On Research and Leadership
UPDATE

University of Illinois at Urbana-Champaign

Vol. 22, No. 1 Fall 2010

Editor's Note: This edition of *UPDATE* revolves around the phenomenon of bridge programs, that are designed to help students transition into postsecondary education and employment. The issue begins with thought-provoking insights on student success from Dr. Rebecca Cox. Dr. Cox draws her comments from her new book, *The College Fear Factor*. Following this article, Jason Taylor positions bridge programs in the educational literature and highlights the variation in bridge program design and offerings. To elaborate on the implementation and design of bridge programs, three programs are described from the perspective of local practitioners. These three programs represent a variation in bridge program design, purpose, and targeted student populations. The final article is a summary of results from a recent survey conducted by Jason Taylor and Tim Harmon of OCCRL on bridge instruction in Illinois. Results of the survey are intended to help educators design bridge programs that result in their students transitioning successfully into college and employment. We are grateful to the many authors who contributed to this edition, and we hope readers will find the content valuable.

The College Fear Factor: An Interview with Rebecca Cox

by Jason L. Taylor

In 2009, Professor Rebecca Cox from Seaton Hall University published The College *Fear Factor: How Students and Professors Misunderstand One Another*. The book is based on five years of interviews and observations with community college students and faculty and provides insightful portraits of classroom experiences from the student and faculty perspective. In October 2010, OCCRL Research Assistant, Jason Taylor, interviewed Dr. Cox about her book.

UPDATE: To introduce our readers to your book, can you describe the primary thesis of your book?

Dr. Cox: The institution of higher education in this country was established and predicated on educating a small and elite group of students, but that is not the situation we have anymore. If we're serious about college access for more than a small elite, then we need to rethink the structures, policies, and norms that are part of that older tradition of higher education. When I wrote the book, I thought about this issue of college readiness that people are talking about—are students ready for college? Excluded from this conversation is whether colleges are ready for students. I think colleges are ready for a particular kind of student, but I don't think there's a typical or usual type of student anymore. So, I would like to extend that conversation by asking whether colleges are ready for the current college students or students who want to attend college. In order to know if colleges are ready, I think we need to know who today's students are, and what it would mean to be ready for them. And, I think we should start at the point of the core technology of community colleges, which is teaching and learning in the classroom. I like to think that my book sheds some light on these questions.

This issue features:

The College Fear Factor: An interview with Rebecca Cox 1

What the Literature Tells Us about Bridge Programs 4

From Curiosity to Results: The Creation of a Summer Bridge Program 8

Illinois Connections in Engineering (ICE) 11

Making the "College Connection": Colorado's SUN (Success Unlimited) Initiative, an Intensive Transition Program 15

Results of the 2010 Illinois Bridge Status Survey 18

Bridge Program Resources 21

UPDATE: Your book is based on five years of research you've conducted in the field. What motivated you to pursue this research and subsequently write this book?

Dr. Cox: I don't think this will be a surprise, but I think my own experience as an adjunct community college instructor in a couple colleges in southern California motivated me. In my experience as an instructor, the college didn't really help me learn how to teach better. This motivated me to return to graduate school and get a doctoral degree in education policy with an interest in faculty professional development. As I started investigating professional development, and I realized that we don't know what good professional development looks like nor do we necessarily know what we're supposed to develop faculty towards or into. This led me to think about what happens in classrooms, because I'm not sure we know very much about what actually happens in classrooms or what we would like to see happen in classrooms based on existing research in higher education. Once we do have that information, then we might be able to think about creating environments for faculty to learn.

My book is based on two different studies where I observed in the classroom as a way of getting at instruction, specifically instructors' knowledge using Lee Shulman's idea of pedagogical content knowledge. Once I was in those classrooms, I realized this was such a small piece of the classroom dynamics, and there were other things I hadn't expected. So after I did that research, I wanted to share it with the world. There was never a question in my mind there was going to be a book. All the pieces seemed so interrelated, it would be difficult to take a small slice and publish in academic journals.

UPDATE: The title of your book includes the phrase "college fear factor." Can you describe the significance of this phenomenon?

Dr. Cox: My original classroom observations were in a basic English class, so it was a pre-college level course that students took in order to move into the college English class. The depth of students' fear in this first study was embedded in every interview I had with them. The next study I did was across six classrooms of students who were placed into college-level English. Before even talking to students, I confirmed that every one of the six instructors of these courses was very optimistic about the ability of the students to pass with flying colors, succeed, and complete the course. When I heard the same level of fear from both groups of students, I was really surprised. I didn't feel like the students in the college-level class should be equally as scared as students in pre-college English. Some of the students use the word fear and some talked more about nervousness. There was one student who used the term 'this total fear factor.' I was really struck by the impact the phrase had on me, and I thought it was an appropriate title for the book both because it was true, but also because it was from the student voice.

UPDATE: In your discussion of students' fear, you describe the strategies students use to manage their fears. What are these strategies?

Dr. Cox: This is the sad part of the book. To me the most significant and the most counterproductive strategy was that of avoiding both formal and informal assessment. Students feared being judged, not being good enough, or not being college material. This meant that not handing in an assignment, not taking a test, not asking a question in class, or not going to office hours was an effective way out of that dilemma. So the strategies ironically worked to manage their fear, but they didn't help them succeed in the class.

I think student's fear of assessment is sad in at least two ways. First, a faculty member depends on assessment, either informal or formal, to know whether students understand and whether they are learning. The other part is that it's very easy as a faculty member to read disengagement as lack of motivation or lack of interest. Even as a researcher during my observations I saw what I thought was a lot of disengagement. It was very surprising to find out from talking to students that what I seemed to read as lack of interest among students in the classroom was actually fear.

UPDATE: How are students' goals, aspirations, and expectations relevant to the fear factor phenomenon?

Dr. Cox: I saw a lot of students applying a strategy I think of as 'trying to get it over with' or trying to do minimal work to finish class. However, that minimal approach wasn't always students' first strategy. While there were students who entered classes with that approach, there were other students who entered class with really high hopes and expectations for learning. After sitting in class for a couple weeks and not understanding how the content related to them, students decided to stop trying; that is a disappointment to me. So, some students expected they would learn something in class, but were disappointed or disillusioned with the subject matter or the way class was taught. Again, I was struck that students seemed disinterested because they were disappointed by their class.

UPDATE: I am especially interested in your findings related to the interactions between students and faculty in the classroom where you suggest there is a fundamental mismatch between instructor's intentions and students' expectations. Could you elaborate on this mismatch from the perspective of the students you interviewed?

Dr. Cox: There were a couple levels of mismatch or misalignment. One relates to our previous discussion that a successful student, according to the faculty, is one who raises their hand if they have a question, comes to office hours, or takes the initiative in some way. Yet these were students whose fears were guiding them to not take initiative, to avoid the instructor, or to not ask questions.

The other level of mismatch that somewhat compounds the first one is that students came into these composition classes thinking the role of a professor in college is to provide information, lecture, or didactically explain things. Student believed their

job was to write information down to either regurgitate on a test or record it for later use. I found that the writing instructors didn't think about teaching writing in this way. However, the instructors didn't know how much their idea of pedagogy was completely lost on students. As a researcher observing class, I thought faulty practice made sense, but I had no idea students weren't getting it until I talked to them in the interviews. Again, this is because part of students' mode of operating was to say nothing or do anything to indicate confusion to the faculty. The interviews allowed a space for students to communicate that they didn't understand why the class was being taught the way it was.

UPDATE: You identify examples of successful faculty strategies that might ameliorate this mismatch between instructor's intentions and student's expectations. Can you discuss some of these successful strategies?

Dr. Cox: The basic idea was that faculty used strategies that fostered relationships with students. Since many students were trying to avoid interaction, I think the onus is on the instructor to create a relationship between them. I'm sitting in some classrooms this semester, and it strikes me that there is one classroom where the instructor still didn't know all the student's names at the midpoint of the semester. Alternatively, there is a different instructor who collected index cards with some personal questions on the first day of class and has continuously referred to students by name. The second example is the type of instructor whom a student might actually approach before they drop out. Anything the instructor could do to invite the student to participate in the classroom, to create a relationship between the instructor and the student, and even possibly to create a relationship among students is really important.

A second successful faculty strategy is offering low-stakes assessment. In the writing situation, there were many good examples of faculty who got their students to write things at the beginning of the semester without the students thinking it was going to be judged or graded. This is a type of low-stakes, in-class writing assignment where the teacher can get some information from the students and assess their writing skills; this strategy addresses both the issue of relationship-building and assessment of students' engagement with the content.

UPDATE: Your last chapter is cleverly entitled "Reimagining College from the Inside Out." Why did you choose this title, and what do you hope it conveys to the reader?

Dr. Cox: I suggest that it is time to rethink what we're doing in higher education but not simply rethink it from the outside. There are increasingly more interventions that are not touching classrooms at all— more advising options, tutoring outside the classroom, and access to a learning center, for example. However, none of those strategies get at what is actually happening in the classroom. To me, the core student experience happens in the classroom, so that is what we want to rethink first. In architecture, you can't construct a building if you don't know what it's going to be used for. In community colleges, we can't restructure college unless we think about the very core function–teaching and learning in the classroom. You can include tutoring and other services and that is important, but if a student already thinks they're going to fail and doesn't want to approach anyone in the college, I don't see how they're going to get the tutoring.

UPDATE: The teaching and learning process is often considered a primary institutional value in community colleges, and your findings suggest a number of implications related to teaching and learning for the community college faculty. What are some of the more significant implications for practice?

Dr. Cox: I don't make this point as strongly as I could have in the book. The fact is that trial and error and experimentation are great, and there are some very interesting innovations in individual classrooms throughout the country. However, trial and error in teaching is a strategy that leads to incremental changes. It's time to radically rethink what happens in classrooms, but we can't rely on individuals experimenting in isolation; there has to be another system for helping people learn. I don't think many people would argue that a good college classroom gives a student a text and tells them to go away and figure it out themselves, so I don't know why we have that strategy for faculty. If we believe that people need to learn and we create that environment in classrooms for students, then why don't we make the same kind of learning environment available outside of classrooms for the faculty who work in these colleges?

Generally speaking in both K-12 and higher education, the typical professional development model is weak and isn't based on how people learn. If community colleges were structured primarily as a genuine learning organization where students learn in classrooms and faculty learn on an ongoing basis, I don't believe colleges would keep existing structures. Again, step one is to rethink what we want to happen in college classrooms and then figure out what colleges should do to help faculty learn to make that happen..

UPDATE: As you know community colleges are increasingly receiving national attention, including the recent White House Summit on Community Colleges in October, and critical policy questions related to student preparation, access, and success are being posed. What contribution can your book make to these policy conversations?

Dr. Cox: I do believe there is an absence of discussion about what really happens in classrooms. There's some talk of student perspectives, but there's not a lot of research to rely on; it's a policy conversation being guided by what we know that largely ignores those two facets [faculty and student perspectives]. The book could guide policy talk a little bit more. To me, the faculty is so important because they're the linchpin of the whole enterprise. I think any conversation that engages faculty will be helpful. It is the policy conversations that happen without the faculty that are misguided.

UPDATE: What are the opportunities for future research on community colleges similar to this to this body of work?

Dr. Cox: Not surprisingly, I believe any research that continues to do classroom-level study is extremely important. There's so much we need to know about these gateway courses that block student progress [such as English], and we need more research of student perspectives. Finally, an important piece from this book that warrants future inquiry is related to funds of practitioner knowledge. I learned so much from these faculty members, and they don't have the time or effort to make their work or their insights public to the research world. I think it is researchers' responsibility to take their work with faculty more seriously.

UPDATE: The theme of this newsletter is related to bridge programs which are intended to ease the transition into postsecondary education. Can you comment on how your book might be relevant to bridge programs?

Dr. Cox: I think that educators involved in bridge programs can effectively address many of the student fears and expectations that I explore in the book. This could include questioning students' preconceptions about what "college" and "college" teaching are all about, as well as discussing some of the fears that students might have. I am sure that bridge programs help students develop specific skills and strategies that could help students take productive action in the face of fear. I wonder, though, whether students are convinced that they should apply those strategies in situations when failure seems inevitable. Tackling this dilemma before students enter college might make all the difference. ◆

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What the Literature Tells Us about Bridge Programs

by Jason L. Taylor

Introduction

This article describes the wide variety of bridge programs that exist in the United States, and the extensive literature that has developed to describe these programs. A quick search of "bridge programs" in the Education Resources Information Center (ERIC) database returns more than 70 publications and illustrates the breadth of variation in bridge programs. The purpose of this article is not to develop a typology or argue for the implementation of one bridge program over another. Rather, the purpose is to situate bridge programs in the larger literature on student transition to college and briefly describe the landscape of bridge programs related to education.

This article starts with a basic conceptual description of bridge programs and describes the need for bridge programming. Next, the article focuses on bridge programs offered at two levels: high school to college and adult education to college and careers. The article concludes with recognition that efforts to develop bridge programs continue to expand for different purposes and various audiences.

What is a Bridge Program?

The Oxford Dictionary (2010) defines a bridge as "something that is intended to reconcile or form a connection between two things" (n.p.). Thus, a bridge program might link two different levels of the educational system, or it might link education to employment. As illustrated in this article and other literature cited in this newsletter, a program is sometimes identified as a bridge even though it is not implemented between two education and employment levels, but it is implemented concurrently with another educational or employment level. For example, a high school student might enroll in a bridge program during their senior year of high school that helps prepare them for the first year of college. This form of a bridge is not implemented precisely between the two levels, but it serves the same purpose in that it seeks to prepare students to transition from one level to the next.

A group of researchers from the National Center for Research in Career and Technical Education recently conducted a systematic review of empirical studies on transition programs for youth to postsecondary education (Valentine, Hirschy, Bremer, Novillo, Castellano, & Banister, 2009). To conduct the review, they created a transition program typology that identified sixteen primary paths among what they identify as six levels. These levels are: a) high school; b) pre-college education (GED, Developmental, Adult ELL) and out-of-school adults; c) community or technical college; d) 4-year college/university; e) community-based programs; and f) related employment. Valentine et al. (2009) focus their literature review primarily on nine paths mostly related to the secondary and postsecondary education levels. Although these levels are not entirely inclusive of all potential experiences (for example, graduate education is excluded from Valentine et al.'s review), it is useful to conceptualize the position of a bridge program between two levels within this typology. For example, a bridge might be implemented to connect secondary and post-

secondary education or to connect pre-college education and postsecondary education. Although bridge programs are not mentioned by Valentine et al. specifically (probably because bridge program studies did not meet the author's minimum inclusion criteria), their concept of paths arranged by the level of education or related community or employer locale is useful to considering where and how bridge programs are implemented.

Why Bridge Programs are Needed

An ideal education system requires seamless transition to and through educational levels and into the workforce. If fully implemented, the boundaries between levels of the system would not be so much about *demarcation* points at which time an individual leaves one level and embarks on another, but about *connecting* points where an individual moves effortlessly because he or she is knowledge about and clearly supported in moving from one system to another. To achieve this latter notion of seamlessness where boundaries are not walls and gaps are not gulfs, *system alignment* is necessary to provide continuity of experience for students traversing the system. This system would also align education with employment and community resources, providing students with a familiarity and continuity of experience. Unfortunately, the current system does not meet this ideal, as illustrated below.

The rationale for bridge programs varies depending on the type of bridge program, but a predominant justification is evidence of student success (transition or "leaks") in moving through the educational pipeline. For example, a notable leak in the pipeline is the transition between high school and college. According to the National Center for Educational Statistics (2008), 69% of high school graduates enroll in 2- or 4-year colleges in the fall immediately after high school graduation in 2007. Disaggregated by race/ethnic group, the transition rate of Whites to college is 69%, African American's is 56%, and Hispanics' is 64%. Both the gap in overall transition from high school to college and the achievement gap are compelling rationales for the development of bridge programs that align and link the education levels. Another relevant justification for bridge programs is the desire to improve academic performance to better prepare students to transition to the next education level. As Adelman's (1999) work illustrates, the intensity and quality of students' high school curriculum is the best predictor of bachelor's degree attainment. Based on the logic of this research, the desire to improve basic academic skills at the high school level and better prepare students for college is an appropriate rationale for bridge programs. Indeed, similar arguments can be made for bridge programs at other levels to improve transition, including from 2-year colleges to 4-year colleges and universities, from college to employment, from adult education to college, or even from undergraduate to graduate education. Linking the system together with bridges ultimately creates a smoother and more coherent education path.

As a justification for the development of bridge programs, social, cultural, and psychological rationales are used to justify bridge programs. Some programs describe the need for students and individuals to acquire certain skills or knowledge in order to insure a successful learning or educational experience in the subsequent educational or employment experiences. Conley (2005) writes about this idea, calling it college knowledge, which encompasses some of the contextual knowledge and skills that students need to access and navigate college. Bourdieu's (1966) concept of cultural capital from the sociology literature is a relevant rationale for bridge programs and certain components of these programs. Bourdieu's (1986) idea of cultural capital generally refers to the knowledge, skills, or other resources accumulated by individuals and exists in various states. Thus, the students' existing college knowledge or cultural capitol may not be adequate to insure their success in subsequent levels of education or employment, requiring that they engage in an educational experience that facilitates enhanced preparation.

Few theoretical or conceptual models are available to explain the purpose of bridge programs. Theories explaining student success in postsecondary education (see Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006) are often confined to the postsecondary education context and arguably do not adequately address a program intended to bridge two educational levels. Karp and Hughes (2008) developed a conceptual model for credit-based transition programs that is intended to explain program structures and interaction among the components of programs. Although bridge programs are not always (or often) classified as credit-based transition programs, this conceptual model is useful to consider variables and mechanisms that contribute to college persistence. Karp and Hughes claim their conceptual model "hypothesizes that student participation in college coursework and support services, along with the attendant growth in academic skills, knowledge of the social aspects of college, and motivation, will lead students to matriculate into postsecondary education" (p.838-839). It is relevant to note that their model was developed using five case studies of programs enrolling middle- and low-achieving students. Thus, the credit-based transition model may not be applicable to all bridge contexts; but does seem helpful to identifying mechanisms that facilitate matriculation and persistence to postsecondary education for students who have been underrepresented and underserved in the past.

Whatever the rationale, the literature shows that there is a need to better "bridge" students from one educational level to another or from one educational level to a community or employment experience, and there is a growing body of information to help educators think about how to support student transition and success.

Bridge Programs from High School to College

Many bridge programs target to the transition from high school to college. As part of the Academic Pathways to Student Success

(APASS) study, Bragg, Kim, and Barnett (2006) identify a bridge program as one of nine academic pathway models between high school and college, and they define academic pathways as "boundary-spanning curricula, instructional and organizational strategies, and meaningful assessments that either link or extend from high school to college, including both two- and four-year institutions" (p. 6). The nine academic pathways identified as part of a 50-state study include advanced placement; bridge programs; the college-level examination program (CLEP); distance learning/virtual high schools and colleges; dual credit, dual enrollment, and concurrent enrollment; early and middle college high schools; GED programs that bridge to college; International Baccalaureate (IB); and Tech Prep and College Tech Prep. A bridge program is described by Bragg et al. as programs that "target specific student groups, including minority students, low-income students, or those with particular disciplinary interests, supporting students' academic preparation so that college-level coursework is achievable" (p. 9).

As documented by Bragg et al., bridge programs are inclusive of programs formally supported by state policy as well as programs developed to serve specific institutional needs. In fact, many states classify federally sponsored programs like Upward Bound and TRIO as bridge programs. Thus, bridge programs serve as a mechanism for reaching underserved students such as first-generation, low-income, and minority students at both four-year and two-year institutions (USDE, 2010). Visible examples of bridge programs from high school to four-year institutions include summer bridge programs for freshman and transfer students at elite institutions such as the residential Summer Bridge Program at the University of California, Berkeley (2010). While some summer bridge programs target all students at an institution, others target specific underserved student groups or they target students enrolling in specific disciplines. An example of the latter is the Summer Bridge Program for Scientists and Engineers at the University of Maryland, College Park (University of Maryland, 2010).

Community colleges are also active in the implementation of programs bridging from high school and college and from college to employment. A recent initiative undertaken by several community colleges (and four-year colleges) in Texas to create a bridge from high school to college is a developmental summer bridge program intended to reduce the time students spend in remediation once they matriculate to the college. The bridge program features information about financial aid, campus life, peer support, college readiness, diagnostic testing, and study skills (Zuniga & Stoever, 2008). The first of these developmental bridge programs was implemented in summer 2007, but recent literature suggests that more bridge programs are being offered during the fall or spring semesters of the academic year (Texas Higher Education Coordinating Board, 2010). Thus, some bridge programs are implemented in the summer while others are implemented concurrently with the regular academic calendar when students are enrolled in other educational experiences, as noted earlier in this article.

Bridge Programs Connecting Adult Education to College and Careers

A number of states and institutions are implementing bridge programs that are intended to help individuals taking adult education, GED, and English as a Second Language (ESL) classes to transition into college and careers. Bragg et al. (2006) identified an academic pathway that connects GED programs to college, noting that "forty-three states have secondary and postsecondary educational organizations that attempt to use GED and ABE programs to help underserved students access postsecondary education." (p. 14). Although the positioning of adult education within a college setting (often a community college) does not necessarily represent the presence of a bridge program, these kinds of efforts may have inspired new programs that are dedicated to helping students bridge from adult education to postsecondary education.

Similar to bridge programs connecting high school and college, bridge programs connecting adult education to college and employment can vary widely. For example, an initiative spearheaded by Jobs for the Future (JFF) and the National Council for Workforce Education (NCWE) in 2004 is the Breaking Through initiative involving multiple community colleges identifying ways to reduce barriers for helping low-skilled adults transition and succeed in postsecondary education (Bragg, & Barnett, 2009). A bridge program was one strategy that community colleges affiliated with the Breaking Through initiative implemented to help students overcome barriers to transitioning to college. LaGuardia Community College, for example, developed a bridge that includes career-related coursework, counseling on career pathways, college-readiness activities, and transition support services (LaGuardia Community College, 2010). Breaking Through currently includes seven Leadership Colleges and twenty-five Learning Colleges engaged in efforts to help adult students transition into postsecondary education (Breaking Through, 2010).

One visible bridge program model that has received a great deal of attention nationally is the Integrated Basic Education and Skills Training (I-BEST) program model in Washington State. This model combines ABE or ESL with workforce training and college-level professional-technical credits (SBCTC, 2010). With an explicit emphasis on both education and the workforce, the I-BEST model integrates an occupational relevance that goes beyond the provision of basic academic skills. Describing the goal of an I-BEST program at Shoreline Community College in a report on adult career pathways, Bragg et al. (2007) note that the goal of an ABE and ESL General Service Technician program that utilized the IBEST model "is to expand access to the automotive sales and service industry sector to such groups as dislocated workers and limited English proficient workers through a training curriculum that embed foundational and employability skills with automotive content" (p. 34). The program embraces both college and career components, and it reaches out to student populations that are not likely to experience either access to or success in college.

In addition to aforementioned developmental education bridges in Texas, bridge programs for adult education students have recently been funded by the state of Texas as part of the Higher Education Intensive Bridge Program (Texas Higher Education Coordinating Board, 2010). According to the Texas Higher Education Coordinating Board website, 13 institutions were funded for 2010 and 2011 to provide "Intensive Bridge Programs" to adult education students. Because these bridge programs are new, there is scant description of them, but it is likely these bridges will be modeled on other state initiatives.

Concluding Thoughts

This brief discussion of bridge programs has highlighted a variety of bridge program initiatives and models at various educational levels that target different student populations. While this article focused on high school-to-college and adult education-to-college and employment bridges primarily, there are numerous ways to formulate bridge programs by using the sixteen paths identified in Valentine et al.'s (2009) typology. The bridge programs identified by Bragg et al. (2006) in the APASS provides a useful starting point for understanding the rapid growth that is taking place in bridge programs, both in terms of numbers and models. Bridge programs are likely to continue to expand, reaching more student populations at both the institutional and state levels, and it is likely that these programs will continue to develop, particularly as the desire to provide smoother transitions from secondary education to college and careers intensifies. ◆

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From Curiosity to Results: The Creation of a Summer Bridge Program

by Alison Douglas and Julie Schaid, Alliance for College Readiness, Elgin Community College

Why do so many high school graduates place into developmental courses in college?
How can we better prepare students for college success?

In 2006, these questions were catalysts for change at Elgin Community College (ECC). One element of that change was the creation of the **Alliance for College Readiness**, a collaboration between ECC and the high schools in our service region. Through this partnership, teams of high school and college faculty in mathematics, reading and writing have developed a three-week summer bridge program that not only benefits each year's recent high school graduates, but provides powerful professional development opportunities for the collaborating faculty who teach the bridge program.

The Alliance for College Readiness Summer Bridge program grew from ideas that started in the monthly Alliance faculty meetings. In 2006, only 23.6% of the recent high school graduates enrolling at ECC met ECC's "college ready" standards on ACT sub-tests or placement tests used by the College. As high school and college faculty sought to understand the causes for students' developmental placement and discussed curriculum alignment, the high school teachers, in particular, questioned whether *all* the developmentally placed students *really* needed an entire semester of developmental instruction to be college ready in reading, writing, or math.

Based on this inquiry, ECC reviewed existing data and learned that students who initially placed into developmental math courses were more likely to place into college level math after taking a two-hour math review course when compared to students who retested but had not elected to take the math review course. This finding prompted Alliance members to continue their efforts to improve curriculum alignment and increase students' college readiness rates. The collaborations led to a college class "shadowing experience" for some of the high school faculty and eventually to the formation of our summer bridge program.

The Alliance's Summer Bridge program benefits from the expertise of high school and college faculty. For the first Summer Bridge in June 2008, Alliance teams analyzed student placement tests for skills gaps and then developed the original Bridge curriculum to address those gaps. Each year thereafter, the current year's Bridge faculty review student diagnostic scores and apply what they learn from the Bridge teaching experience to improve the curriculum. High school and college faculty members apply to teach in the Summer Bridge program, and the Alliance selects faculty representing all four high school districts as well as ECC. Both the college and the high school teachers report the experience is rewarding and instructive.

Summer Bridge Goals

The Summer Bridge program, supported by a JPMorgan Chase Foundation grant in 2010 and 2011, embraces the Alliance's vision of high school-to-college alignment. The core goals of the Bridge are below (see *Alliance for College Readiness Summer Bridge Goals*). If, as current learning theory suggests, students create new knowledge in relation to previous learning and knowledge, then by bringing high school and college teachers together, this bridge program literally connects the high school experience to the college experience. When high school and college teachers collaborate with students, as they do in the Summer Bridge program, students experience a smoother transition between high school and college learning, and they gain a better understanding of college expectations. As a result of the bridge experience, faculty from both levels return to their regular classrooms more familiar with their counterparts' methods and expectations.

In ECC's Summer Bridge, students enroll in either a math or writing bridge class and are taught by a team consisting of one high school teacher, one college faculty member, and one reading specialist. Both the writing and the math bridge curriculum include reading instruction designed to increase students' integration of reading strategies in that subject area.

Alliance for College Readiness Summer Bridge Goals

- Increase number of students placing into college-level coursework
- Increase instructional alignment between high school and college classes
- Increase instructors' skills in integrating reading instruction with their course materials

For the past three years, the Summer Bridge program targeted that year's high school graduates who just missed placing into college level courses in reading, writing, or math. The bridge program is not restricted to students planning to *enroll* at ECC; however, in order to qualify, students must apply to ECC, demonstrate the requisite ACT sub-scores, and earn specific placement scores on the Algebra domain of the COMPASS test or on ECC's in-house writing test. Table 1 displays the specific placement scores for the Summer Bridge compared to placement scores for college-level courses at ECC.

Table 1
ECC Placement and Bridge Eligibility Criteria

Criteria	ACT Sub		ECC Placement Test	
	English	Math	Writing	COMPASS
ECC Placement for College-Level Courses	20	23	5-5	55-100 (Algebra)
Alliance for College Readiness Summer Bridge	18-19	21-22	4-4	38-54 (Algebra)

About 100 students qualify for the Summer Bridge each year, and approximately 25-30% of those who qualify enroll. The Summer Bridge program does not target specific populations based on race or ethnicity; however, characteristics of the 2010 Bridge students show that participants represent a range of ethnic backgrounds and all four of ECC's high school districts (see Figures 1 and 2).

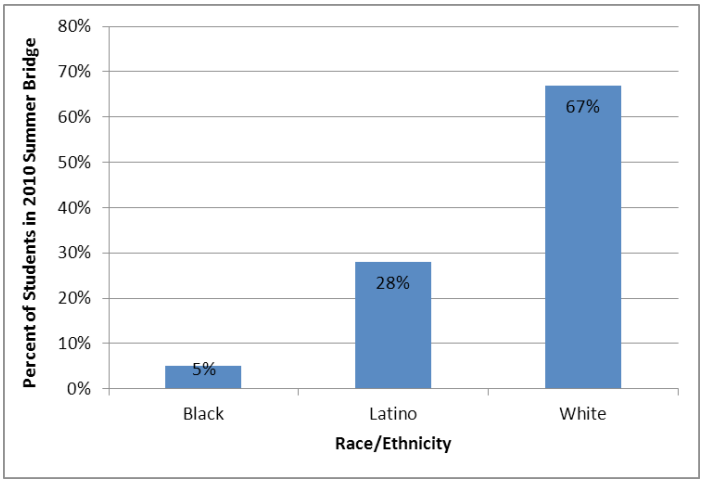

Figure 1
2010 Summer Bridge Racial/Ethnic Composition

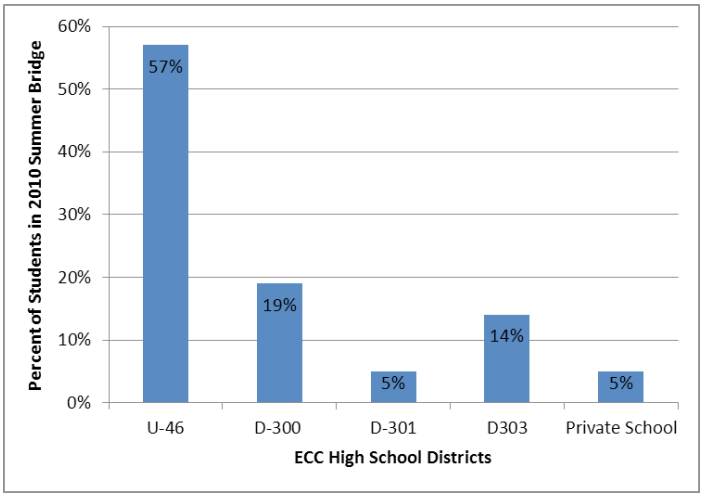

Figure 2
2010 Summer Bridge Secondary District Representation

Bridge Program Outcomes and Successes

After three years, the Bridge Program has blossomed into an innovative program of student success and faculty professional development. The Alliance uses several measures that indicate success from both the student and faculty perspective, and a few of these are highlighted below.

Student Outcomes. As noted above, students qualify for the Summer Bridge program based on ACT and placement test scores used by ECC. The college uses these same placement exams to post-test the students upon completing the three-week bridge.

Figure 3 illustrates the percentage of bridge students placing into college-level math and writing at the completion of the most recent Summer Bridge program. Although the bridge enrollment each year has hovered between 20-30 students, placement into college-level courses at the end of the three week program has increased. For example, in 2009, 70% of bridge students placed into college-level coursework following their bridge experience, and in 2010, 87% of the bridge students placed into college-level coursework.

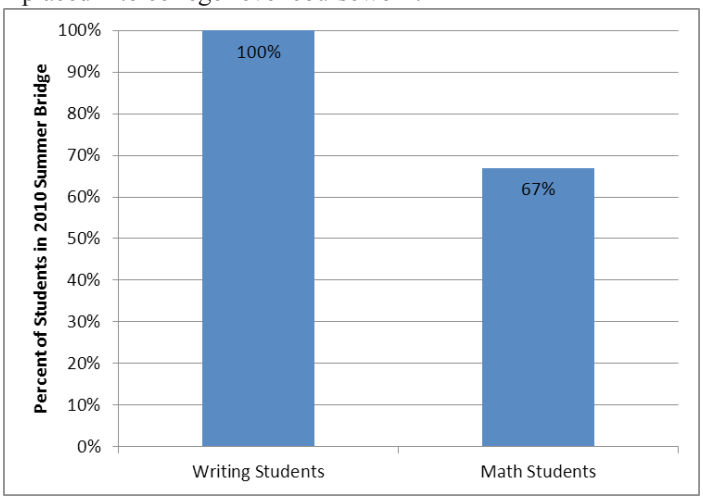

Figure 3
2010 Summer Bridge College-Level Placement

Based on end-of-course evaluation surveys, students report they finish the Summer Bridge program with a greater understanding of college expectations and with a stronger foundation on which to build their postsecondary goals. Students report that the Bridge Program helped them learn new skills and material and also helped them remember strategies and concepts they were taught in high school but had forgotten.

Student success is the ultimate goal of the Summer Bridge. Over a three-year period, about 70 students have participated in the Bridge program. While the numbers are small, the Alliance not only documents student success on college-level placement tests but also tracks student success rates in subsequent fall courses. For example, of students who enrolled in the next course in sequence in the Fall 2009 after participating in the 2009 Summer Bridge, 82% earned a C or better in the college-level math, writing or reading course compared to a 76% success rate of ECC's general college freshman population.

Faculty Outcomes. Beyond student outcomes, the Alliance for College Readiness is interested in the professional development benefit to the Summer Bridge faculty. Whereas teaching can be an isolating experience for teachers at all levels of the educational system, collaboration among high school and ECC faculty has led to positive and enlightening experiences. One Bridge faculty member reflected, "I thought I taught every step [of a math problem], but [my Summer Bridge team teacher] showed me how to write out each step. Her enthusiasm as she does it is impressive." Another bridge faculty member marveled at her high school colleague's ability to engage students in rhetorical concepts through multi-media lessons. As a whole, the bridge faculty revels in the chance to learn from and with each other. One even summarizes the experience by stating, "This is the best professional experience of my life."

Most bridge faculty become increasingly involved in broader efforts associated with the Alliance for College Readiness. They continue to work on curricular and instructional alignment projects and provide faculty development workshops through which they share the lessons they have learned. Thus, the benefits of the bridge reach far beyond the registered students and participating faculty.

Conclusion

The Summer Bridge program, like the Alliance for College Readiness itself, is an organic process, constantly changing as the Alliance members modify the curriculum, procedures, and criteria in search of increased college readiness for all students. Attracting all the students who are eligible for the program remains a challenge. Despite varied efforts at marketing the program, only 30 percent of the students eligible for the bridge ultimately attend the program, resulting in smaller classes and higher costs per student. In an attempt to address this challenge, the 2011 bridge will be open to *any* students who meet the test score criteria, regardless of high school graduation date.

The Alliance for College Readiness and its Summer Bridge program are part of an overall focus on student transition and success at ECC. Since 2006, the percentages of high school graduates placing into college level coursework continue to increase. We believe that as efforts like the Summer Bridge program continue, a more coherent P-20 system will emerge and our area high school graduates will reap the benefits. ◆

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Illinois Connections in Engineering (ICE)

by Kimberly Walker, Ivan Favila, and Eve Earles, University of Illinois at Urbana-Champaign

The Illinois Connections in Engineering (ICE) program is a six-week residential program at the University of Illinois at Urbana-Champaign, which began in the summer of 2007. Understanding that students come from varying educational backgrounds, ICE is designed to assist students with their adjustment to college. Students enroll in preparatory courses and workshops designed to help them adjust to the level and pace of university coursework. Students also participate in mandatory study sessions where tutors are available to assist them three nights a week. Further, ICE gives students the opportunity to become accustomed to social and academic components of campus life (i.e. housing, student life, resources, etc.).

Since its inception, the program has served a total of 142 students: 2007 (42); 2008 (41); 2009 (29); 2010 (32). Students are invited to participate based on a combination of the following criteria: ACT Math score of 28 or lower, self-reported racial/ethnic identity with groups underrepresented in engineering[1], female, students from low-sending counties, and/or first-generation students. As a representative model, Figure 1 shows the comparison of ACT scores between ICE participants (lines) and all engineering students (bars) for the Fall 2008 incoming freshman class. This graph illustrates that ICE participants are represented in the lower-quartiles compared to all College of Engineering freshman.

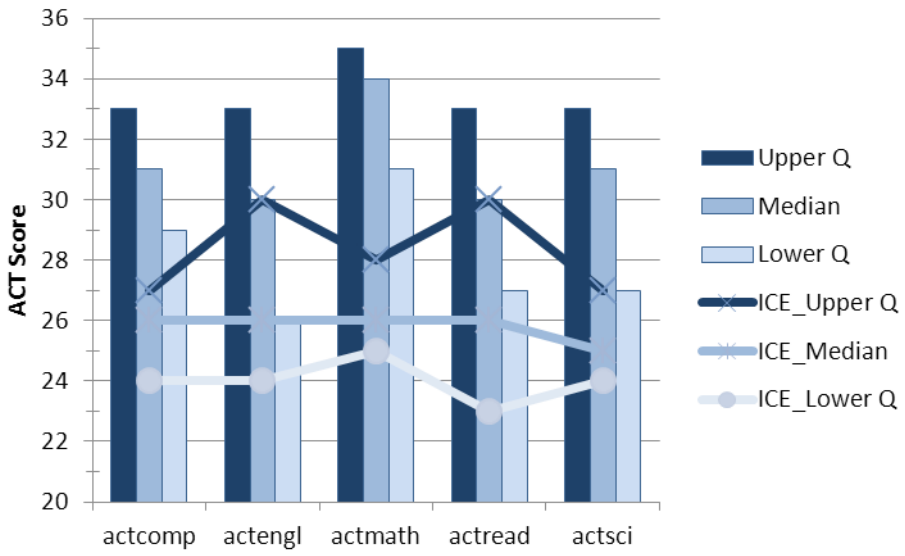

Figure 1
Engineering Freshman ACT Scores, Fall 2008

[1] Racial/ethnic minorities underrepresented in engineering are defined as Black, Hispanic, and Native American.

Program Components & Goals

ICE is an academically rigorous bridge program, which eases students' transition from high school to college. Figure 2 illustrates the interaction of the three program components: academic, social, and financial. Academically, students take preparatory classes in Mathematics (Linear Algebra, Calculus, & Pre-Calculus), Chemistry (Chemistry 102- Introduction to Chemistry), Physics (Physics 100 and Physics 211), Computer Aided Design (CAD), Computer Science, Writing, and Engineering Leadership to help them prepare for classes they will encounter their first year of college. The content of a 16-week semester is compressed into six weeks, including homework, quizzes, exams, and projects, resulting in an intensity and rigor that can overwhelm or intimidate students. Students who did not have advance placement courses available at their high school or who attended a school with limited college preparatory curriculum may be especially challenged by the pace of the program, but they benefit by learning that they are able to be successful.

With commitment from the Provost's office, the College of Engineering Dean's office, and corporate sponsorship including Caterpillar and BP, the program pays for the students' tuition and fees, room and board, books, all program fees, and guarantees students a $1000 book award upon completion of the program. Without this level of financial commitment, the cost of the program would be daunting for students and their families, so the program is committed to supporting students for the duration of the summer program and beyond. For example, the book award is given to help alleviate some of the financial stress the students may experience in their first year of college.

The social component of the program is crucial to the students' level of belonging and comfort on campus. Students often say that ICE makes the large university campus small by providing them with the opportunity to interact with a smaller cohort of students, connecting them to their respective department, increasing their comfort with the Undergraduate Programs Office, and encouraging informal mentoring with program staff, former ICE participants, and engineering student organizations. The program is structured with a strong emphasis on the formation of networks, relationships, and connections as powerful skills for matriculating through engineering.

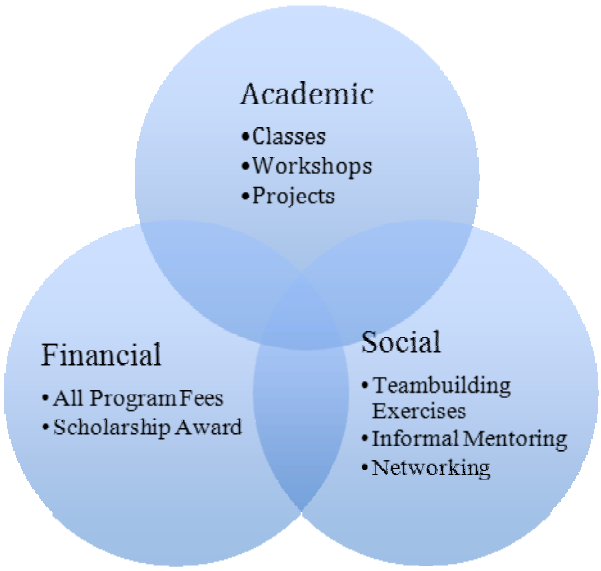

Figure 2
ICE Program Components

When the program began in 2007, the objectives of the program were to:

- Bridge the gap from high school to a large, research university for underserved populations in engineering;
- Develop a skill set so that the target group can compete at the academic level of an elite school; and
- Increase the graduation rate of underserved populations in engineering.

Since implementation, these primary program goals remain constant, but the program is also interested in student persistence in engineering and the completion of the bridge program by equipping them with the necessary skills (i.e. time management, study skills, course selection with the assistance of the deans, etc.) to increase their confidence. The ultimate bridge program goal is to impact degree attainment by retaining the majority of ICE students.

Program Theory

The original Program Coordinator and planner of ICE, Dr. Joyce Lee, created ICE based on her dissertation and the need to help retain traditionally underrepresented engineering students. Lee's (2006) work analyzed introductory chemistry classes at state universities as "gatekeeping" courses for minority students in the science, technology, engineering, and mathematics (STEM) pipeline. Her work acknowledged that minority students filter out of the STEM pipeline at disproportional rates in comparison to non-minority students. One of her most important findings was that minority students leave STEM-based majors because of their academic performance and preparation in introductory college STEM courses.

There are three critical transition points in the STEM pipeline: 1) *opting* out of STEM, focuses on factors that affect students' initial choices of majoring in a STEM field; 2) *filter* out of STEM, focuses on "gatekeeping" courses; and 3) *leaking* out of STEM, focuses on academic or social issues causing students to change majors (Watson & Frody, 2007). Intervention occurs at crucial points in the pipeline, and ICE was created as means of slowing or stopping the filtering of traditionally underrepresented students from engineering.

Program Outcomes and Student Success

During the 2007 and 2008 program terms, a formal evaluation was conducted on the ICE program that included both qualitative and quantitative methods. The qualitative methods included focus groups with instructors, counselors, and students; activity observations; classroom observations; and a review of student grades at the middle and end of the summer program. The purpose of the focus groups was to provide formative assessment, which ultimately resulted in positive programmatic changes. These changes included breaks between classes, instructor changes for core courses, exclusion of mini-workshops, and the inclusion of more professional field trips.

Focus group data from the evaluation also highlighted the maturity and growth of program participants. Evaluation results suggested that students are more prepared academically and socially for college after the program. Students mentioned that study groups, office hours, department visits, and rigorous academic courses were quite beneficial. The following statements reflect the most frequent themes:

> *"ICE provided me with very valuable tools that allowed me to succeed in the fall. I was able to understand the factors that allow one to succeed at the college level. ICE also taught me how to manage my time and become a better student. It also allowed me to meet a great group of people that I could associate with in the fall. I am glad that I made the decision to attend the ICE summer program."*

"The student body is very diverse and I will be attending class with persons from all walks of life."

"I had an idea before I came to ICE that it's not like high school that you actually have to learn the material and not just memorize things without knowing what they mean."

"I really gained a great support system that I will try to keep in touch [with other students] forever."

During the middle of the program, the coordinator meets individually with each student to discuss academic performance and adjustment to college based on instructor grade reports and weekly Resident Counselors and Classroom Assistants' reports. These reports are used to assess student progress and make an academic success plan for the school year.

The quantitative component of the evaluation entailed an analysis of several measures including: pre-post assessments of students' attitudes toward engineering and college; assessment of student perceived abilities in subject areas; measurement of the acquisition and implementation of academic success skills; and examination of students' grades at midterm and the conclusion of the fall and spring semester.

Below are select results reported in the evaluation:

- Based on the pre-post attitude assessments:
  - Student interest in engineering increased
  - Students show an increased interest in time management, study skills, motivation, asking for help, and working in groups.
- The pre-post assessment also gauged students' perceived abilities in the subject areas of Math, Chemistry, Physics, Computer Programming, Computer Aided Design (CAD), and Writing. The pre-assessment showed students overwhelming feel more comfortable with their math abilities than any other subject. Students perceive their abilities in Chemistry and Physics to be equally distributed between feeling extremely comfortable to extremely uncomfortable. Students feel less comfortable with CAD and computer programming. The post-assessment showed a dramatic increase in students' perceived ability in CAD and Computer Programming from the lowest level of comfort to the highest level of comfort, as well as an increase in Math, Chemistry, and Physics.
- Based on analysis of the student grades at the midterm and the conclusion of the fall and spring semester, ICE participants consistently outperform a comparison group of College of Engineering first-semester freshman. Below are some highlights of these data:
  - Among the ICE cohorts of 2007 and 2008 totaling 79 students, 9 students (11%) qualified for Dean's List after their first semester. Twelve (12) students in the 2009 ICE cohort (42%) qualified for the Dean's List.
  - As of April 2010, 72% of the 2007 ICE participants have persisted compared to 71% of all College of Engineering first-semester freshman including an ICE comparison group (students who were invited to ICE but did not participate) and all College of Engineering first-year freshman who are not invited based on the student participation criteria.
  - As of April 2010, 85% of the 2008 ICE participants have persisted compared to 85% of all College of Engineering first-semester freshman including an ICE comparison group (students who were invited to ICE but did not participate) and all College of Engineering first-year freshman who are not invited based on the student participation criteria.

Building Connections

One of the most unique characteristics of ICE is the relationships that are built through the program. The development of relationships occurs at many levels; it occurs among students, between students and departments, and between students and student organizations.

First, many students build relationships with each other. They become roommates during the academic year, join registered student organizations together, create friendships, and build an informal support system.

Second, the relationships students build with the College of Engineering Academic Deans and their respective departments connect them to the formal structures of the college and university. Dean Ilesanmi Adesida, Associate Dean for Undergraduate Programs Charles Tucker, and Assistant Dean and Director of Morrill Engineering Program Ivan Favila are visible and accessible to the students. The students become familiar with them and feel comfortable going to them for support and guidance. Additionally, students have an opportunity to visit with their department professors, graduate students, and administrative staff during the program. These visits include tours of labs and individual meetings. Students often leave their department visit with a more coherent understanding of their academic and career potential and department expectations.

Finally, students are exposed to several student engineering organizations, such as the National Society for Black Engineers (NSBE), Society for Hispanic Professional Engineers (SHPE); and the Society for Women Engineers (SWE). These connections create opportunities for informal mentoring by students at the junior and senior level, and students are involved in goal setting and potential leadership roles on the organizations' junior executive boards.

The CONNECTIONS component of the program goes well beyond academics. While the program structure intentionally creates opportunities to build relationships, it is the continued development and nurturing of these relationships once the program is over that facilitates program success. ◆

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Making the "College Connection": Colorado's SUN (Success Unlimited) Initiative, an Intensive Transition Program

by Stephanie Moran, Paulette Church, Tim Birchard, and Nan Uhl, Durango Adult Education Center

The Durango Adult Education Center (DAEC), a community-based nonprofit adult education center in southwest Colorado, serves about 800 adult learners who are learning or strengthening their English skills, earning a GED, or providing a literacy-rich environment for their children in DAEC's family literacy program. The DAEC was one of seven "College Connection" program sites for the Colorado SUN initiative, an out-of-school youth program called "Ready for College" that was funded by the U.S. Department of Education, Office of Vocational and Adult Education (OVAE). College Connection was intended to successfully transition GED graduates into the community college, and the DAEC was actively engaged in implementation of College Connection from August 2008 to June 2010 in partnership with the Colorado Community College System (CCCS) and Southwest Colorado Community College (SCCC), a division of Pueblo Community College (PCC). With the goal of offering this intensive and accelerated learning program to GED completers, the program hoped to reduce the number of remedial classes students needed upon completion of the program, to build student confidence and academic skills, and to help students become independent advocates who could "navigate" the often complex college system competently.

College Connection Student Participants

Between fall 2008 and June 2010, a total of 45 students participated in the program. Of the 45 participants, 35 were GED graduates; 23 were within OVAE's target age range of 18-24 with two students below the target age range and 20 students above the top of the range. Females represented 64% of participants and males represented 36% of participants. Students' racial/ethnic characteristics were: 61% white, 18% Native American, and 20% Hispanic.

Program Design and Conceptualization

The College Connection program was designed to enroll students in classes four days a week for eight weeks. Class time each day was allocated as follows: 1.5 hours of math; 1.5 hours of reading, sentence skills, study skills, and career exploration; and 1.5 hours of study lab. The program content was designed to resolve the demands placed on students who might falter without a holistic approach during the transition to college, and DAEC personnel knew that students needed support in three realms: cognitive, affective, and logistic. The cognitive realm was of principal concern, because every student had one or more cognitive deficiency as measured by standardized instruments, including the Accuplacer or the TABE. Some students also struggled with diagnosed or undiagnosed learning disabilities. Finally, a large majority of students had weak math skills that made achieving a long-term goal, such as earning a Registered Nurse (RN) degree, nearly impossible without the concentrated and accelerated approach that a program like College Connection presented.

Along with the cognitive realm, program staff recognized the need to address the affective domain including: students' fear and anxiety of not being college material or being unable to succeed; their lack of understanding about or valuing of higher education; their lack of support from friends and families; and their ambiguity about appropriate, realistic, and reachable college and/or career goals. Ignoring the affective realm with this student population was unfeasible and inappropriate, so program staff often assumed the role of major supporters and advocates for students. For example, some students were involved in serious legal predicaments and severe family conflicts or crises that required some form of intervention or support mechanism, and the professionals engaged in College Connection served in these support roles.

The third realm of the program design was logistical. Students needed assistance navigating college processes, procedures, and structures. This included financial elements, academic advising, college deadlines, and many other aspects of student support. This circle of concerns surrounded the students, and the College Connection solidified the circle of support by addressing students' cognitive, affective, and logistics needs.

Program Components

Four program components were standardized from the first semester and they continued throughout the grant period, although the configuration of College Connection changed in response to several factors during the duration of the grant period.

The first and arguably the most critical component of College Connection was the intensive and accelerated college prep coursework. This piece consumed a minimum of 110 contact hours with instruction in basic reading, writing, and math, along with study groups. Fortunately, since the three College Connection instructors had experience teaching college-level courses as well as adult education courses, they could accommodate the varied needs of the diverse students in the program. The primary text books used for the course were:

- Dave Ellis' *Becoming a Master Student*;
- Pirozzi, Starks-Martin, & Dziewisz's *Critical Reading, Critical Thinking: Focusing on Contemporary Issues, 3rd ed*, which combines college-level reading skills with excellent, short articles and essays of interest to a wide range of adults;

- John Langan's *Sentence Skills with Readings*, a less prescriptive but accessible grammar book;
- Elayn Martin-Gay's *Basic College Mathematics*; and
- Allen Angel's *Intermediate Algebra for College Students*.

The math instructor opted to use the texts required for developmental math classes at the college.

The second program component was a one-credit Academic Success course (AAA 101) that the teachers alternated teaching in 45-minute sessions. This course focused on study skills, sentence skills/reading skills, establishing cohort rapport, reviewing college resources, offering strategies for success, facilitating exploration of college student identity and values, and facilitating an extensive career exploration project which offered skills across the curriculum. Students researched careers and career clusters and industries, and they arranged and completed interviews with working professionals, and composed and revised papers related to the career exploration project. To improve their writing skills beyond the career project, students read and highlighted main ideas and major details, and they developed summaries and narratives through writing. Several students described the career exploration project as "transformative" because they discovered that they could combine their passion with a field of study that offered them a family-sustaining wage rather than focusing on entering a career that would pay well (might not have been personal fulfilling). Some students became more confident about their career path, and they attributed some of their confidence to meeting with potential mentors during the mock interview and job shadowing sessions.

The third component, learning communities, focused on creating a sustained and supportive community of learners through study groups, peer tutoring with study labs, and other exchanges that strengthen students' affective domain. For example, study labs were a place for learning among peers and allowed students to ask their College Connection instructors for advice on communicating with college-level instructors and managing assignments in college-level courses. Many College Connection students struggled with primary life goals and often had competing priorities, so it was crucial that instructors and the designated student advisor, referred to as the "navigator," to give time and credence to affective concerns. Boundaries were set between the navigator position and the college's student services division to avoid creating enmeshment. For example, students were directed to college and local resources when financial, medical, transportation, and other personal issues arose.

The final component of the program was the "navigator," who was instrumental in students' success, starting with the program's inception and continuing through the entire semester and beyond. The navigator combined the roles of marketer, recruiter, intake and orientation person, advocate, referral guide, referee, tour guide, financial aid guru, team-builder, barrier-buster, administrator/assessment/progress report manager, and cheering captain. The navigator was efficient, capable, and fully committed to this endeavor, and the program would have crumbled at a number of points without the ever-present commitment. Playing these multiple roles required the navigator to be a talented speaker, writer, number-cruncher, listener, motivator, and mentor.

Capitalizing on a Partnership

A unique aspect of this bridge program is that DAEC operates independently of the community college system, so partnering with the community college was essential. Looking back, it is clear that some semesters went more smoothly than others, because while SCCC accommodated the College Connection program as best it could, there were internal operating structures that created difficulties for the non-traditional needs and approaches of the bridge program. However, the college administration allowed the program to use resources and textbooks as well as accelerate the schedule substantially from typical developmental courses, and these were important accommodations. The acceleration strategy was appreciated by students as they were given the opportunity to complete up to three developmental courses in a single semester, compared to a traditional route that would have spanned twelve months. As a consequence of the bridge, SCCC implemented accelerated approaches for some math and reading classes.

Student Assessment and Outcomes

The primary methods of assessment for the bridge program included the Test of Adult Basic Education (TABE), a standard and nationally recognized test and the ACCUPLACER, a national college entrance placement test. Students were tested to determine their math and reading competency level using the TABE exam before the College Connection program and during the final week of the program. Similarly, students were tested in math, reading, and English sentence skills using the ACCUPLACER exam, both before and after the program. Of the 45 students in the bridge program:

- 25% made gains of one or more levels on the sentence skills portion of the ACCUPLACER;
- 42% made gains of one or more levels on the reading portion of the ACCUPLACER;
- 78% made gains of one or more levels on the math portion of the ACCUPLACER
- 45% of math students made a gain of one developmental math course level;
- 22% of math students made a gain of two developmental math course levels;
- 8% made a gain of three developmental math course levels; and
- 3% made a gain of four developmental math course levels.

At the instructional level, the study skills instructor used the "Discovery Wheel" in Dave Ellis' *Becoming a Master Student* textbook to capture a snapshot of students' self-assessment at

the beginning and end of the course in 12 critical areas. Students then wrote about the changes they saw in a Discovery Statement generated from the assessment. All students made significant gains on this assessment in key areas like testing, time management, and memory. Often, even if students did not show improvement based on the assessment, they demonstrated an increased awareness of a particular skill. Students in the reading classes also worked through Reading Plus, a self-paced computer-based reading program that yields reams of assessment reports, from increases in reading rate, comprehension, eye scanning, and vocabulary. Reading classes also took a SCCC-required pretest exam, and a similar final exam in comprehension and vocabulary.

Program and Institutional Learning

From the perspective of the professional DAEC team, the Colorado Connection program was a resounding success that has influenced DAEC operations in several ways. First, it allowed the adult education center to build a "Beyond the GED" program that symbolically and structurally represents DAEC's commitment to students who want to attend college after GED completion. Similarly, the program sends a message to other DEAC students who don't think they are college material, showing them that they can succeed at DAEC with guidance and support. Although the College Connection grant funding has ended, DAEC now offers a free afternoon College Connection program that offers study skills, math, reading, and writing assistance. Although the Navigator role is no longer funded or formalized, DAEC has adopted the practices and continues to function in ways consistent with the navigator role in many ways.

DAEC professionals also believe the College Connection program raised awareness about postsecondary education and increased buy-in among other adult educators at DAEC. The program inspired instructors to encourage their students to attend the College Connection class concurrently with their GED classes. The College Connection program also influenced the use of textbooks and resources with GED students. Students are now introduced to more critical thinking skills across the curriculum and concepts associated with college readiness are introduced to students earlier.

DAEC professionals are encouraged by SCCC's use of some accelerated learning approaches for developmental math and reading classes and hopes that the Colorado Community College System evaluates the success of accelerated developmental courses. The adult education system encountered challenges when trying to work with the community college system. Despite these challenges, the Colorado Connection program offered exemplary support systems with a holistic and multi-tiered approach that provided out-of-school students with a dynamic opportunity to succeed where they might otherwise fail. The DAEC professional team recommends that OVAE continue this important work in Colorado and in the other states that piloted the "Ready for College" program, making an intensive transition program a hallmark of 21st century education. ◆

Some of the material for this article was summarized from the Implementation Guide organized and finalized by Kendra Stevenson Rodriguez, SUN's Program Manager. To see the Guide in its entirety, go to: http://www.cccs.edu/Foundation/SUN.html

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Results of the 2010 Illinois Bridge Status Survey

by Timothy Harmon and Jason L. Taylor

Bridge programs in the adult education context are an emerging educational concept in Illinois. These programs are intended to help low-skilled adults transition to postsecondary education and employment. While various forms of bridge instruction have been provided in the state in the past, especially among community-based adult education providers, the bridge concept became a major focus of Illinois state policy-makers as a consequence of the state's participation in the Joyce Foundation-funded Shifting Gears Initiative. In 2009, Illinois Community College Board adopted a formal definition of bridge instruction. According to this definition,

> *Bridge programs prepare adults with limited academic or limited English skills to enter and succeed in credit-bearing postsecondary education and training leading to career-path employment in high-demand, middle- and high-skilled occupations. The goal of bridge programs is to sequentially bridge the gap between the initial skills of individuals and what they need to enter and succeed in postsecondary education and career-path employment (Illinois Community College Board, 2009).*

The adoption of the bridge definition is one of many ongoing policy-related activities associated with the Shifting Gears initiative. These policies are intended to encourage local entities to develop and implement bridge programs that can take a variety of forms, including bridges that are associated with adult education, developmental education, and career and technical education (CTE).

Having adopted the bridge definition, along with the other policy changes, state policy-makers wanted to be able to understand the extent of implementation of the bridge concept and assess the alignment of existing bridge instruction with the new definition. The Office of Community College Research and Leadership was asked to conduct a survey of Illinois community colleges and adult education providers to collect information about current and planned bridge instruction in order to answer these questions, and to create an on-line directory of bridge programs.

The Illinois Bridge Status Survey was administered between April and June 2010. The survey was conducted in two parts: an initial survey was distributed to all community colleges and adult education providers to identify potential bridge program contacts, and a second survey was sent to these contacts to collect the detailed information. The survey instrument was administered via the Internet using Survey Monkey. Selected findings of the survey follows.[1]

[1] Click here to read the full survey report.

How many bridge programs exist, and what are their characteristics?

Thirty (30) existing bridge programs and 33 bridge programs under development were identified in the survey. The findings in this article are applicable to the 30 existing programs only. Twenty-six (26, or 87%) of the 30 programs are offered currently and four (or 13%) were offered within the past year but are not currently offered. These 30 bridge programs were reported by 23 different organizations and include programs offered by adult education departments and programs, CTE, and workforce development, as well as via partnerships comprising these entities.

The majority of bridge programs (57%) are associated with the Health Science cluster, with Manufacturing or Transportation, Distribution, and Logistics being the occupational focus of a few bridges. Four bridge programs were not connected to any particular career cluster but were intended for career exploration across clusters and occupations (Figure 1).

Fifteen (15, or 50%) bridge programs were designed as a single course, and the other 15 were designed as multiple courses or a series of courses. The duration of the 15 single-course bridge programs ranged from 1 to 26 weeks, with an average duration of 10.3 weeks.

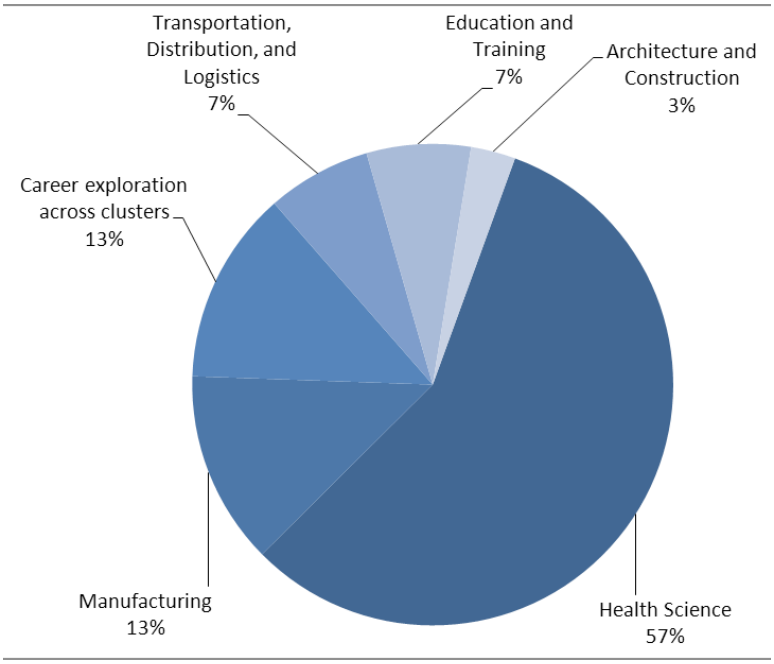

Figure 1

Career Cluster Associated with Bridge

What types of funding are used by bridge programs?

To understand funding mechanisms used to support bridges, the survey instrument asked respondents to select from a list of types of funding that support their bridge program(s). Figure 2 below illustrates the results for this question in order of frequency. The most common funding source is an adult education grant, as identified by 17 of the 30 respondents. Beyond the adult education grant, other frequently mentioned sources of funding include private foundation funds, organizational general revenue, and WIA Title I funds.

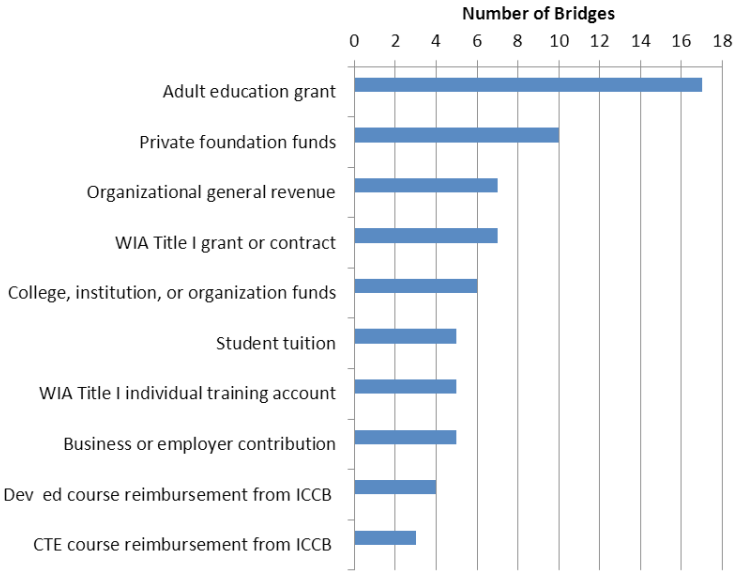

Figure 2
Sources of Bridge Funding

What skill levels must students have to be eligible for these bridge programs?

Twenty-three (23) of the 30 bridges use specific Test for Adult Basic Education (TABE) Math scores, Reading scores, or both, to determine eligibility. Sixteen (16) of these bridge programs require the same range of scores for both TABE Math and Reading, and of this number, nine use the 6.0 to 8.9 range (Figure 3). Fifteen (15) of the bridge programs use the Combined English Language Skills Assessment (CELSA) to assess eligibility, and in 14 of these programs, students scoring above the high beginning English as a second language (ESL) level are eligible to participate.

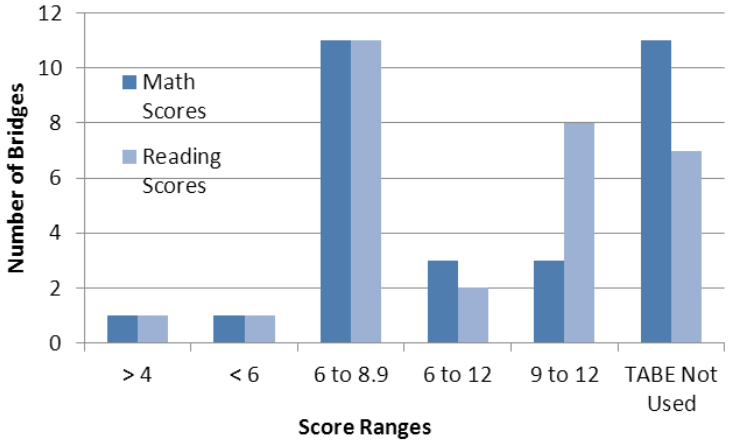

Figure 3
TABE Eligibility for Bridges

What are the intended outcomes of bridge programs?

Not surprisingly, survey respondents from most (29, or 97%) programs indicated that student completion of the bridge is an intended outcome. In addition, an intended outcome of most of the bridges is student enrollment in occupational credit courses (26, or 87%) and entry into employment (22, or 73%). Respondents from 15 programs reported that a credential or certificate is awarded on completion of the program.

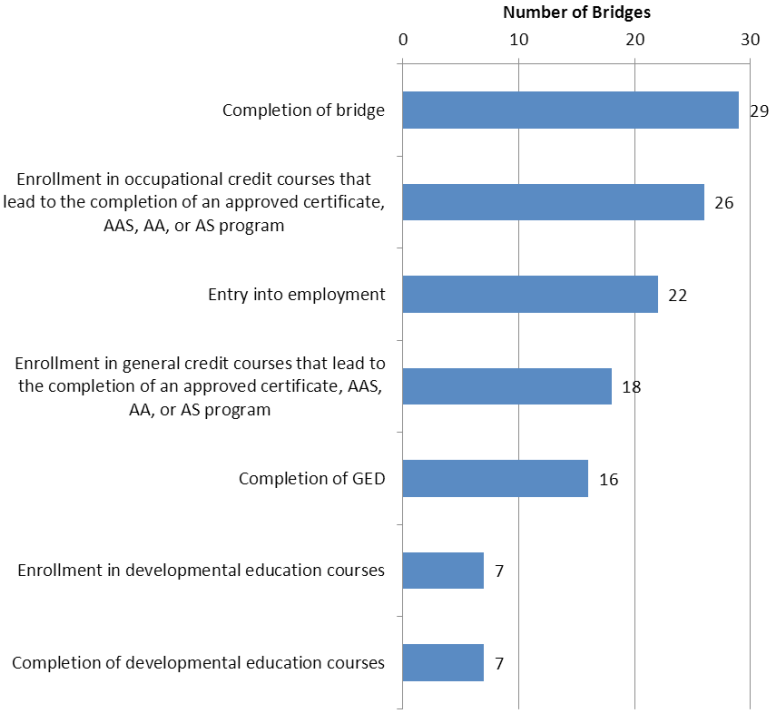

Figure 4
Intended Bridge Outcomes

How well do existing bridge programs align with the Illinois bridge definition?

The Illinois bridge definition includes three main program design elements:

- *Contextualized instruction* that integrates basic reading, math, and language skills and industry or occupational knowledge;
- *Career development* that includes career exploration, career planning within a career area, and understanding the world of work; and
- *Transition services* that provide students with the information and assistance they need to successfully navigate the process of moving from adult education or remedial coursework to credit or occupational programs (ICCB, 2009).

Most of the survey respondents indicated that their bridge programs incorporated these key elements of the bridge definition. Nearly all (26, or 87%) respondents indicated that their "bridge curriculum integrates basic reading, math, and language skills (academic content) with career and technical content (i.e., contextualized curricula)." In addition, respondents from nearly all (27, or 90%) programs indicated that "career development includes career exploration and planning within the career cluster/occupation." Finally, the bridge programs provide most of the 17 transition and support services listed in the survey. Most common among these services are individual assistance with the college admissions process, academic advising, career advising and career coaching, and job search assistance.

A principal objective of the survey was to assess the extent to which current Illinois bridge programs are aligned with the Illinois bridge definition. Our survey strategy was designed to obtain responses from all programs that self-identified as bridge programs. Therefore, we anticipated receiving responses from bridge programs that are variously aligned with the Illinois bridge definition. To assess the extent of this alignment, we adopted an operational definition of a bridge based on the survey questions. This definition included the following five criteria:

- Criterion A: Alignment with the eligibility requirements ("reading and math levels at or above the 6th grade through precollege level *or* have English language proficiency at or above the low-intermediate ESL level");
- Criterion B: Alignment with a career cluster;
- Criterion C: Alignment with the core element of contextualized instruction;
- Criterion D: Alignment with the core element of career development; and
- Criterion E: Alignment with the core element of transition services.

Twenty-one (21, or 70%) of the bridge programs met all five criteria, and an additional six met four of the five criteria (Figure 5). This finding suggests a high level of alignment with the Illinois bridge definition, at least as perceived and reported by respondents. This result is noteworthy, given that the development of many of these bridge programs predated the issuance of the bridge definition. It is important to acknowledge that this conclusion is based solely on self-reported characteristics of the bridge programs.

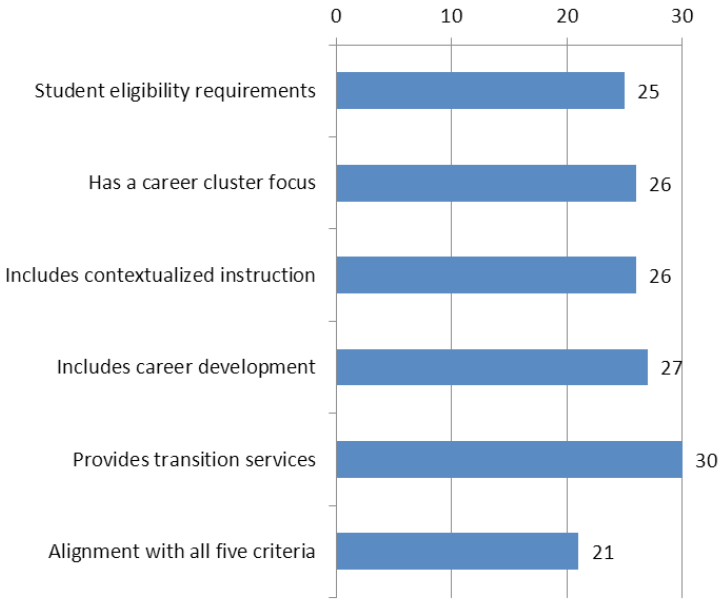

Figure 5
Alignment with Bridge Elements

Next Steps

The focus of the bridge status survey was to describe the current array of bridge programs in Illinois in order to establish a baseline against which to measure future progress in adopting the bridge model as defined by the Illinois Community College Board through the Shifting Gears initiative. In addition, the survey was designed to provide information about the characteristics of these bridge programs along dimensions that may be useful for policy makers. The bridge status survey will be conducted again in 2011. The next iteration of the survey will include improvements in the collection of information on developmental bridges, bridge intensity, alignment with the bridge definition, bridge outcomes and partners and funding arrangements. In addition, a web-based directory of bridge programs is being developed based on the responses to the survey. ◆

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Bridge Resources

Below is a brief list of resources related to bridge programs beyond the citations included in the newsletter articles.

Alssid, J. L., Goldberg, M., & Klerk, S. M. (2010). *Building a higher skilled workforce: Results and implications from the BridgeConnect national survey*. New York, NY: Workforce Strategy Center. Retrieved from *http://www.workforcestrategy.org/images/pdfs/publications/bridge_connect_report_2010-11.pdf*

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