Illinois Adult Education Bridges: Promising Practices

The Theory and Application of Contextualized Teaching and Learning in Relation to Programs of Study and Career Pathways

The Integral Role of Career Development in Supporting Programs of Study and Career Pathways

The Relationship of Individual Career Plans to Programs of Study and Career Pathways
ABOUT THIS PUBLICATION

This compendium includes four publications that summarize emerging theories, research, and promising practices to provide practitioners with targeted information and resources on issues related to transition to education beyond the high school level. Entitled Transition Highlights, the publications were created by the Office of Community College Research and Leadership (OCCRL) research staff between 2010 and 2011 to address issues pertinent to programs of study, career pathways and bridge programs. The first issue in the compendium, “Illinois Adult Education Bridges: Promising Practices,” summarizes select findings from a formal evaluation of bridge programs conducted by OCCRL, particularly their models of implementation of the three core elements of the Illinois Bridge Definition: contextualized instruction, career development, and transition support services. The second issue, “The Theory and Application of Contextualized Teaching and Learning in Relation to Programs of Study and Career Pathways,” delves deeply into the supporting research, challenges and relevance of contextualized instruction and its application in programs of study and bridge programming. The third issue, “The Integral Role of Career Development in Supporting Programs of Study and Career Pathways,” covers another core element of bridge instruction; the article shows the critical role of career services providers and the challenges they face, and introduces the reader to career development guidelines and standards. In the final issue “The Relationship of Individual Career Plans to Programs of Study and Career Pathways,” the authors cite the origination of ICPs in career development literature and discuss their use in helping students set goals, make well-informed decisions, and with the help of counselors plan a course of study to reach their educational goals. Copies of each of the Transition Highlights can be downloaded from the OCCRL web site at http://occrl.illinois.edu/publications/projects/pos.

TRANSITION HIGHLIGHTS


At a time when postsecondary education plays an increasingly important role in preparing the workforce, it is disconcerting that such a sizeable proportion of the U.S. population is not prepared to enter college. Obtaining a high school diploma or a General Education Development (GED) certificate is the first step. A 2008 study conducted by the American Council on Education (ACE) (2009) reports that almost 40 million U.S. adults aged 16 and older are without any high school level credentials. Much attention is paid to the academic preparedness and transition rates of students who enter college directly from high school, but less is known about GED credential recipients’ participation in education beyond the GED (Zhang, 2010). The 2009 ACE report mentions that more than 17 million adults have passed the GED test since 1942, but existing research consistently shows very low participation by GED holders in postsecondary education. Carnevale, Smith and Strohl (2010) contend that some form of postsecondary credential will be required for 64% of the new jobs created from 2008 to 2018. At a time when “90% of the fastest-growing jobs will require postsecondary education or training” (Connell, 2008, p. 5), it is becoming increasingly evident that many Americans are unprepared to fill these positions. Further, with a national unemployment rate of just under 9% (Bureau of Labor Statistics, US Department of Labor, 2011), strategies that assist adults to transition into college are important to the nation’s economic recovery (Carnevale, et. al, 2010).

In light of these economic circumstances and the dramatic impact on individuals and families, it is critical that adults receive access to educational opportunities that assist them in finishing their secondary education and preparing them for and connecting them to postsecondary education. Policy, practice, and planning efforts should be directed at transitioning students through the educational system and helping them to secure gainful employment, build productive careers, and improve their overall quality of life (Lekes et al, 2007; Oertle & Trach, 2007; Will, 1983; Wittenburg, Golden, & Fishman, 2002).

THE BRIDGE FRAMEWORK

To enhance state-level adult education and employment policy, in 2007 the Joyce Foundation began the Shifting Gears (SG) initiative (see http://www.shifting-gears.org) to assist six states (Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin) to integrate adult education, workforce development and postsecondary education policies and improve job opportunities for low-skilled workers. SG seeks to make systemic policy changes that, in turn, enhance the educational and economic circumstances of adults with limited
education and occupational skills (Price & Roberts, 2009). Policy change is dedicated to strengthening the educational pipeline, including Adult Basic Education (ABE), Adult Secondary Education (ASE), and English as a Second Language (ESL); and postsecondary education and workforce education and training associated with Title I of the Workforce Investment Act (WIA). With funding from Joyce and with leadership from the Illinois Community College Board (ICCB) and the Department of Commerce and Economic Opportunity (DCEO), Illinois’ SG initiative connects multiple state training and retraining programs, P-20 education, and workforce development.

Bridge programs are a centerpiece of Illinois’ SG effort, and build upon the definition (see http://occrl.illinois.edu/files/Projects/shifting_gears/Bridge%20Definition.pdf) of bridge programs that focuses on enhancing transition to college for adults with limited skills, including three core elements of contextualized instruction, career development, and transition services (ICCB, 2009). Adult bridges in Illinois attempt to prepare adults “to enter and succeed in credit-bearing postsecondary programs, thus leading to career-path employment in high-demand, middle- and high-skilled jobs” (Price & Roberts, 2009, p. 11). Findings from the evaluation of Illinois’ SG pilot sites, conducted by the Office of Community College Research and Leadership, show that adult bridge programs offer preparatory courses intended to help students transition to postsecondary education, job-related specific training, and employment (Bragg, Harmon, Kirby, & Kim, 2009). Initial results of this evaluation of bridge programs funded by Shifting Gears showed higher completion of the bridge program by students in the developmental education bridge than the adult education bridge programs. However, students in developmental bridges had graduated from high school and possessed stronger academic preparation than their adult bridge counterparts. (The lack of access to student unit record level data precluded us from conducting an analysis that was controlled by demographic and other individual differences.)

### Bridge Definition and Core Elements

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.

**CORE ELEMENTS**

Bridge programs assist students in obtaining the necessary academic, employability, and technical skills through three required components—contextualized instruction, career development, and support services. Required elements include:

- Contextualized instruction that integrates basic reading, math, and language skills and industry/occupation knowledge.
- Career development that includes career exploration, career planning within a career area, and understanding the world of work (specific elements depend upon the level of the bridge program and on whether participants are already incumbent workers in the specific field).
- 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. Services may include (as needed and available) academic advising, tutoring, study skills, coaching, and referrals to individual support services, e.g., transportation and child care.

*Note: Career development and transition services should take into account the needs of those low-income adults who will need to find related work as they progress in their education and career paths.*

[http://occrl.illinois.edu/files/Projects/shifting_gears/Bridge%20Definition.pdf](http://occrl.illinois.edu/files/Projects/shifting_gears/Bridge%20Definition.pdf)
ILLINOIS’ BRIDGE DEFINITION

A formative evaluation of adult education bridge programs funded by the ICCB subsequent to the original Shifting Gears pilot projects has shown that sites involved in implementing bridge programs in Illinois attempt to use the bridge definition. A summary of the strategies the sites were using in three core areas follows.

Contextualized Instruction

The first core element of the Illinois’ bridge definition is contextualized instruction, which is defined as curriculum that “integrates basic reading, math, and language skills and industry/occupational knowledge” (ICCB, 2009). All of the adult education bridge programs attempted to integrate academic content and contextualized curriculum, and some were doing so with business partner input. Most program staff discussed curriculum in detail, including involving local employers to provide input on curriculum and create lesson plans, offer career development, and share resource materials. We observed adult students learning industry specific vocabulary and practicing reading comprehension using an employee handbook and hazardous materials statements. Mathematics skills were incorporated into word problems contextualized with inventory control practices and medicine dosage problems. We observed instruction using industry specific tools, such as handheld scanners and blood pressure and heart monitors to teach students how to use technology in work applications. Whereas all of these strategies have the potential to benefit students, relatively few of the instructors had formal education or experience in the associated occupations. In only a few instances did we see bridge instructors co-teaching with someone with occupational knowledge and experience. Several bridge instructors reported having some access to professional development on contextualized instruction, but many wanted more training.

Career Development

The second core element of Illinois’ bridge definition is career development, a component that, “includes career exploration, career planning within a career area, and understanding of the world of work (specific elements depend upon the level of the bridge program and whether participants are already incumbent workers in the specific field) (ICCB, 2009). Career exploration and development activities were found at all 10 bridge sites, with the following variations emerging: (1) career development activities were integrated into the curriculum as a course or within a course; (2) career development activities were supplemental to bridge coursework; and (3) career development activities were available as a combination of in-class and supplemental experiences. The major categories for these activities were: (1) assisting bridge students to explore the related occupational sector: healthcare, manufacturing, or transportation, distribution and logistics (TDL); (2) goal setting and planning for the future, including crafting individualized career plans (ICPs); (3) accessing further education including the admissions process, financial aid, and enrollment; and (4) preparing for work, including workforce preparation, networking, job search skills, resume and cover letter writing, and interviewing.

Whereas both formal and informal career counseling was available to students once they were enrolled in bridge coursework, career counseling that began at the initial stage of student recruitment appeared most useful to students. Administrators and faculty from several sites pointed out that students dropped out because they found that they were not interested in the specific career area. Often,

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1The evaluation methods employed to gather these findings is detailed at the conclusion of this paper. Readers are also encouraged to reference the following reports available on the OCCL website at http://occrl.illinois.edu.


staff did not have sufficient time to screen students because of the short recruitment period, and they later learned that students who enrolled were not interested in pursuing the occupations. Even with time, administrators and faculty had difficulty assessing whether students’ career interests were aligned with the career cluster associated with the bridge.

**Transition Services**

The third core element in the bridge definition is transition services, which refers to 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). A number of examples of services are listed as part of the definition, but it does not mandate or require that any specific type of service be provided.

One transition strategy introduced by some sites was the use of a transition coordinator or case manager as a primary contact person for students before, during, and after their enrollment in the bridge. Four predominant forms of the transition coordinator were: (1) an advisor designated to support the program who was apart from other bridge staff at District 214; Kaskaskia College; Pui Tak Center; and Rock Valley College; (2) an instructor who served in a dual role as transition coordinator at Shawnee Community College; (3) a program coordinator who served a triple role as transition coordinator and instructor at College of Lake County; and (4) transition supports but no dedicated transition coordinator at four sites. Rather than having a transition coordinator, Jewish Vocational Services, Elgin and Lewis and Clark used counselors funded by adult education and/or the community college to provide support for their bridge students. Alternatively, Triton College provided mentors to support students individually.

In addition to transition coordinators, other support services present in the programs were:

- a Website (see: [http://www.clcillinois.edu/healthlibrary/](http://www.clcillinois.edu/healthlibrary/)) specifically for the bridge program that was targeted toward ABE/ASE/ESL populations built by several Health Science faculty at College of Lake County. The website provided a wealth of healthcare related information, including a series called, “A Day in the Life of a…” This series covers 16 allied health fields and gives students a glimpse into a professional’s day in each field.

- a GED scholarship was being developed by Kaskaskia College for students who completed the GED and enrolled in a one-credit hour transition course.

- a bridge medical math course at Lewis and Clark Community College gave students who successfully complete the bridge the opportunity to take the math college placement exam and earn college credit for medical math required in the healthcare coursework.

- targeted COMPASS workshops provided by Pui Tak Center exposed students to the COMPASS test and prepared them for the exam at the end of the program. The Student Transition Services Coordinator at the Pui Tak Center worked with Malcolm X Community College personnel to create sample reading passages.

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**EMERGING AND PROMISING PRACTICES**

The evaluation results reported by Oertle et al., (2010) also revealed a number of promising practices:

**Bridge Collaborative Partnership(s)**

Bridge partnerships were based on reciprocal opportunities and maximized resources and returns. The partners were adult education, continuing education, postsecondary career and technical education (CTE), community-based organizations (CBOs), and business and industry.

**Bridge Champion(s)**

Program administrators or coordinators were champions (i.e., agents of change) for the adult bridge programs, with many demonstrating enough clout in the parent organization to influence decisions and affect change. These bridge champions spread the word about the programs, and they helped to build partnerships in positive ways. They also served as the basis of support to connect the bridge staff and partners. Furthermore, they had a progressive vision for how students would access adult education that transcends the GED or improves English language skills.
**Bridge Transition Coordinator**

The transition coordinator was the “go to” person who acted as a broker of knowledge for students, bridge staff, and bridge partners. The coordinator was key to student movement into, through, and beyond the bridge. The coordinator became the hub for recruitment, including giving presentations to potential students, sponsoring open houses, sharing enrollment information, creating bridge flyers and pamphlets, and using mass media for marketing. Their role in retention included arranging for study skills support, tutoring, childcare, and transportation, and transition services included providing and sharing resources through interagency collaboration, goal setting and planning, and making referrals.

**Bridge Technology**

Many of the bridge administrators and instructors were intentional about the integration of technology into the curriculum. At some sites, classrooms with computers for each student were the primary point of instruction. Communication in some sites was facilitated via electronic mail, Blackboard, and Facebook where student learning was facilitated through social networking. These technologies were also key to communicating information about employment and computer security. Instructors routinely integrated technology and dedicated time for computer research and web-based instruction so that the students could improve their technical skills, and some students routinely used handheld electronic dictionaries and language translators. Furthermore, industry specific tools such as handheld scanners and blood pressure and heart monitors were used to teach students how to use technology in work applications. Many students seemed comfortable using technology, which was an unanticipated finding since the evaluation of Illinois’ original Shifting Gears sites revealed many bridge students struggled to use technology (Bragg et al., 2009).

Two bridge programs are profiled in the remainder of this brief. These two programs were funded by the state’s Shifting Gears initiative, and additional information is presented about these programs in Bragg et al. (2010) and on the OCCRL website at: http://occrl.illinois.edu/publications/projects/shifting_gears.

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**BLACK HAWK COLLEGE**

**ADULT EDUCATION ESL TO TDL BRIDGE COURSE**

**Practice Context**

Black Hawk College (BHC) is a comprehensive community college serving all or part of nine counties and a population of over 230,000 residents in a mostly rural area of northwest Illinois. This practice was fully developed and implemented for the Shifting Gears (SG) initiative during the 2007–08 academic year. Heeding BHC’s strategic plans to expand the student base to include their relatively large population of adult education students, the timing of development of the bridge for adult learners was fortuitous. Coinciding with SG, college administrators were looking for a program offering that would provide adults with a credential to secure employment or improve their career opportunities in a relatively short amount of time. Based on several carefully considered factors, the college chose the Transportation, Distribution and Logistics (TDL) industry sector to develop the bridge, as the college’s geographic location is a hub of transportation on the Mississippi River and on a major east-west interstate (I-80). Also, the college had existing courses and programs in the logistics area.

**Practice Description**

To help address the educational and employment needs of a relatively large English language learner population (800-900 students annually) the College developed an occupationally contextualized bridge course for English as Second Language (ESL) adult education students interested in careers in TDL. The 16-week, ESL bridge course was developed to address two goals: 1) contextualize a standard adult education ESL course to prepare students to transition into the Warehouse Distribution Specialist (WDS) certificate program, and 2) provide comprehensive support services including tutoring, learning communities, targeted use of instructional software, and career counseling to enhance students’ success.
The ESL curriculum was co-developed by an experienced, full-time ESL teacher and another contractor (external to BHC) who was familiar with Georgia’s “Quickstart” curriculum. Quickstart was used as a model to create a customized outline of concepts and terminology to contextualize with the ESL curricula.

The instructor contextualized the ESL curriculum with reading, writing, and math content she aligned with the WDS program and with competencies needed in the larger TDL industry. To do this, she read WDS program texts to determine the academic level required and the common vocabulary needed by her ESL bridge students. In addition to the requisite foundation in English grammar, she infused over 500 vocabulary words, including terms that reference math, the industry, and the workplace. Classroom strategies and instruction were diverse and included warehouse tours and outside speakers, mentors and tutors who were involved in the TDL industry. Students strengthened their computer literacy by learning some content via computer-based modules; they watched American films to learn about American culture and to hear nuances in English pronunciation and contemporary American jargon. The curriculum also included employability and teamwork skills, career development and job acquisition skills, college success skills, and lessons on health and wellness. To be sure all students were prepared to enter the fall semester WDS courses, BHC also created a 6-week ESL refresher course to help students retain their new knowledge during the summer break between the end of the spring bridge course and the start of the fall semester.

Supporting Strategies

1. Hiring a Part-Time Math Instructor
   Black Hawk College hired a part-time math instructor to teach bridge students in the classroom and on an individual basis to ensure they understood math vocabulary well enough to succeed in their subsequent WDS courses. The ESL instructor also included math-related vocabulary because, as she explained, “many ESL students have knowledge of math principles but cannot read the mathematical words on the exams and thus, score lower than their actual competency level.”

2. Curricular Alignment and Career Pathway Development
   From the beginning of the SG initiative, BHC adult education administrators designed their approach to bridge course development to be consistent with the larger career pathway framework because they understood its utility for transitioning students as their needs and aspirations evolved. Bridge course content was carefully aligned with entry level competencies for the WDS program, a certificate program comprised of five courses that earn vocational skills credit. The WDS certificate is aligned to the Inventory Specialist Certificate program, which is aligned to the college’s Associate of Science degree in Supply Chain Management, which is articulated with a baccalaureate program in Supply Chain Management at Western Illinois University.

3. Intensive Transition Support Services
   Black Hawk College hired an Advisor to support the diverse needs of the bridge students through coaching, registration assistance, academic and financial aid advisement, coordination of local resources for child care, assistance to help students secure transportation resources, and creation of events to help the students feel a part of a learning community. In addition, the Advisor wrote brief profiles about each student to provide to the WDS program instructors to familiarize them with the population as a whole and the individuals’ specific needs or issues.

4. Utilizing Data for Program Improvement
   Due to student demand, the College offered two sections of the WDS certificate program in two formats; one met five days per week over thirteen weeks, and the other met two days per week over twenty-five weeks. The additional section was offered to accommodate bridge students’ work schedules, to accelerate the WDS curriculum into two different models, and to measure student outcomes to help determine the most optimal delivery model. Overall, the BHC bridge team embraced a continuous improvement culture that called for ongoing re-evaluation of student outcomes in response to the program’s evolving nature.
Leadership of this practice was situated in the Adult Education division of the college. Bridge course development was spearheaded by the Associate Dean of Extended Educational Programs, the Coordinator of Literacy Programs, and a part-time program Advisor. Also highly supportive of the bridge were the college president, vice presidents, and faculty from academic ESL, adult education, and the specific career area. Externally, the bridge was supported by an active partnership with Eastern Iowa Community College, a partner in a federal Department of Labor (DOL) grant focusing on logistics entitled, “Joined by a River.” Further, BHC is a partner in the Quad-Cities Logistics Roundtable, a large employer advisory group to the DOL grant which provides BHC with coordinated business and industry support for the College’s several logistics courses and programs. The program also benefited from collaboration with the college’s Carl D. Perkins Administrator who was involved in the implementation of the “Joined by a River” grant, and also provided funding to pay instructors for the additional cohort. In addition, she assisted in recruiting, interviewing, and hiring additional instructors for the bridge.

Evidence of Success
All 19 of the ESL students enrolled in the bridge course completed all five courses in the WDS certificate program. Given the success of the SG bridge course in the manufacturing/TDL industry sector, the bridge curriculum process has also been applied to developing a bridge in the health science sector. With the initial SG bridge as inspiration, the College expects this second bridge program to be even more robust and further its mission for student success.
science, math and psychology prerequisite Practical Nursing program classes. Seventeen Presbyterian Homes’ employees self-selected to attend OCC’s CNA to LPN bridge course. Although students were not pre-tested upon admission, they were given English and reading placement tests and the math portion of the COMPASS near the completion of the bridge course.

The bridge course curriculum was co-designed by OCC’s ADN coordinator and the bridge instructor, an experienced instructor of developmental English. Class was held one day per week for three hours. The lecture/discussion and lab components were provided at OCC’s Skokie campus and at a cottage at Presbyterian Homes, donated for classroom use. The bridge instructor contextualized medical vocabulary with reading, speaking and writing assignments. She used a variety of sources including the National League of Nursing (NLN) exam, which all students would eventually take as an admission requirement for the Practical Nursing program, as well as the texts “504 Absolutely Essential Words” and “Reading Smart.” Students completed individual, group, and project-based assignments infused with workplace skills, such as presentations and projects with firm deadlines. Basic computer skills were introduced in the course once students’ low levels of computer literacy were determined. The instructor created an encouraging and challenging classroom environment, designing activities that built upon the learners’ prior knowledge and experiences and reinforcing study and time management skills.

Support Strategies

1. **Extending Course Length**

Oakton Community College Nursing faculty determined that the 8-week course used as a model needed alterations to enable student success and thus extended the timeframe, from eight to sixteen weeks. While the students admitted into the bridge course were described as a “highly motivated group,” they proved to have academic needs far greater than anticipated and the extended timeframe was needed.

2. **Intensive Transition Support Services**

The provision of support services was a shared effort between the Director of Nursing Education at Presbyterian Homes and two coordinators at OCC: one with an extensive nursing background and the other an experienced admissions counselor. Transition support took many forms and required frequent, responsive communication to advise bridge students about college-related information and provide individual registration assistance and academic advising to create individual plans of study. To accommodate students’ busy work schedules and personalize the college-going experience, the co-coordinators conducted weekly visits to OCC’s Skokie campus where the bridge course was held and to the Presbyterian Homes cottage to get to know the students.

3. **Instructor Selection**

Administrators at OCC realized the selection of the “right” instructor was imperative to the bridge course’s success. The College specifically recruited an instructor with whom they had worked in the past. The instructor had previously been in the Peace Corps and had a great deal of experience in developmental education. Given her nurturing nature and creative, “out of the box” thinking, there was immediate agreement among OCC administrators that she possessed the qualities best suited to meet the bridge students’ needs.

**Evidence of Success**

With respect to the first cohort involved in the SG initiative, of the 17 students who began the bridge course, 15 persisted to completion of the course. Fourteen students enrolled in the next course in the prerequisite sequence, and as of this writing they were all on target to graduate in August, 2011. They will then be eligible to sit for their licensure exam to become Licensed Practical Nurses. Further, all 14 have indicated their intention to continue their education by enrolling in OCC’s ADN program.

Given the SG bridge course’s success, the college has used this course as a template for developing a part-time Nursing program in an effort to better accommodate working adults who are interested in becoming Registered Nurses.
CONCLUSION

Illinois is experiencing a growth of bridge programs as state education and workforce agencies continue to devote existing and pursue new resources to establish planning and demonstration sites. Five adult education provider sites have received planning grants and five others have demonstration grants in FY2010. Five community colleges are implementing developmental education bridge courses and three other colleges received funds to develop models that establish how a comprehensive array of student support services can be coordinated and offered to adult student needing assistance to reach their academic goals. Workforce agencies in the Chicago metro area continue to offer bridge programs, and plans are being made to replicate them on a regional basis in other parts of the state. In Fall 2011, the state will release the results of the second bridge survey which is tracking bridge growth and some implementation characteristics, aiding the state and providers in establishing a repository of bridge-related information. In addition, state and local leaders continue to critically examine policies that impede bridge instruction and improve policies that advance its adoption. The state remains committed to supporting adult students’ completion of the credentials they need to improve their personal and professional lives and in doing so, contribute to the economic well-being of the state.

The Evaluation

During the 2009-10 academic year, 10 Illinois adult education bridge sites were evaluated by OCCRL, with funding from the ICCB. The 10 sites were:
- College of Lake County
- Elgin Community College
- Township High School District 214 Community Education (District 214)
- Jewish Vocational Services
- Kaskaskia College
- Lewis and Clark Community College
- Pui Tak Center
- Rock Valley College
- Shawnee Community College
- Triton College

The primary goal of this evaluation was to generate knowledge that could be used to further develop adult bridge programs in the state of Illinois. The evaluation design was formative, and mixed methods were used. Data collection methods included:
(a) development and review of logic models with the adult bridge program administrators; (b) document review and analysis of program proposals and supporting materials; (c) one-day site visits that included collection of program documents (e.g., program marketing materials, syllabi, student goal and progress forms), semi-structured interviews, classroom observations, and student focus groups; (d) follow-up conference calls with bridge program administrators, faculty, and staff; and (e) analysis of data from the Illinois Bridge Status Survey. All data collection activities were conducted between November 2009 and May 2010 using site visits, surveys, telephone interviews and document analysis. The design did not offer rigorous evidence of program effectiveness; rather, its goal was to lay the groundwork for future impact studies.
REFERENCES


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THE THEORY AND APPLICATION OF CONTEXTUALIZED TEACHING AND LEARNING IN RELATION TO PROGRAMS OF STUDY AND CAREER PATHWAYS

Stephanie Kalchik and Kathleen Marie Oertle

WHAT IS CONTEXTUALIZED TEACHING AND LEARNING (CTL)?

Contextualized Teaching and Learning (CTL), also known as Contextualized Instruction, is defined as a “diverse family of instructional strategies designed to more seamlessly link the learning of foundational skills and academic or occupational content by focusing teaching and learning squarely on concrete applications in a specific context that is of interest to the student” (Mazzeo, 2008, p. 3; see also Medrich, Calderon, & Hoachlander, 2003). In other words, CTL is a process built on the recognition that some students learn more effectively when they are taught in a hands-on, real-world context rather than in an abstract manner (Baker, Hope, & Karandjeff, 2009; Bond, 2004; Predmore, 2005). The primary goal of CTL is to utilize the “context supported by traditional academics to drive instruction” thus engaging students in active learning to assist them in making meaning (N. N. Badway, personal communication, August 1, 2010).

Bond (2004) outlines the characteristics of CTL, as opposed to traditional academic models:
- Focuses on concrete skills and knowledge needed in work and life
- Combines academic learning with workplace applications
- Personalizes instruction for each student
- Presents abstract ideas through the senses
- Indicates utility or usefulness of information
- Provides factual information during hands-on experiences so that it immediately makes sense
- Presents information in small increments instead of large chunks or thick books

Cross-curriculum integration is an important part of CTL that connects academic and career and technical education (CTE). An example of cross-curriculum integration is when academic teachers, CTE teachers, and representatives of business and industry form teams to create projects involving an intersection between academic content and career-technical or workforce competencies. The primary benefit of this strategy is that “students experience the subject matter as connected and reinforcing, rather than separate and unrelated” (Chernus & Fowler, 2009, p. 6).

THEORETICAL ROOTS AND IMPLICATIONS

Successful CTL engages teachers and students in active classroom activities, insuring that learning is student-centered and engaging. Thus, CTL is based on a constructivist educational theory, which is “a conceptual framework that asserts that learners are constantly updating their memory based on ongoing experience” (Baker et al., 2009, p. 8). Constructivism relies on the notion that students create their own meaning of concepts when they learn through experience, which furthers an innate motivation and desire to learn. Supporters of CTL assert that it can motivate many students more effectively than traditional classroom pedagogy (Baker et al., 2009; Perin & Hare, 2010).
Baker et al. (2009) outline several other psychological and educational theories and research that have implications for CTL:

- **Motivation Theory.** Motivation theory focuses on students’ perceived value of the mode of instruction and development of self-efficacy, which is a key component of CTL. Students are encouraged to reflect on their own ideas and the experiences in which the instruction and materials are imbedded. Predmore (2005) shows that thinking about content within real-world experience is important in CTL because “once [students] can see the real-world relevance of what they’re learning, they become interested and motivated” (Putting it Into Context, The Success, para. 6).

- **Problem-Centered Learning.** This style of learning activity requires students to work in teams to progress through a network of interconnected problems that lead to a relevant conclusion. This CTL approach helps students to see the usefulness of certain skills because they are connected to a real-life problem-solving situation.

- **Social Learning Theory.** Social learning theory emphasizes a shift away from solitary studying and passive listening and toward collaboration with peers. Students are encouraged to create and understand their own learning within a social situation associated with CTL. The social context of collaborative learning also often emulates what students can expect in a future work environment.

- **Learning Styles.** Students have different prior knowledge and experience, motivational factors, and personalities. These elements affect the ways in which students learn most effectively. CTL reaches a variety of learning styles in the classroom because the instructor can use different approaches within the experiential context, such as hands-on learning and collaborative learning.

- **Brain Research.** Emotion, practice, experience, and the environment can shape learning because “the human brain is highly responsive to association and sensory experience” (Baker et al., 2009, p. 15). Brain research is important to CTL because it demonstrates that the brain can develop through connections between experience, sensory information and learning new concepts.

### THE RELATIONSHIP OF CTL TO PROGRAMS OF STUDY (POS) AND CAREER PATHWAYS

Programs of Study (POS) are sequences of courses that begin in secondary education and continue through postsecondary education. POS incorporate academic and CTE courses and are based on Career Clusters and Career Pathways (Jankowski, Kirby, Bragg, Taylor, & Oertle, 2009; State’s Career Clusters Initiative, 2010; Taylor et al., 2009). Career Clusters allow students to gain fundamental academic knowledge while exploring a variety of career interests. Career Pathways provide students with the opportunity to develop specialized skills while learning how to apply those same skills to career options within each Career Cluster. Career Pathways are also flexible in that they help students connect current learning with future opportunities in continuing education and career development. For students who seek education primarily to gain access to more advanced jobs, “career pathways are only effective if they seamlessly link students to courses, programs, and good jobs” (National Council for Workforce Education [NCWE], 2010, p. 1.12).

One significant way of addressing this job-focused motivation is to implement CTL strategies through POS and Career Pathways to make learning relevant to specific occupations. Furthermore, “contextualization provides an immediate application of learning to [students’] career and education goals, which can help students remain motivated to continue their studies” (NCWE, 2010, p. 2.13).

The intersection of academic and CTE instruction through POS provides a framework for CTL. Baker et al. (2009) emphasize the importance of the development of transferrable skills in programs that utilize CTL, reflecting the notion that “the student has developed into a better learner by becoming more aware and self-directed as well as increasingly capable of constructing more effective inquiry transferring that knowledge to other fields” (p. 16, see also Chernus & Fowler, 2009). Promoting students’ ability to generalize knowledge is essential in connecting CTL to POS because one central goal of the POS Career Pathway structure is to provide students with skills they need to move between different career and educational options.
CHALLENGES OF CTL

Although CTL has strong advocates and a growing foundation of theoretical and practical applications, its proponents may encounter challenges when implementing this strategy, especially implementing from the instructor perspective. Some possible challenges include:

- Difficulties obtaining additional funding for hands-on courses (Baker et al., 2009).
- Developing on a continual basis creative and effective teaching and learning strategies and finding ways to apply abstract material to concrete experiences (Predmore, 2005).
- Working with state curricula that emphasize high-stakes testing, leaving little time for active learning applications in the classroom (Predmore, 2005).
- Helping students adjust to a type of instruction that differs from traditional instruction to which they are accustomed (Predmore, 2005).
- Adjusting to the high energy levels required for managing a louder and more active classroom (Predmore, 2005).

IMPLEMENTATION OF CTL

Despite the potential challenges, many instructors have implemented CTL in their courses. CTL is a flexible process for both instructors and students, so there is no single way to implement such instruction. Developing an effective CTL classroom requires patience, open-mindedness, and flexibility because CTL is very different from traditional instruction. Instructors may need to adjust to the learner-centered approach that is integral to CTL if they are accustomed to teaching in a traditional classroom. Various authors provide insight as to how instructors and their colleagues can successfully implement CTL in their classrooms.

- Collaborate with other instructors and colleagues. Many effective CTL courses are interdisciplinary, so forming teams with other instructors, workplace representatives, and experts on specific subjects can create a well-rounded instructional base from which students can apply what they are learning to concrete experience (Baker et al., 2009; Chernus & Fowler, 2009; Predmore, 2005).
- Obtain or develop relevant materials. Instructors and their collaborators can create their own instructional materials based on resources from industry partners or student experience with such partners (Baker et al., 2009). Or, instructors can locate commercial materials since publishing companies are increasingly providing CTL materials (Predmore, 2005).
- Seek professional development. Many instructors need training in order to learn how to teach effectively under a CTL model (Finkelstein, Hanson, Huang, Hirschman, & Huang, 2010; Predmore, 2005). To improve and maintain the quality of instruction and student outcomes in CTL classrooms, professional development can help instructors to “clarify the learning outcomes afforded by an integrated curriculum,” reach greater understanding of how to develop CTL content, and “teach in a contextualized manner” (Baker et al., 2009, p. 20).

For Further Reading


• Ask questions of students. Instructors should try to anticipate the students’ view of which instructional approaches work best. Instructors and their collaborators can participate in students’ classroom conversations in order to better understand their problem-solving thought processes and to guide discussion as students create their own questions and understandings (The Cognition and Technology Group at Vanderbilt, 1990; Predmore, 2005).

With the above recommendations in mind, instructors and their collaborators can create an environment in which students can explore academic and CTE material through a contextualized approach.

**CTL Resources**

**Career Ladders Project**
http://www.careerladdersproject.org/videoa/mainpages/ctl.html  
Videos illustrating students’ experiences with and perspectives of CTL courses.

**Contextualized Teaching and Learning Project**
http://www.rpgroup.org/css/CTL.html  
Instructional strategies for teaching basic skills in a context that is meaningful and relevant to students' lives, including career preparation, community service and social justice.

**CORD Contextualized Teaching and Learning Resources**
http://www.cord.org/contextual-classroom-resources/  
Links and descriptions of CTL publications through the Center for Occupational Research and Development; publications emphasize strategies that instructors can employ in CTL classrooms.

**Math-in-CTE**
http://136.165.122.102/mambo/content/view/66/1/  
Downloadable sample curriculum maps embedding math into the following CTE courses: Agriculture, Automotive, Business and Marketing, Health, and Information Technology. From the National Research Center for Career and Technical Education.

**TeachNET**
http://www.cew.wisc.edu/teachnet/ctl/  
Descriptions of CTL strategies and links to information about the relationship of CTL to workplace and community learning.
REFERENCES


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CTL In Action

According to the Vocational Instructional Materials Laboratory (VIML, 1999), CTL lessons are designed with the expectation that students will develop specific skills that employers seek, such as the ability to “initiate action on their own…assess problems and situations, anticipate what might happen next, and continuously search for creative solutions” (VIML, 1999, p. 10).

A sample CTL lesson from the VIML consists of a scenario and guiding questions for students to read and follow:

You are among a team of architects hired to plan the revitalization of a deteriorating historic area in your community. In spite of a rich ethnic history and residents who are committed to seeing the area thrive, the neighborhood is plagued by inadequate housing, abandoned buildings, lack of transportation, crime, and declining businesses. The City Planning Commission is prepared to provide resources to encourage economic development, recreation areas, and better housing. Create a design for the neighborhood and present your plans to the commission for their approval.

Guiding Questions:

What alternative uses should be considered for the land to best meet the needs of the community and its citizens?

What historic and current economic, social, and environmental factors should be considered in the creation of the plan?

What data regarding the needs and concerns of citizens and businesses in the community would inform the design of the neighborhood? How should this data be collected, analyzed, and presented?

The goal of the above VIML sample CTL lesson is to help students develop the following competencies, which combine academic and work-related skills:

1. Solve problems and make decisions in work-related situations
2. Read for information and understanding
3. Use observation skills to analyze work-related situations
4. Apply mathematical processes
5. Apply measurement and spatial skills
6. Apply statistical analysis skills
7. Analyze critical data to guide work activities
8. Utilize scheduling techniques to ensure that jobs are completed by the stated due date
9. Demonstrate knowledge of the economy and how it functions as a whole
10. Demonstrate knowledge of the economy as a framework within which decisions are made by individuals and groups

WHAT IS CAREER DEVELOPMENT?

According to Sears (1982), career development is “the total constellation of economic, sociological, psychological, educational, physical, and chance factors that combine to shape one’s career.” This definition was advanced by the Illinois Career Development Task Force that engaged in more than a year of deliberation. Career development is grounded in career theory, including Super’s (1957) life-span career theory. Applied to career development, the significance of Super’s (1957) theory is that it emphasizes career development as an ongoing process that continues throughout an individual’s life. Career development programs and services can assist to “improve individual career awareness, exploration, choice, preparation, and management” (Williams, Bragg, & Makela, 2008, p. 7; see also Herr & Cramer, 1996). Successful, ongoing career development helps individuals of all ages to make a variety of transitions throughout their lifetimes: between different levels of education, from education to work, and between work and education.

THE IMPORTANCE AND BENEFITS OF CAREER DEVELOPMENT

The Association for Career and Technical Education (ACTE) notes that today’s employees must navigate a complex and changing world of work. Further, individuals face preparation gaps that educators and employers must fill through improved career development initiatives. Identifying and securing opportunities to earn a viable income is important but only part of the story. Finding employment and building a career based on interests is not an easy process (Lewis, Kosine, & Overman, 2008). ACTE states, “Without structured guidance activities, young people tend to drift through their high school education without gaining knowledge of all the career opportunities available to them or the skills that are required” (“Career and Technical Education’s Role,” Dec 2008, p. 2).

Career development can help to remedy this lack of knowledge for individuals of all age levels and can promote personal and educational development. For example, research demonstrates that “career development positively impacts academic achievement, career maturity, educational motivation, coping skills, self-esteem, and age-appropriate exploration and career decision-making” (Williams et al., 2008, p. 7; see also Akos, Kold, & Niles, 2004; Evans & Burke, 1992; Hughes & Karp, 2004; Jepsen & Dickson, 2003; Lapan, Gysbers, & Sun, 1997; Legum & Hoare, 2004; Oliver & Spokane, 1988; Patton & Creed, 2001; Whiston, Sexton, & Lasoff, 1998). Career development can also motivate individuals by providing a concrete connection between educational programs and future careers.
WHAT’S IN A NAME?

Scholars and practitioners disagree about the use and meanings of terms for individuals who work in fields related to career development. The National Career Development Association crafted a career provider’s comparison chart to improve understanding of the various terms and their meanings. The comparison chart can be accessed at http://associationdatabase.com/aws/NCDA/pt/sd/news_article/15416/_blank/layout_details/false.

Two of the most commonly used terms are career coach and career counselor. Although these terms are used differently in different fields, Chung and Gfroerer (2003) make general distinctions between the two. According to these authors, career coaches use task-focused and problem-solving methods to help individuals develop career-related skills and make solid career choices. On the other hand, career counselors rely more heavily on psychological methods and “work with clients to achieve self-understanding and awareness in career planning and may use professional instruments to assess personality traits to aid in the awareness process” (Chung & Gfroerer, 2003, p. 142). Counselors are required to have professional training and at least a Master’s degree, whereas coaches do not have specific training or education requirements. Career advisor is another term that is used extensively in secondary and postsecondary education settings to identify individuals who help to guide students in identifying career goals and align these goals with the choice of a major and the selection of appropriate course work. Like career coaches, career advisors are not required to have advanced education at the master’s level or beyond, although it is not unusual for career advisors to do so (D. Bragg, personal communication, May 7, 2010).

Since these terms are often understood differently, in this document the term “career services provider” is used to allow for flexibility in understanding while emphasizing the role of individuals in facilitating career development (R. Reardon, personal communication, April 13, 2010). We also use the terms guidance counselor and school counselor because individuals employed in these positions are often asked (though sometimes unprepared) to provide career counseling in Pre-K-12 schools (American School Counselors Association, 2005).

ORGANIZATION AND IMPLEMENTATION OF CAREER DEVELOPMENT

Career development initiatives can be implemented by career services providers and through career courses, internships/job shadowing, and computer-based guidance programs (Williams et al., 2008). These initiatives should:

- Include individuals of all ages and levels of education
- Offer services for individuals of all ages that continue through one’s lifetime
- Recognize the interactions among education, business, industry, and government
- Be foundational and systemic – not an extra activity
- Emphasize alignment between academic and career development services
- Utilize and promote problem-solving and decision-making skills
- Refer to human development in theory and practice through the cycle of career decision-making

HOW DOES CAREER DEVELOPMENT RELATE TO PROGRAMS OF STUDY AND CAREER PATHWAYS?

**Programs of Study (POS)** consist of clusters and pathways that connect high school to college and careers in a variety of fields. POS are sequences of courses that progress through secondary and postsecondary education. POS incorporate both academic and career and technical education (CTE) courses and other curricular elements, building from the national model of Career Clusters and Career Pathways (Jankowski, Kirby, Bragg, Taylor, & Oertle, 2009; State’s Career Clusters Initiative, 2010; Taylor et al., 2009). While POS are articulated from secondary through postsecondary education, there are multiple entry and exit points with numerous opportunities for students to earn stackable credentials, certificates, and degrees.
Career Clusters and Career Pathways are components of POS where students gain Cluster and Pathway level knowledge and skills. At the Cluster level, students explore their career interests while developing academically by learning a common core of foundational knowledge and skills. At the Pathway level, students gain more specialized knowledge and skills. Pathways consist of academic and technical study that prepares students for a full range of options within each of the Career Clusters. Currently, there are 79 nationally recognized Pathways, each with specific Pathway knowledge and skills. Career Pathways provide a context for further gains in students’ academic knowledge and skills integrated with career exploration. Pathways are designed to link learning to the skills and knowledge needed for further education, career development, and employment.

Career and Technical Education (CTE) is an important aspect of the comprehensive curriculum associated with POS, emphasizing “career clusters and career pathways as a way to guide young people through the career decision-making process” and helping “students to more clearly understand how their educational choices affect future career options” (“Career and Technical Education’s Role,” Dec. 2008, p. 5). Core academics are equally as critical. Math, science, language arts and communications, social sciences, and other core subjects are essential for K–12 students who seek to transition successfully to college and careers, as well as for adults who are preparing for study or are studying at the postsecondary level.

THE ROLES OF CAREER DEVELOPMENT, PROGRAMS OF STUDY, AND CAREER PATHWAYS

Career development is important because it motivates and engages students in career decision-making through relevant and personalized education (“Career and Technical Education’s Role,” Dec. 2008). Without career development, including career exploration, students are challenged to make good decisions about college and careers. Career development in association with POS can provide students with a combination of coursework, innovative instruction including work-based learning experiences, and support services that are aligned with career clusters and career pathways. POS provide the support structures and information that guide students’ course taking as they explore their career interests. Research findings indicate that participation in POS coursework adds value to the career development process by providing students with opportunities for career exploration and preparation as they develop their career identity (Lewis, et al., 2008). POS and the related Career Pathways create an organizational system that can be used to guide student exploration and connect career interests to course-taking and preparation.

Other Career Development Resources

Guidance tool to provide individuals with a thorough understanding of the career clusters.

CareerOneStop: Pathways to Career Success sponsored by the U.S. Department of Labor [http://www.careeronestop.org/]
Includes resources for exploring careers and education, and provides resume and interview tools.

Illinois One Source: Your Gateway to Workforce and Career Information: [http://www.ilworkinfo.com/]
Provides career information in English and Spanish for elementary, high school, and adult students.

Next Steps [http://www.nextsteps.org/]
Provides information about specific careers and guidelines for career planning, career seeking, and career maintenance.

School to Careers [http://www.careers.iptv.org/]
Allows students to become acquainted with a variety of careers through interaction with professionals in different fields through media such as video and discussion boards.

Vocational Information Center [http://www.khake.com/index.html]
CTE resources, including career options, required skills, and educational programs.
INTEGRATING CAREER DEVELOPMENT, PROGRAMS OF STUDY, AND CAREER PATHWAYS

Introducing career development without emphasizing a breadth of factors that influence education and career opportunities can be confusing to students. Some teachers, administrators, guidance counselors, and others worry that a focus on careers narrows the curriculum in ways that are detrimental to students’ broader educational goals. Younger students may interpret career development and POS discussions as forcing them to choose between college and a technical career path rather than integrating elements of both throughout their education. This perspective may lead to tracking that limits students’ college and career options, which is counter to the actual intentions of POS or CTE (Stern & Stearns, 2006). POS actually provide a means for exploring options, organizing course selections and planning for transition while developing knowledge and skills. With POS as a centerpiece, students can receive assistance to plan an individualized educational path that connects their interests with coursework and motivates them to reach higher academic achievement. Furthermore, POS and Career Pathways can help show the relevance of school to postsecondary and lifelong learning (Lewis, et al., 2008).

Along the same lines, career development programs may appear to place a liberal arts education in competition with or opposition to CTE. This competition between CTE and liberal arts and general education is unfortunate and unnecessary. Program administrators, teachers, and guidance counselors should emphasize the integration of CTE and other academic coursework to help prepare students for the transition from secondary education to college and careers (Stern & Stearns, 2006). Once again, this integration of curriculum, academic and CTE, is an essential element of POS.

CAREER SERVICES PROVIDERS’ ROLE IN CAREER DEVELOPMENT

High school and college level career services providers can facilitate quality career development by providing personalized educational guidance for students by helping them to choose relevant academic coursework along with practical educational and career experiences (“Career and Technical Education’s Role,” December 2008). Despite their recognition of the importance of personalized plans, such as Individualized Education Plans (IEPs) or Individualized Career Plans (ICPs), many career services providers have difficulty providing career-focused guidance in high schools and in community colleges, four-year colleges and universities. Since the formal training of many career services providers focuses on student development, these individuals may sometimes lack understanding of career development, a related but distinct body of knowledge. As a consequence, it is beneficial for career services providers to work closely with teachers to provide students with well-rounded guidance involving developmental, academic, and career-oriented facets (“Career and Technical Education’s Role,” December 2008).
CHALLENGES TO CAREER DEVELOPMENT

Several concerns expressed by practitioners who work closely with career development in the state of Illinois are:

- Historically, Illinois has not adopted state policy on career development or required that schools and colleges implement career development programs (Williams et al., 2008). Concerned about fragmented delivery of career development programs and services, in 2007-08 the Illinois Career Development Task Force was formed and led by Mark Williams of the Illinois State Board of Education (ISBE). This group recommended that the state adopt a career development framework, recognizing that attention and support is needed from all levels of the P–20 system to achieve lasting impact. Without clear and consistent state and local policy, the group predicted that program implementation would continue to be uneven and likely ineffective.

- In many states and localities (not just in Illinois), counselors are trained in mental health counseling with minimal or no training in career development. This lack of career development knowledge may contribute to counselors minimizing the importance of career development and sometimes providing students with inadequate and even inaccurate perceptions of college and career options (“Career and Technical Education’s Role,” December 2008).

- Even within CTE courses, the aspect of the K–12 curriculum that is presumably most aligned with career development, gaps exist between CTE and career development. Some high schools and community colleges offer CTE courses without much focus on career development, despite the potential close relationship between the two constructs. For example, some CTE programs assume that students have explored career options and have made career decisions prior to entering a CTE course, and they breeze past career orientation and exploration to skill-building (Williams et al., 2008). This approach to teaching CTE is not consistent with the building curriculum reform efforts that support the state’s efforts to implement POS and Career Pathways and facilitate student transition to college and careers.

CHALLENGES TO GUIDANCE COUNSELING

Guidance counselors face myriad challenges in delivering effective academic and career guidance (“Career and Technical Education’s Role,” December 2008; Jaschik, 3 March 2010). Many high schools have tight budgets that result in a too-large student-to-counselor ratio and heavy counselor workloads. The average national ratio is reported variably as 265:1 (Jaschik, 3 March 2010) or 479:1 (“Career and Technical Education’s Role,” December 2008), with some states’ ratios reaching nearly 1,000:1. Unfortunately, Illinois’ student-to-counselor ratio is toward the higher end of this spectrum (Williams et al., 2008). A consequence of these high ratios is that students feel like a face in the crowd when seeking guidance about college and career preparation. The actual time counselors have to devote to counseling students about careers is modest, at best.

The guidance counseling function is further complicated in that many guidance counselors are expected to administer the master course schedule for their schools and administer achievement tests, which take away from their time with students. Students and families that have the resources to do their own research increasingly seek online college/career resources rather than the advice of career professionals. Finally, knowing how to advise students about career options is often difficult for guidance counselors whose training has focused primarily on mental health rather than on career guidance (“Career and Technical Education’s Role,” December 2008; Jaschik, 3 March 2010).

For Further Reading


NATIONAL STANDARDS ALIGNING SCHOOL COUNSELING AND CAREER DEVELOPMENT

Consistent with the perspective that school (or guidance) counselors should play a role in assisting students with their career development, the American School Counselors Association (ASCA) (2005) adopted national standards that recognize career development as one of three domains that enhance student learning, with academic development and personal/social development being the other two domains. These standards complement the competencies listed under the National Career Development Association (NCDA) guidelines (America’s Career Resource Network, undated) that emphasize personal social development, educational achievement and lifelong learning, and career management. The ASCA guidebook (2005, p. 33) provides an example of a crosswalk developed by educators in the state of Connecticut that shows alignment between the ASCA national standards and the NCDA competencies, in addition to showing alignment with Connecticut’s standards for learning and school counselors’ goals. This example displays how the ASCA national standards and the NCDA national competencies complement one another in ways that support the role that school counselors play in supporting their students’ career development.

<table>
<thead>
<tr>
<th>American School Counseling Association (ASCA) National Standards</th>
<th>National Career Development Association (NCDA) Guidelines</th>
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<tbody>
<tr>
<td>Standard 4: Students will acquire the skills to investigate the world of work in relation to knowledge of self and to make informed career decisions</td>
<td>Competency 9: Understanding how to make decisions Competency 10: Awareness of the interrelationship of life roles</td>
</tr>
<tr>
<td>Standard 5: Students will employ strategies to achieve future career success and satisfaction</td>
<td>Competency 11: Awareness of different occupations and changing male/female roles</td>
</tr>
<tr>
<td>Standard 6: Students will understand the relationship between personal qualities, education and training and the world of work</td>
<td>Competency 12: Awareness of the career planning process</td>
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NEXT STEPS

The Illinois Career Development Task Force (Williams et al., 2008) recommended that implementation of a comprehensive career development system should take place in phases in order to create successful changes in the P-20 educational system. Phase I should involve coordination of existing career development services and promote networking between state and local career development leaders. Phase II should include career plans for all K–12 students and make them available for all learners, as well as improve teacher and counselor training at all levels. Phase III should implement electronic and online learning to enhance current state career development programs, and should assess the support of local and state governance. These phased recommendations still seem to make sense, possibly now more than before, and we encourage the state to proceed with their implementation.

In addition, schools, community colleges, and four-year colleges and universities need career services providers who can take action to ensure their students are prepared to benefit from current and accurate academic and career guidance. By focusing on the inclusive nature of CTE, career services providers should reach out to all learners in their institution and help them develop college and career plans. In addition, guidance counselors can combine their efforts with those of career services providers to provide career development for all students. Guidance counselors can expect to continue to face challenges as the emphases on achievement tests and online college and career information prevail. Underserved students face real challenges in this environment as well. However, by focusing on career development alongside academics, innovative instruction, and support services as a comprehensive initiative, career services providers can impact their students in a positive way.
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THE RELATIONSHIP OF INDIVIDUAL CAREER PLANS TO PROGRAMS OF STUDY AND CAREER PATHWAYS

Stephanie Kalchik and Kathleen Marie Oertle

WHAT IS AN INDIVIDUAL CAREER PLAN (ICP)?

Emerging in the late 1960s and early 1970s, the concept of individual student planning developed as a component of school guidance counseling programs. The underlying significance of these plans, such as the Individual Career Plan, is that “it gives [students] a chance to tell and develop their story” (N. Gysbers, personal communication, December 7, 2010). Conducting some of the first research on career planning, Gysbers (1983) provided an early definition of the Individual Career Development Plan, which focuses on the development of an instrument and a process. He explained the importance of the Plan as follows:

As an instrument, a plan can provide a place for people to record the aptitudes, interests, values, and competencies they possess, and an opportunity to itemize those they may wish to work on or acquire. It can become an organizer for personal, educational, and occupational information, which can then be updated periodically. As a process, a plan can become a pathway or a guide through which individuals may use the past and the present to look forward to the future. (p. 5)

Over the years, Gysbers (1983) has emphasized that such a plan is not a routine track to follow but rather a highly personalized guide that helps people plan and organize their most critical life choices, including decisions about their education and career.

A related and more recent definition of such a plan that was developed by the Council of Chief State School Officers (CCSSO) suggests Individual Learning Plans (ILPs) are personalized student education plans that include information such as high school courses, post-secondary education and career interests, and extracurricular activities. State approaches to developing and implementing ILPs are as varied as the information that goes into them. (in a section of the CCSSO website labeled “Individual Learning Plans”, n.d.)

Appearing on the CCSSO website, this definition identifies ILPs as a strategy for supporting K-12 instruction. In this site, links are offered to six states (Colorado, New Hampshire, Kentucky, Massachusetts, Ohio, and Washington) that represent 30 states that have mandated or provided general models or frameworks for ILPs (Connolly, 2009). Connolly observes that these 30 states have “clear strategies for ILPs” (p. 7), and she describes the role of the states and districts in implementing ILPs. Other results of the national survey by Connolly show only eight of all 50 states have no state mandate for ILPs, no state support for ILPs, and no plans for adopting ILPs, and Illinois is in this group. All other states are implementing, planning to adopt, or currently discussing ILPs.
As demonstrated in the above definitions of Individual Career Plans and Individual Learning Plans, different terms are used to describe the tool and the process that is known as the Individual Career Plan (ICP). For consistency, this type of plan is referred to as ICP throughout this brief. For reference, the following list presents a sample of terms that authors use to describe the same type of plan:

- Individual Learning Plan (ILP) (Burgess, 2008; Connolly, 2009; Solomon, Solomon, & Solomon, 2010; Wilkerson, 2010)
- Mandated Career Plan (Martin, Carey, & DeCostor, 2009)
- Individual Academic Plan (Horry-Georgetown Technical College [HGTC], 2008)
- Individual Student Planning (Gysbers, 2008)
- Graduation and Career Plan (The Carl D. Perkins Vocational and Technical Education Improvement Act, 2006)
- Personalized Learning Plan (Gibson & Clarke, 2000)
- Individual Career Development Plan (Gysbers, 1983)

In his foundational piece, Gysbers (1983) supplemented his definition of the ICP with the following list of characteristics:

- Never completed; an ongoing record
- Flexible; a document that can be used throughout an individual’s lifespan
- Person-centered; belongs to the individual using it
- Competency-based; records current competencies and identifies further competencies to be developed

**IMPORTANCE OF ICPs**

According to Gysbers (2008), ICPs allow students to work closely with school counselors, and this in turn begins a process of goal setting that gives students concrete direction and purpose. This leads to increased academic achievement when ICPs are included in guidance counseling programs. Wilkerson (2010) also found that school counselors supported the use of ICPs in terms of both academic progress and career preparation. Furthermore, motivation for learning and performance are maximized when ICPs are used as components of guidance processes and tools that promote autonomy and provide individuals with a greater sense of self-determination (Rigby, Deci, Patrick, & Ryan, 1992; Vansteenkiste, Lens, Deci, 2006). Martin and Marshall (1995) described people who are self-determined as individuals who:

> know how to choose—they know what they want and how to get it. From an awareness of personal needs, self-determined individuals choose goals, then doggedly pursue them. This involves asserting an individual’s presence, making his or her needs known, evaluating progress toward meeting goals, adjusting performance, and creating unique approaches to solve problems. (p. 147)

ICPs are important to the process of the development, practice, and reinforcement of self-determination skills because they help individuals to be causal agents. The concept of a causal agent in association with an ICP refers to the way ICPs can encourage students to actively make things happen in their lives rather than passively waiting for things to come their way (Wehmeyer, Agran, & Hughes, 1998; Wehmeyer & Palmer, 2003; Wehmeyer & Schwartz, 1997). ICPs promote goal-oriented thinking that takes application of problem-solving and decision-making skills to guide actions. The process of creating and reflecting with the ICP helps students to understand better what they do well, what they can improve, and where they need assistance (Gysbers, 2008). Consequently, the essential components of self-determination skills (choice-making, problem-solving, decision-making, goal-setting and attainment, self-regulation, self-advocacy, self-awareness, and self-efficacy) are supported through the ICP process.
Gysbers (2008) emphasizes the importance of the goal-setting aspect of ICPs, and notes several examples of the impact of ICPs at various schools in different states. For example, at Franklin Pierce School District in Washington that adopted ICPs for all students, there was a “10% increase in the number of students who progress from grade 9 to grade 10 on time,” as well as “Dramatic increases in the number of students enrolling in rigorous, demanding classes: 28% increase in students requesting pre-calculus classes, 240% increase in students requesting physics classes, and 180% increase in students requesting chemistry classes” (p. 132). Furthermore, ICPs have been shown to increase student engagement, improve decision-making, improve transition outcomes, increase interactions among parents and teachers, and generate useful data (Bullock, Harris, & Jamieson, 1996; Connolly, 2009; Welsh, 2005).

ROOTS OF THE ICP

Gysbers (1983) attributed the emergence of ICPs to ideas associated with career development in the late 1970s. The foundational notion of career development emphasizes that occupational decisions are made throughout an individual’s lifetime and involve all aspects of an individual’s life; occupational choices are not isolated from other needs, anxieties, and responsibilities. As part of career guidance, ICPs assist in dealing with “the developmental concerns of individuals as well as with their immediate concerns and the crises in their lives” (p. 7).

In her reporting results of the national survey, Connolly (2009) linked ILPs to Individualized Education Plans (IEPs), which have been mandated since 1975 to support the educational progression of students with disabilities. She discussed an expansion of the idea of IEPs to include a “6-year academic plan, career interests, student reflection data, personality and learning style assessments, and action plans” (p. 4). The Individuals with Disabilities Improvement Act of 2004, the current federal legislation addressing the educational needs of students with disabilities, requires that IEPs include measurable transition goals for students who are 16 years and older, and it also requires data collection for postsecondary outcomes. Building on these ideas, Connolly observed that ILPs provide data that are usually left out of state-level data systems, including student-level data pertaining to career interests, student reflections, learning style inventory results, etc. Through the adoption of ILPs, states can build a comprehensive instructional support system that emphasizes student planning and enhance data reporting and accountability requirements of No Child Left Behind. ILPs (or ICPs) also have a strong connection to other federal legislation, specifically the Carl D. Perkins Career and Technical Education Act of 2006 that mandates that all states accepting federal dollars for career and technical education (CTE) adopt at least one Program of Study that extends from secondary to postsecondary education.

PROGRAMS OF STUDY AND CAREER PATHWAYS AS A STRUCTURE FOR PLANNING

Programs of Study (POS) in association with CTE are often aligned with the 16 nationally recognized Career Clusters and approximately 79 Career Pathways (States’ Career Clusters Initiative website, 2010). From this perspective, a POS is a framework for aligning academic and CTE course sequences, connecting secondary and postsecondary education and guiding students in their career development (Jankowski, Kirby, Bragg, Taylor, & Oertle, 2009; Kalchik & Oertle, 2010; States’ Career Clusters Initiative website, 2010; Taylor et al., 2009). Through participation in POS course sequences, students explore their career interests while increasing their academic knowledge and skills and developing a career identity (Lewis, Kosine, & Overman, 2008).

The following figure represents Illinois’ POS model that displays the relationships between Illinois’ five secondary CTE Areas, the Career Cluster, the Career Pathways within that Cluster, and the Career and Program Options within the Career Pathway. This figure uses a POS in health sciences technology as an example of the way in which students gain access to and advance through multiple levels of academic and career preparation that connects education to credentials and eventually to employment.
Note that the lines between the Career Cluster, the Career Pathways, and the Program Career Options are blurred to represent the flexibility that students have to move between different career areas. As students advance through the education system, they can move through a linear sequence of coursework, although we know many students do not know exactly what they want to do and so they explore, find new options that interest them, and move to study different programs. Illinois’ POS model is designed to support this flexibility, and a growing number of students’ POS courses are rewarded with dual credit. In addition, the arrow labeled Programs of Study extends beyond the border of the figure, denoting the idea that education and career development continues throughout an individual’s lifespan. The POS arrow also illustrates that individuals can earn credentials beyond the associate and baccalaureate degree levels.

The POS framework provides a strategy that students can use to help them think about next steps in their educational and career progression (N. Gysbers, personal communication, December 7, 2010). Thus, students can develop and modify their ICPs using the POS information for short- and long-term goal-setting, including life-long learning. Integrating the ICP with the POS framework would provide processes and tools that students can use to organize, plan, and reflect on their career journey while learning and practicing self-determination skills (Gysbers, 2008; Wehmeyer et al., 2003).
RELATIONSHIP OF ICPs TO GUIDANCE COUNSELING AND ADVISING

Optimally, ICPs are implemented as a component of guidance and career counseling in schools and colleges. For example, Horry-Georgetown Technical College in South Carolina has named their version of an ICP the Guided Plan for Success (GPS). GPS came about partly in response to student concerns about advising, based on the results of a 2007 focus group with students. In developing GPS, there was a “focus on improving the total advising system to foster student success” (HGTC, 2008, pp. 8-9). Through GPS, students benefit from guidance efforts in forming goals early and in progressing towards those goals. GPS aims to provide individual student support while encouraging students to actively participate in the advising process.

Gysbers (2008) also claims that ICPs help students make connections to the guidance counseling and support a comprehensive approach to guidance and counseling:

The purpose of the individual student planning component of a comprehensive guidance and counseling program is to provide all students with guidance and counseling activities to assist them to positively assess, plan for, and then monitor or manage their personal-social, academic, and career development (p. 122).

In addition, Wilkerson (2010) lists specific ways in which guidance counselors implement aspects of ICPs. In particular, she identifies advising activities that include academic planning, career counseling, career interest assessments, and Career Cluster/Pathway/major discussions.

IMPLEMENTATION

Experts recommend that elementary school students be introduced to the ICP process to begin building a foundation for future planning that includes career awareness and exploration (Gysbers, 2008; Magnuson & Starr, 2000). Applying ICPs to youth, Magnuson and Starr (2000) claim that, “Through career awareness and exploration children become knowledgeable about themselves, other people, and the world of work and workers” (p. 92). Drawing from the scholarly work of noted child development theorists such as Erikson, Piaget, and Vygotsky and career development theorists such as Super and Gottfredson, Magnuson and Starr argue that self-awareness and career awareness are interconnected. Therefore, career awareness and career planning needs to begin early. They also contend it is never too late to begin the process. No matter when ICPs are introduced, as individuals build knowledge and skills, career exploration and development become more central to the ICP process and less focused on the initial stage of career awareness.

Adopted by many states and endorsed by the American School Counselors Association (ASCA) is the implementation of ICPs as part of a comprehensive guidance and counseling program that includes characteristics and assumptions that are grounded in students as learners. Through a comprehensive framework, leadership situates guidance and counseling as centerpieces of education, not as an add-on (Gysbers & Henderson, 2001). According to Crow (2008) and Gysbers (2005, 2008), key features of such programs include:

• an assumption that all students can learn and want to succeed
• connection and direction that supports academic achievement
• career planning and management that are utilized to improve learning and motivation
• physically and emotionally safe learning environments that emphasize students’ interests, strengths, dreams, and plans, while addressing learning needs
• evidence-based assessment, curriculum, instruction, and discipline policies that are student-centered and promote learning
• on-going development, assessment, reflection, and revision of education and career goals that students undertake to support their own learning and success
• activities that support continuous quality improvement
• schools that implement learning communities where learning is shared and interdependent
• strategies that enable students to gain and maintain lifelong career planning knowledge, skills, and behaviors

A comprehensive guidance and counseling program provides a framework to assist in making ICPs useful to students. Without this, ICPs can easily turn into a list-making and checking exercise that lacks meaning and significance for students. Therefore, ICP implementation should be intentionally connected to an active guidance and counseling process that teaches students how to use their ICPs to guide their actions and actualize their education and career aspirations. Gysbers claims, “The goal is for students’ plans to become pathways or guides through which students can use the past and present to anticipate and prepare for the[ir] future” (2005, p. 210). Furthermore, an acclaimed group of educational researchers recommends that “high schools should make sure that these plans [ICPs] are living documents that are referred to by teachers and counselors, and provided to parents” (Tierney, Bailey, Constantine, Finkelstein, & Hurd, 2009, p. 15). Implemented in this manner, ICPs are meant to assist students to explore academic and career opportunities with structured support, and they do not limit students’ choices or force them to commit to a specific career early in their educational journey, which has been a criticism of ICP implementation in some states (J. Makela, personal communication, January 30, 2011, Orfield & Paul, 1994). To address this concern, Gysbers (2008) describes three strategies the involve school counselors integrally in ICP implementation:

• Individual appraisal. School counselors help students to assess and interpret their abilities, interests, skills, and achievement.
• Individual advisement. School counselors help students use self-appraisal information along with personal/social, academic, career, and labor market information to plan for and realize their personal, social, academic, and career goals.
• Transition planning. School counselors and other education personnel help students make the transition from school to work or to additional education and training. (p. 123-124)

As technology advances and becomes increasingly more available, ICPs will evolve. While the paper and pencil format still exists, web-based ICP portals are becoming more commonplace to engage students in their own planning, decision making, and preparation (Conolly, 2009). Multiple examples of implementation and guidance associated with ICPs are included in the resource section of this paper to illustrate how students can engage and utilize these various ICP-related tools and processes.

CHALLENGES

Implementation of ICPs has several challenges that deserve attention. At the macro level, some states mandate the use of ICPs, but do not provide leadership for systems change, new organizational structures, or support systems that provide students with the knowledge and skills they need to develop their own plans. ICP mandates without state level leadership, structure, and support offer little to those responsible for ICP implementation at the local level, and this results in inadequate policies and protocols, minimal efforts, and limited benefits for students (Martin et al. 2009; N. Gysbers, personal communication, December 7, 2010; Wilkerson, 2010). Additionally, in their national study...
of the current status of state school counseling models, Martin et al. (2009) found that variations in political power, economic resources, and demographics influenced the ability of states to support the implementation of ICPs in a comprehensive fashion. For example, states with active state-level leadership for CTE appeared more able to support and access resources for comprehensive guidance and counseling initiatives than those states without such leadership. Furthermore, Martin et al. (2009) found that the weight of local control in some states created additional challenges for implementing ICPs, suggesting that state leaders need to find alternatives to state mandates and requirements that may not be effective in these situations. Engaging local leaders in implementation begins by convincing them of the potential of ICPs to improve student achievement and success.

At the local level, school districts, individual schools, and institutions of higher education often face difficulties finding and receiving support for ICP implementation. A problem for many states and especially Illinois is the ratio of students to counselors. ASCA recommends a 250-to-1 student-to-counselor ratio, but the national average is 457-to-1. As of 2008-09, Illinois’ ratio was 672-to-1, ranking the state 46th in the nation (ASCA, n.d.). In these circumstances, students have limited opportunity to meet with a counselor and gather information about future education and careers, and counselors have minimal opportunity to gain new knowledge and communicate with other counselors to maximize their ability to counsel students about careers (Dykeman et al., 2003; Wilkerson, 2010). Further, some counselor programs do not emphasize the value of career courses, reducing the possibility that counselors will understand the connection between career theory and practice and understand how to implement ICPs (Wilkerson, 2010). Professional development, additional time, and personnel are needed to assist in demonstrating the significance of ICPs to various stakeholders (e.g., school leaders, students, and their families). Gysbers described this challenge as follows: “We have what I would call an ‘implementation gap;’ we have a lot of rhetoric, but we still are working on getting it [ICPs] actually put into the schools in a way that makes sense to students and their parents” (personal communication, December 7, 2010).

At both the macro and micro levels, insufficient evaluation of a formative and summative nature has been conducted. Furthermore, while there has been some research on the effects of ICPs on student outcomes, this research is limited (Dykeman et al., 2003; Martin et al., 2009). It takes time to follow students through the ICP implementation process and assess their choices, persistence, and outcomes. However, more evaluation and research is critical. Investigation is especially needed because so little information is available about how ICPs continue to be useful to students through college and into their careers. The primary focus has been on middle and high school planning and transitions; although other countries such as Hong Kong use plans as documentation of future education and employment (Gysbers, 2008; N. Gysbers, personal communication, December 7, 2010).

For Further Reading


RECOMMENDATIONS

With the above challenges in mind, Wilkerson (2010) proposes the following suggestions for improving the implementation of ICPs:

- Clearly communicate policies to stakeholders
- Outline specific roles for everyone involved, such as counselors, mentors, and supervisors
- Set aside time to develop and implement an evaluation system and engage in continuous improvement

The developers of Check and Connect (Institute on Community Integration, 2008), a high school dropout prevention program for high school students, including students with disabilities, provide several recommendations to ensure that student-level planning contributes to student success. (Also noteworthy, Check and Connect has been expanded recently to the community college through an Institute of Education Sciences (IES) grant. See: Maus, 2009). The following recommendations for implementation of Check and Connect are highly relevant to ICPs:

- Provide additional staff training to guide expectations for implementation
- Provide technical assistance for “unique situations” that may arise
- Engage in continued research to assess the effectiveness of the program, in addition to examining “the degree to which improvement in students’ cognitive and affective engagement influences their willingness to attend (behavioral engagement) and engage in and complete academic work (academic engagement). (Institute on Community Integration, 2008, 67)

In addition to the specific suggestions above, Gysbers recommends a general structural shift to help improve implementation of ICPs (personal communication, December 7, 2010). He indicates that ICPs will be most successful when included within an overall structure of a comprehensive school counseling program that features a guidance curriculum. Through a guidance curriculum, students gain the knowledge and skills that can help them navigate the ICP process independently and effectively. Comprehensive school counseling programs can also help state leaders and administrators to recognize the importance of ICPs, leading to a well-rounded support system for schools offering ICPs as part of a counseling program. Gysbers (personal communication, December 7, 2010) also calls for increased interaction between elementary and high school guidance counseling programs, based on the national model of the ASCA. This can result in a smoother transition for students between levels of the educational system and ensure that their initial ICPs do not become lost during transitions. As students transition to college and careers, ICPs should support their progression through the educational system and through their career paths.

Ideally, systems, policies, procedures, programs, and people are aligned and coordinated to create educational and career pathways for all learners; however, these linkages are often not as fully developed as desired. Whereas systems’ alignment is desired and is occurring in some places, it has yet to materialize uniformly or on a large scale in some states, including Illinois and this is unfortunate. When ICPs are implemented as a component of a comprehensive guidance and counseling approach, learners are empowered with skills that they can use throughout their lifetimes (Gysbers, 2008; N. Gysbers, personal communication, December 7, 2010; Shugart & Romano, 2006; Shugart & Romano, n.d.). Reinforcing the idea that ICPs need to fit into the larger structure, Gysbers observed that educators “…can’t just stick this [ICP] in arbitrarily; alone. It has to fit in to a broader structure, a structure [that] we call the comprehensive school counseling program” (personal communication, December 7, 2010).

Gysbers’ many years of research and his extensive experience in the U.S. and internationally create a compelling case for the ICP. He, along with many other researchers, policy makers and practitioners highlighted in this brief, are calling for the adoption of ICPs, pointing to enhanced student achievement and improved transition from high school to college and careers. We believe Illinois’ students would benefit from ICPs, and we urge policy makers to adopt state policy on implementation of ICPs and to support their implementation by K-12 schools and higher education institutions throughout the state.
ICPS IN ACTION

The following sections illustrate examples of ICPs. These examples were chosen to highlight different plans for secondary and postsecondary students. The first example, called LifeMap, was developed for use by community college students. The second example, the Self-Determined Career Development Model (SDCDM), has been used to assist elementary, middle, and high school students to develop ownership of their academic and career plans. The SDCDM is currently being tested with adult learners (Wehmeyer et al., 2009). Each example provides steps through which students progress in order to effectively plan for their education and careers.

LifeMap

LifeMap is a five-stage developmental advising model developed by Valencia Community College in Orlando, Florida. It is one component of “a trilogy of interactive systems for engaging students” (Shugart & Romano, n.d., The Systems Trilogy section, para. 1). According to Shugart and Romano, the systems trilogy is comprised of LifeMap, along with Atlas (a web-based portal learning community system) and the Learning-Centered Student Services. These components “work together to provide the platform…for operational performance and also for creating a learning centered student affairs environment” (n.d., The Systems Trilogy section, para. 1). LifeMap provides a space where students can connect with college faculty, personnel, and other resources, and it helps students to recognize and draw upon relationships among these groups (Shugart & Romano, 2006). By creating these links for students, LifeMap guides students to appropriate resources to help them complete their education and career goals. The five stages of LifeMap appear below, with a brief description of each stage (for more information, visit http://valenciacc.edu/lifemap/).

<table>
<thead>
<tr>
<th>Stage</th>
<th>Focus</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Postsecondary/College Transition</td>
<td>Helps students make decisions about their educational options</td>
</tr>
<tr>
<td>Two</td>
<td>Introduction to College</td>
<td>Helps students make connections to resources at the beginning of their college experience to help them find success in their education</td>
</tr>
<tr>
<td>Three</td>
<td>Progression to Degree</td>
<td>Emphasizes exploration of career options and possible changes to initial career goals</td>
</tr>
<tr>
<td>Four</td>
<td>Graduation Transition</td>
<td>Offers resources to help with transition to further study or entry to careers</td>
</tr>
<tr>
<td>Five</td>
<td>Lifelong Learning</td>
<td>Recognizes that students need continuing education once they enter the workforce; Valencia offers resources to help returning students meet their educational needs for their careers</td>
</tr>
</tbody>
</table>
The Self-Determined Career Development Model

The Self-Determined Career Development Model (SDCDM) was created by Wehmeyer et al. (2003) and adapted from the Self-Determined Learning Model of Instruction (SDLMI), which was developed to promote self-directed learning (Mithaug, Wehmeyer, Agran, Martin, & Palmer, 1998). The SDCDM is grounded in research that indicates that enhanced self-determination leads to improved and more positive transition outcomes (Wehmeyer & Palmer, 2003; Wehmeyer, et al., 2009; Wehmeyer & Schwartz, 1997). The SDCDM is divided into phases. “In each phase, a facilitator guides students through a decision-making process by posing questions to them that require that they identify a problem, potential solutions to the problem, barriers to solving the problem, and the consequences of each solution” (Wehmeyer et al., 2003, pp. 1–2). The following table is a modification of the SDCDM framework that Wehmeyer et al. (2003) developed for facilitators to use in guiding and supporting students in career- and education-related decisions (Oertle, 2008). An example of a facilitator’s guide can be accessed at [http://www.wnyil.org/Compendium/bestprac/pdfs/bestpractice.pdf](http://www.wnyil.org/Compendium/bestprac/pdfs/bestpractice.pdf).

The Self-Determined Career Development Model (modified)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Problem to Solve</th>
<th>Questions to Answer to Solve Problem</th>
</tr>
</thead>
</table>
| One   | What are my career or job goals? | What career and job do I want?  
What do I know about it now?  
What must change for me to get the job and career I want?  
What can I do to make this happen? |
| Two   | What is my strategy? | What actions can I take to reach my career or employment goal?  
What could keep me from taking this action?  
What can I do to remove these barriers?  
When will I take action? |
| Three | What was the outcome? | What actions have I taken?  
What barriers have been removed?  
What has changed to enable me to get the job and career I want?  
Have I achieved what I wanted to achieve? |
| Four  | What have I learned? | What did I do well?  
What do I need to do better?  
What has changed to enable me to get the job and career I want?  
What do I need to do next time? |
ICP Resources

A Perspective on Individual Graduation Plans
Examples of strategies in the planning, implementation, and follow up of Individual Graduation Plans in Kentucky.

Career Cruising
http://www.careercruising.com/Public/ProIndex.aspx
Resources for course planning, networking, and test preparation rooted in the Programs of Study (POS) model.

CareerForward Course
http://nroc.careerforward.org/mvu/default.htm
20 one hour on-line sessions that assist in creating and actualizing an Educational Development Plan (EDP).

Check and Connect
http://checkandconnect.org/
Describes the Check and Connect model, including components and monitor/mentor’s role.

Council of Chief State School Officers (CCSSO)
http://highschool.ccsso.org/web/guest/IndividualLearningPlans
Resources and information regarding different states’ implementation of ILPs.

GACOLLEGE411
https://secure.gacollege411.org/Home/_default.aspx
A comprehensive education and career planning on-line information system

Horry-Georgetown Technical College Guided Plan for Success (GPS)
http://www.hgtc.edu/int_y.php?pageid=181
Outlines questions that GPS can help students address and illustrates the benefits of GPS.

Kentucky Department of Education
Individual Graduation Plan Folders - designed for students to use in academic and career planning and to help them focus on the connection between course work and goals after high school.

Ohio Career Information System
http://www.ocis.org/materials/iacp.htm
Resources for Individual Academic and Career Plans for junior high school, high school, college, and adult education.

Oregon Department of Education – Comprehensive Guidance and Counseling
http://www.ode.state.or.us/search/results/?id=132
Comprehensive guidance and counseling is an integral part of the school support system that advances high quality learning opportunities.

Pathways to College Network
http://www.pathwaystocollege.net/Default.aspx
An alliance of national organizations that advances college opportunity for underserved students by raising public awareness, supporting innovative research, and promoting evidence-based policies and practices across the K-12 and higher education sectors.
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REFERENCES


The Office of Community College Research and Leadership (OCCRL) was established in 1989 at the University of Illinois at Urbana-Champaign. Our primary mission is to use research and evaluation methods to improve policies and programs to enhance community college education and transition to college for diverse learners in Illinois and the United States. Projects of this office are supported by the Illinois Community College Board (ICCB), the Illinois State Board of Education (ISBE), along with other state, federal, and private and not-for-profit organizations. The contents of our publications do not necessarily represent the positions or policies of our sponsors or the University of Illinois. Comments or inquiries about our publications are welcome and should be directed to OCCRL@illinois.edu. This document can be found on the web at: http://occrl.illinois.edu.

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