and developing practices with emerging conceptual frameworks and provide much-needed leadership on these critical issues. Also, connecting theoretical- and research-based practice with evaluation measures is underdeveloped within education policy and especially underdeveloped relative to college and career readiness. This connection would further support Illinois' pilot sites as they continue be on the forefront in addressing college readiness issues. A common CCR framework would also allow other institutions (secondary and postsecondary) across the state to replicate programs and test their effectiveness in supporting enhanced student outcomes in their own communities. Continuing down the path that the state assembly began in 2007 with passage of the CCR Act, Illinois is positioned to be a national leader. By building on the promising programs and practices that the state's CCR pilot sites have begun and aligning these efforts with a common framework on CCR, the state can position itself to support a state-wide effort to ensure that more students, possibly eventually all students, complete high school college and career ready.

Evaluation Methods

Five community colleges were involved in the first and second year of the CCR evaluation (2007-08 and 2008-09): John A. Logan College, Moraine Valley Community College, Shawnee Community College, South Suburban College, and Southwestern Illinois College. (During the third year of the project, College of Lake County and Kankakee Community College were added to the project, but results discussed in this brief focus on the first two years of the project and the original five community colleges.) During years one and two, OCCRL's evaluation team conducted site visits to the five pilot sites. A number of data collection methods were used in conjunction with the site visits, including personal interviews (one-on-one and small group), focus groups with students, and classroom observations to gain an understanding of the programs. Our evaluation team also asked students to complete a paper-pencil survey about their high school educational experiences, their perceptions of college and their readiness to make the transition from high school to college, and their background characteristics. Both reports are available on the OCCRL website at: http://occrl.illinois.edu/publications/projects/ccr

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PL 095-0694, Section 5 of the Public Community College Act, Sec. 2.24, College and Career Readiness Pilot Program.

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