### REPORT

### **SEPTEMBER 2013**



PATHWAYS RESOURCE CENTER

FACING EQUITY Understanding P-20 Equity Conscious Leadership for College and Career Pathways

> Anjalé D. Welton Priya G. La Londe

Office of Community College Research and Leadership Department of Education Policy, Organization and Leadership College of Education University of Illinois at Urbana-Champaign 51 Gerty Drive Champaign, Illinois 61820



The Office of Community College Research and Leadership (OCCRL) was established in 1989 at the University of Illinois at Urbana-Champaign. OCCRL is affiliated with the Department of Education Policy, Organization and Leadership in the College of Education. Our mission is to use research and evaluation methods to improve policies, programs, and practices to enhance community college education and transition to college for diverse learners at the state, national, and international levels. Projects of this office are supported by the Illinois Community College Board (ICCB) and the Illinois State Board of Education (ISBE), along with other state, federal, and private and not-for-profit organizations. The contents of 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 publication was prepared pursuant to a grant from the Illinois State Board of Education and was funded 100% through the federal Race to the Top Funding provided through the American Recovery and Reinvestment Act of 2009. Printed by the Authority of the State of Illinois in September 2013 (400 copies, ISBE Contract Number 2012-06779). The total amount of federal funding involved is \$2,200.00, which represents 100% of the cost of producing the publication.

An Equal Opportunity/Affirmative Action Employer



Illinois State Board of Education 100 North First Street Springfield, IL 62777-0001 www.isbe.net

### Acknowledgment:

Chair, Gery J. Chico Superintendent, Christopher A. Koch, Ed.D.

Published September 2013 by the Office of Community College Research and Leadership, Department of Education Policy, Organization and Leadership, University of Illinois at Urbana-Champaign. In addition to the Office of Community College Research and Leadership staff, special thanks go to Dora Welker, Harley Hepner, and the professional staff of the Illinois State Board of Education, who are committed to making significant changes to advance career and technical education in Illinois.

### Suggested Citation:

Welton, A. D., & La Londe, P. G. (2013). *Facing equity: Understanding P-20 equity conscious leadership for college and career pathways.* Champaign, IL: Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign.

Copyright 2013 Board of Trustees, University of Illinois

### Table of Contents

Introduction	1
What is Equity?	4
How is Equity Defined in P-20 Scholarship?	8
Equity-Minded Leadership: Spotlight on the Pathways to Results Process 13	3
Strengthening Equity-Minded Leadership Across the Secondary-Postsecondary Pipeline	9
Concluding Thoughts	2
References	3
Additional Recommended Readings2	7
Appendix A: The 16 Career Clusters <sup>™</sup> 2	9
Appendix B: Key Concepts and Definitions	0
Appendix C: Illinois' Program of Study Model: Health Science Cluster	1

### List of Tables and Figures:

Table 1. The Principles of the Equity Scorecard <sup>™</sup> Process	12
Table 2. The Five Stages of the Equity Scorecard <sup>™</sup> Process	12
Table 3. Pathways to Results Process	14
Figure 1. Structures of Inequity	7
Figure 2. Perspectives on Pathways to Results and Equity1	18

### Leaders Fostering a Pathway to Equity

The U.S. economy added 63 million jobs between 1973 and 2007; however, jobs held by persons with no postsecondary degree fell by 2 million (Symonds, Schwartz, & Ferguson, 2011). Furthermore, it is predicted by 2018 the U.S. economy will produce an additional 47 million job openings and close to two thirds of these jobs will need some form of postsecondary education, such as a bachelor's degree, associate degree, and most will require an occupational certificate via vocational-technical education (Carnevale, Smith, & Strohl, 2010). Unfortunately, those who once could find employment without obtaining training post high school graduation now face severe compromises to their quality of life as the emerging economy and workforce requires adults to acquire skills to meet its demands. A number of these newly created jobs will be in middle skilled areas such as construction management and the health care industry (e.g., a nurse's assistant), but there also will be a growing number of jobs in higher skilled STEM professions and information technology (Symonds et al., 2011). Still, there is a growing concern among employers in these growth industries that there are not enough workers with the multitude of skills necessary (i.e., 21st century skills) to fill the growing number of jobs (Symonds et al., 2011). Twenty-first century skills are aptitudes such as critical thinking, creativity, and communication skills that are not often taught in a standard college preparatory curriculum but would make one equipped to navigate the workplace. Thus, in order to be "ready" for what the economy and the consequent workforce demands, potential workers will need a combination of college rigor and career and technical preparation (Symonds et al., 2011; U.S. Department of Education, 2012).

With the demands of the U.S. economy before us, the term "readiness" has emerged in the national discourse, urging leaders in education and industry to formulate innovative solutions to transition youth into the responsibilities of adulthood via both college and workforce readiness. Conley (2007) defines college readiness as "the level of preparation a student needs to enroll and succeed—without remediation—in a credit-bearing general education course at a postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate program" (p. 5). Also, according to findings from a survey of 400 employers in the U.S., workforce readiness encompasses a combination of applied knowledge such as reading comprehension, writing in English, mathematics, and English language skills, and applied skills such as professionalism/work ethic, oral and written communications, teamwork/collaboration, critical thinking/problem solving, and ethics/social responsibility (Casner-Lotto & Benner, 2006).

The "readiness" mantra is also a premier focus in educational policy at the federal level. President Obama's Blueprint for Reform (U.S. Department of Education, 2010) is grounded in one clear goal: "by 2020 the United States will lead the world in college completion...and every student graduates from high school well prepared for college and a career" (p. 1). Blueprint for Reform for the reauthorization of the Elementary and Secondary Act encourages states to adopt college readiness standards, enhance existing standards to ensure students will not need remedial coursework upon entering a postsecondary institution, adopt assessments that better represent a student's level of college and career readiness, and ensure all students have access to resources such as Advanced Placement and dual credit courses that provide college academic preparation. The Common Core State Standards (CCSS), the first set of national learning goals for the U.S. (National Governors Association, n.d.), is similarly grounded in readiness rhetoric emphasizing all states share a common goal of ensuring students graduate school "prepared to succeed in college and in a modern workforce" (http://www.corestandards.org/ the-standards, par 3). Forty-five states and the District of Columbia have agreed to adopt the CCSS and have designed assessments and professional development to ensure students meet the standards.

Centering primarily on career and technical education as a pathway to workforce readiness, the federal Carl D. Perkins and Technical Act of 2006 (Public Law 109-270) provides states funds to prepare their workforce with the skills necessary to successfully compete

and gain employment in a world market (U.S. Department of Education, 2012). Typically career and technical education cultivates a series of skillsets, such as academic knowledge, higher-order reasoning, problem solving skills, and the occupational-specific skills needed to advance an individual's economic independence and transition to being a productive, contributing citizen (U.S. Department of Education, 2012). The 2006 Perkins Act initiated a broader focus on education and workforce readiness by cultivating a pathway system that bridges P-12 and postsecondary education-i.e. the P-20 pipeline (U.S. Department of Education, 2012). The Perkins Act fosters this bridge between secondary and postsecondary specifically via Programs of Study (POS) that blend academic and technical content across secondary and postsecondary education and local accountability systems that ensure continuous program improvement (Jankowski, Kirby, Bragg, Taylor, & Oertle, 2009). Career and technical education has emerged to include both school and work-based learning, with a majority of programs offered at community colleges as well as universities. High quality career and technical education programs are seamlessly aligned with college and careerreadiness standards as wells as the needs of employers, industry, and labor (U.S. Department of Education, 2012). High quality career and technical education also offers a rigorous curriculum that integrates academic and technical content as well work-based learning opportunities that provide real-life career experiences to increase a student's employability (U.S. Department of Education, 2012). Gaining traction in policy and practice, the "readiness" movement-college and workforce—is at the forefront of classroom, school, district, state, and national conversations.

The "readiness" policy rhetoric generally centers on providing all students with quality preparation for college and careers. However, there is also a segment of the discourse that questions whether the solutions for college and career readiness are one-size-fitsall approaches that are not culturally responsive to students of color specifically and fail to consider larger racial and socioeconomic contexts and structural inequities (Welton & Martinez, 2013). In response, Castro (in press) argues that our expectations of what it means to be college and career ready in the U.S. must be re-normed to be both equity-minded and race conscious. The "readiness" slogan is indeed loaded with deep, longstanding standing issues of equity and access. As such, in this report instead of distinguishing secondary from postsecondary leaders, we use the term P-20 leadership to emphasize that leaders from both secondary and postsecondary education should work in concert to promote equitable access to college and career pathways.

P-20 leaders must forge conversations and collaborations regarding the policy issues, agendas, and social cultural changes that are upon us because (in)equity is fundamentally at stake. Thus, the onus is on both secondary and postsecondary leaders to prepare all young people, especially those from the most marginalized groups, for the responsibilities of adulthood. P-20 leaders are not only expected to attend to inequities that are generated within the institutions they lead but also must contend with a host of inequities external to the institution that may derail students' access to postsecondary training and careers. Thus, creating bridges between secondary and postsecondary leaders is especially important in equity work. If leaders are not in communication with each other at various critical transition points for students, it is a challenge to even begin tackling some of the key equity issues at hand regarding pathways to college and careers.

Finally, the term "pathway" is either used in educational research to illustrate the various social, cultural, economic, and political structures that may impact a student's college and career trajectory (Welton & Martinez, 2013) or a term used to describe multi-year programs that prepare high school students for college and careers by providing curriculum and course sequences that blend both academic and technical study (Jankowski et al., 2009; Oakes & Saunders, 2008). In this report we take this notion of "pathway" a step further by suggesting that P-20 leaders not limit their problem solving to solely considering formulaic steps students should take to be "ready" for college and career, because unfortunately not all students are afforded the adequate resources and supports necessary to do so. Instead, P-20 leadership must expand upon this pathway notion by working collaboratively to design a pathway to college and careers and a pathway that leads to equity.

### Overview

In this report we focus on concepts, frameworks, and practices that help leaders vision a "pathway to equity" for all students to gain access to college and careers. This report is explicitly intended for P-20 leaders such as principals, counselors, curriculum directors, deans, transition specialists, and heads of departments. This report also is beneficial to policymakers who aim to understand the policy implications of equity issues that practitioners face in educational institutions. Embracing the call for attention to the responsibilities and practices of P-20 leaders who must face issues of equity pertaining to student access to college and career preparation and opportunities, we focus on the following:

- What is equity? Because the current policy agenda calls for secondary and postsecondary leaders to come together to address issues of access and college and career readiness, it is important to understand how equity is generally defined and the structural inequities that conflict with achieving equity. We also make distinctions between the terms equity and equality.
- *How is equity defined in P-20 scholarship?* Next, with a cursory understanding of equity in place, this section addresses conceptualizations of equity in P-20 scholarship. We identified the following three themes in the literature: equity consciousness/ mindedness, accepting responsibility for equity issues, and responsiveness for students' identities. We also define the concept equity traps (McKenzie & Scheurich, 2004), a term used in the educational leadership research to describe deficit-oriented thinking and practices at both the institutional and individual levels. Additionally, we feature The Equity Scorecard, an equity assessment tool for teams of practitioners working on equity-focused transformations at postsecondary institutions.

- What do Pathways to Equity look like in practice? To situate "pathways to equity" in practice, we share findings from a pilot study that explored how high school and community college partners used the continuous improvement process, Pathways to Results (PTR). The University of Illinois at Urbana-Champaign's Office of Community College Research and Leadership (OCCRL) conceived of the PTR process as a platform for multiple stakeholders/leaders to convene, dialogue, problem-solve, and face issues of equity and access in the development of a Program of Study (POS), which is a sequence of courses that incorporate a non-duplicative progression of secondary and postsecondary elements that include both academic and career and technical educational content.
- Equity-Minded Leadership Across the Secondary-Postsecondary Pipeline. We conclude this report with considerations for P-20 leaders who wish to strengthen their equity conscious leadership practices. Far from a recipe for this sort of leadership, these are guidelines grounded in scholarship on equity and lessons from practitioners who collaboratively grappled with issues of equity in the Pathways to Results (PTR) process.

Additional recommended readings. These additional references are included, to assist educational leaders with equity conscious leadership for college and career readiness. The High School Supplement (Hackmann & Ratner, 2012) and Strengthening Partnerships Workbook (Office of Community College Research and Leadership, 2012) are particularly well suited for strengthening high school leaders' background on the landscape of issues related to college and careers readiness. There are also readings (Baber, in press; Reddick, Welton, Alsandor, Denyszyn, & Platt, 2011) that provide strong narratives of equity and are well suited for group readings among high school staff and leadership.

### **P-12** Education

In P-12 education equity-minded reforms differ from other more prescriptive reforms (e.g., market-driven policies). Here, equity-minded reforms denote an end goal of equality in opportunity and achievement across diverse groups of students (Oakes, Welner, Yonezawa, & Allen, 2005). Equity-minded reforms often generate more controversy and resistance than prescriptive reforms because it creates "a struggle between individuals over resources that are perceived to be scarce and "entail an ideological struggle over the meaning of culture as it is enacted in schools" (Oakes et al., 2005, p. 283). In P-12 settings resistance to equityminded reforms occurs within and beyond schools, as resistance also can emanate from surrounding communities who feel that they too have a stake in and will be impacted by the changes that take place in their local school. This is to be expected, as resistance to equity is connected to larger political and sociocultural inequities related to race, class, and gender (Oakes et al., 2005).

### Postsecondary Education

Community colleges are positioned as an equalizer for students from historically marginalized groups especially students of color, low-income students, students with disabilities, immigrants, and firstgeneration students. If it were not for the community colleges' general commitment to more affordable degree attainment options and open enrollment policies, higher education at-large, especially fouryear institutions, would enroll fewer students from the aforementioned groups. This is precisely why equity and access remain community colleges' core principles and a visible focus in national conversations on college completion (Bragg & Durham, 2012). Community colleges also aim to alleviate socioeconomic and racial disparities in employment by increasing access to workforce development certificate programs that lead to higher wage employment (Aragon & Brantmeier, 2009). In its blueprint for the reauthorization of the Perkins Act the Obama Administration urges the Act's subsequent reauthorization safeguard equity and quality in alignment, collaboration, accountability, and innovation so that more students have access to high-quality career and technical education programs (U.S. Department of Education, 2012). The Obama Administration also demands that access to highquality career and technical education be offered to everyone fairly and equitably, but there are still specific groups (women, students of color, students from low-income families, and students with disabilities) with disparate access to quality secondary and postsecondary career and technology programs.

### Structural Inequities

In order to visualize and strategize a pathway to equity, P-20 leaders must first identify structural inequities that derail student transitions to college and career. Below we identified the following key issues or "root causes" of inequities in access to college and careers most frequently identified in the research literature (see Figure 1):

Demographic shifts. P-12 and postsecondary classrooms are becoming increasingly diverse, as it is predicted in 20 years persons of color will soon comprise over 50% of students served in the U.S. education system. For example, in states such as Texas and California persons of color can no longer be "minoritized" as they are the emerging "majority" of the student population. Community colleges are also a gateway for diverse populations, especially for Latinos, who typically access higher education through a Hispanic Serving Institution (HSI), with high proportions entering the postsecondary pipeline via a Hispanic-serving community college (Flores, Horn, & Crisp, 2006). Likewise, because community colleges are affordable and more accessible due to their open enrollment policies they are also a gateway to postsecondary education for immigrants. While a large number of new arrivals are Latino/a, Asian immigrants often are overlooked because it is assumed that most come from educated and elite families; however, there is a significant proportion of this population who originated from impoverished rural areas and grew up in families with limited to no formal education

(Teranishi, Suarez-Orozco, & Suarez-Orozco, 2011). Finally, students who identify as gay, lesbian, bisexual, transgendered, or queer (LGBTQ) are an understudied and overlooked population (Zamani-Gallaher & Choudhuri, 2011). While notable research is emerging on LGBTQ students' experiences in secondary school settings (see Robinson & Espelage, 2011) more documentation is needed to understand how this population experiences and navigates postsecondary education, especially community colleges (Zaman-Gallaher & Choudhuri, 2011). Diverse student populations are the growing majority in the U.S. educational system and will soon be the major contributors to the workforce and the U.S. economy. However, research has shown when leaders' responses to shifts in student demographics are reactive instead of proactive, they hastily respond with policies and practices that are deficit oriented, unresponsive to the socialcultural needs of the new student populations, and further exacerbate inequities (Holme, Diem, & Welton, in press).

Opportunity gaps. Standardized measures are commonly used to observe gaps in achievement between White, middle-to-higher income students versus Latino/a, Black, and low-income students. Milner (2012) argues that solely using standardized measures to make sense of the achievement gap provides educators with only oversimplified and deficit-based understandings of the root causes of educational inequities and fails to provide critical analyses of the underlying causes of disparities in achievement among student groups. This standardized interpretation of the achievement gap also assumes that students who fall within the typical categories used when disaggregating achievement data are homogeneous, when in fact there are distinct social-cultural differences within these groups that standardized approaches cannot capture (Leonardo, 2007; Milner, 2012; Welton & Martinez, 2013). Milner reframes the "achievement gap" as the "opportunity gap" because this latter term shifts the focus to what opportunities educators and leaders do not afford students that

may explain the disparities between and among students. Similarly, according to Barbara (2010), a former superintendent who reflects on race issues in leadership practices, the phrase "closing the achievement gap" implies that the students are the cause of the gap and instead encourages practitioners to use the term "equity agenda" because "the lack of success of our students of color is a systemic issue resulting from inequitable practices not only within the educational setting, but in a society as a whole. Switching to the less deficit term 'equity agenda' calls attention to this larger problem" (p. 8). Therefore, instead of using the concept achievement gap we encourage P-20 leaders to use the concept opportunity gap to frame their equity discussions.

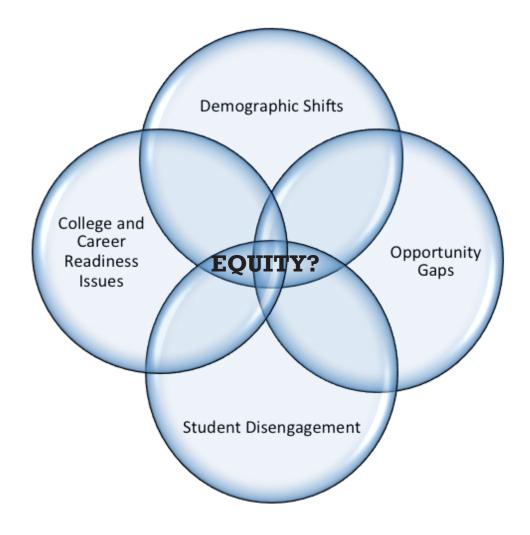
Student disengagement. Black and Latino/a students specifically are 40% more likely than White students to witness their peers dropping out of school (Zuckerbrod, 2007), and Latino/a youth currently have the highest dropout rates among any racial ethnic group (Rumberger & Rodriguez, 2010). The assumption is that students "choose" to leave school, but research shows that inequities in educational opportunities are what isolate certain student groups, which in turn leads to student disengagement from education and the ultimate decision to drop out entirely (Patterson, Hale, & Stessman, 2007; Valenzuela, 1999). For example, Black and Latino/a students who are consigned to the lowest track classes are conscious of the limited rigor and lower expectations presented in these classes and may resort to absenteeism as a form of resistance to school boredom (Cammarota, 2004; Brown & Rodriguez, 2009). Also, in both secondary and postsecondary educational settings an uncaring and aversive institutional culture and climate impacts student retention. Brown and Rodriquez (2009) contend that school personnel's racial biases toward and inattentiveness to the academic needs of students of color may influence their decision to drop out of school (also see Katz, 1999; Wayman, 2002). Similarly, when community college settings are highly competitive, leave few opportunities for teachers to make meaningful connections with students, and view students through a deficient lens, low-income and firstgeneration students feel disconnected from the institutional culture. As such, student retention issues signify that the institution is not providing the necessary structural supports to help all students feel connected (Rendón, 2002).

College and career readiness issues. Students of color are more likely than White students to attend high schools with the most inexperienced teachers (Jerald, Haycock, & Wilkins, 2009), and they also are grossly underrepresented in Advanced Placement courses (The College Board, 2011). Furthermore, a higher proportion of low-income students and students of color attend underresourced, low-performing schools where school personnel are under pressure to meet the demands of federal and state accountability restrictions such as high stakes-testing (McNeil, Coppola, Radigan, & Heilig, 2008), and this pressure often leads to a compulsive emphasis on test preparation, not college and career preparation (Perna & Thomas, 2009; Welton, Williams, & Forbes, 2013). The aforementioned deficiencies in educational resources and supports in secondary schools leave high school graduates ill prepared as they transition to postsecondary education and the workforce. According to 2007-2008 national data, roughly 23% of first-year undergraduate students take a remedial course (Sparks & Malkus, 2013). College readiness consists of college awareness, college eligibility, and college preparation, especially for underrepresented populations (Baker, Clay, & Gratama, 2005). However, it is the institutional responsibility of secondary schools to ensure that all students are college and workforce ready (Welton et al., 2013).

### Point of Clarification: Equity versus Equality

It is common for leaders with equity in mind, to mistake equity for equality, equality for equity, or to incorrectly use these terms interchangeably. Nieto and Bode (2009) clarify that equity is the process involved in achieving the ultimate goal—equality.

Even though equal implies that the same resources and opportunities are offered to all students, providing each student with more of the same (Nieto & Bode) does not address institutional and structural inequities that have accumulated over time (see Ladson-Billings, 2006). One example of the equal concept is the community colleges' open enrollment policy, which aims to provide fair and equal access to higher education (Bragg & Durham, 2012). Yet, this policy solution is not an adequate representation of equity given it solely focuses on access but does not consider what other supports are needed for the ultimate goal, which is to increase student retention and degree attainment. Therefore, the community colleges' open enrollment policy leaves the door open for any student to access higher education, but this policy does not address the structures that will need to be put in place to successfully keep them moving along the pathway to a degree (see Rendón, 2002). As such, "the principle of open access, the intentions of a comprehensive mission, and service to the community can fall short amid the everyday realities and constraints of doing business in community colleges" (Aragon & Brantmeier, 2009, p. 39). Finally, equity means some students may need varied or additional supports for equality to be realized. Hence, equal education implies we are giving every student the same, and equity in education provides students with the varied or differentiated supports needed to achieve equality. Consequently, in order to provide adequate preparation and access to college and careers we emphasize and encourage P-20 leaders to focus on equity to achieve equality.



In order for leaders to be successful in accomplishing their equity-minded goals it is important that all stakeholders involved have a common language for how equity is defined and what equity means for their context-specific goals. We reviewed scholarship on both P-12 and community college leadership practices to explore how each phase of the educational pipeline defines and frames equity. The following themes emerged in P-20 scholarship.

- 1. Equity consciousness/mindedness. The terms equity-minded or equity consciousness are used interchangeably in the literature. According to McKenzie, Skrla, and Scheurich (2006) a leader who is equity conscious understands that all students can achieve regardless of race, social class, gender, sexual orientation, learning difference, culture, language, religion, and any identity that is significantly marginalized. Furthermore, leaders should not only raise their personal consciousness about equity issues but should also work toward helping the adults with whom they collaborate to acknowledge their roles and responsibility for ensuring all students have opportunities to learn and succeed (McKenzie et al., 2006). Leaders who are equity conscious also are willing to probe and ask the tough questions necessary to get at the heart of inequity issues (Larson, 2011). Brooks, Gaetane, Normore, and Hodgins (2007) take the notion of equity consciousness a step further, emphasizing that leaders should exercise more of Paulo Freire's (1987) critical consciousness. In other words, rather than being simply conscious of equity issues, leaders should engage in the critical thinking and dialogue that are necessary to dispel some of the negative assumptions and beliefs, such as deficit thinking (see Valencia, 2008), that people may have about one another that may impact how they make decisions about students' opportunities to learn. As such, Cooper (2009) suggests that leaders have the "courage to facilitate and engage in hard dialogue about race, culture, class, language, and inequality with their staff and families and then make decisions that exemplify their commitment to equity and cultural responsiveness" (p. 718).
- 2. Accepting responsibility for equity issues. Raising leaders' consciousness of inequities is an important step, but the pathway to equity begins with ceasing the "who is to blame" game. When doing equity work, it is easy to sidestep difficult conversations related to racism, classism, heterosexism, and xenophobia, and instead revert to solutions that place the burden for improving educational achievement and outcomes on the very students who must endure the inequities in the first place (see Welton, Diem, & Holme, in press). Those involved in the profession of both increasing educational and workforce opportunities are committed to the cause because they generally care and see access to college and careers as the great equalizer. However, as Barbara (2010) contends, we all generally support equity issues such as "institutionalized racism until asked to confront our own contribution to the system that perpetuates the racism" (p. 10). For this reason it can be hard for an educator to admit that certain groups of students may be afforded opportunities that are not provided to other students. Consequently, when searching for solutions to gaps in student achievement it is not uncommon for educators to "treat the symptoms" of achievement gaps "rather than the cause" (Valencia, Valenzuela, Sloan, & Foley, 2001, p. 319). In doing so, educators search for external explanations for the problem instead of looking internally to see how the institutions and organizations that educational leaders manage may indeed have structures and practices that could be harmful to students from historically marginalized backgrounds.
- 3. Responsiveness to students' identities. There are a number of explanations for data that reveals retention issues in secondary and postsecondary institutions. Insufficient academic supports may not be the sole impetus for a student's decision to permanently leave school. A lack thereof or a mismatch in institutional social and cultural supports, especially for students who do not fit the archetype of what a secondary or postsecondary institution deems as a "normal" student, also could explain why students may exit

the educational pipeline. However, research on developing students' college knowledge primarily focuses on the social and cultural capital students from underrepresented groups-especially firstgeneration, low socioeconomic, and students of color-lack to help connect them to college preparatory information compared to White, middle-, and upper-class students (Welton & Martinez, 2013). Instead of focusing on deficits, college and career readiness policies and practices should affirm the identities of students from underrepresented groups to help these students access college knowledge (Welton & Martinez, 2013). Responding to students' cultural identities especially important considering some is student groups who are traditionally defined as "underrepresented" are no longer the "minority" in many U.S. educational institutions, but are now the "majority."

Though progress has been made in postsecondary access as greater student diversity is represented at all institutional types, the way in which we instruct students has altered little to meet the academic, social, and cultural needs of the newfound student diversity. As stated earlier in this report, great emphasis is placed on making policy, programmatic, and instructional adjustments in secondary and postsecondary education to meet the skillset needs of the changing economy and workforce. However, more discussion is needed regarding what culturally responsive policy and practices would ensure that all students, especially those from underrepresented groups, are engaged and make meaningful connections to the institutions that serve them. Borrowing from Gay's (2000) definition as well as the work of Gonzalez and Moll (2002) and Yosso (2005), and Welton and Martinez (2013) define culturally responsive college and career readiness as policies and practices that renounce deficit-oriented perspectives and consider the contextual needs as well as positive resources, cultural knowledge, and assets students use to navigate their college and career pathways. Again we emphasize that this student identity affirmation at both secondary

settings and community colleges should not only extend to race, ethnicity, and language but also to students who identify as LGBTQ. As stated earlier there is little data collected to understand how students who identify as LGBTQ navigate pathways to college and career, especially at the community college level, which may suggest that P-20 leaders are not garnering enough attention and supports for this student community. Thus, Rendón's (2002) theory of validation posits that students from diverse backgrounds usually do not succeed in community college settings that exclude their culture and view them as deficient, and recommends community colleges, and any institution in the P-20 pipeline, validate students' identities by creating a learning environment that is culturally responsive, family-like, connects faculty and counselors to the classroom, and views that all students have assets or a "foundation of knowledge" to bring to the classroom (p. 664).

### Equity Traps

When explaining how equity is defined in the educational pipeline, we must also be cautious of deficit views and practices that may hinder leaders' ability to accomplish equity focused goals and outcomes; therefore, we highlight the concept equity traps coined by McKenzie and Scheurich (2004) as a practitioner-friendly approach to raising leadership's consciousness of deficit-oriented thinking and practices at both the institutional and individual level. Equity traps are ways of thinking or mindsets that prevent leaders from believing that students from historically marginalized groups can be academically successful. The foundation of equity traps lies in one's assumptions and beliefs, and they are reinforced by educators at all levels and exacerbated by communications, policy, and culture.

McKenzie and Scheurich identify five common equity traps: a deficit view, racial erasure, avoidance and employment of the gaze, and paralogical beliefs and behaviors.

• A *deficit view* sees a student as culturally incompetent, apathetic, and unsuccessful. To challenge deficit views leaders should encourage

other leaders to move from a deficit mindset to one that recognizes the assets that students possess (Gonzalez & Moll, 2002).

- *Racial erasure* derives from the work of bell hooks (1992) and is the act of denying that racism exist, attributing inequities to other factors such as socioeconomics. Racial erasure is also similar to the concept colorblindness by refusing to "see" color, treating everyone "the same" as if racial identities or differences do not exist. In order to help leaders recognize race does matter, the authors suggest leaders engage in professional development such as book studies related to race or conduct equity audits to disaggregate data to expose inequities and see how race matters.
- Avoidance and employment of the gaze is when educators avoid working with White students from middle-to-high income families, whose parents they perceive as hovering, to instead educate lowincome, students of color with parents who they assume will never question their instructional practices. Avoidance and employment of the gaze is concerning because when educators assume low-income, parents of color "don't care" about their child's education, they may then set lowexpectations for this student group. Therefore, when working cooperatively to improve career and technical education programs P-20 leaders should only collaborate with other leaders who believe that all students can be successful and learn at high levels.
- Paralogical beliefs and behaviors ensue when educators malign low-income, students of color, and irrationally excuse their negative behaviors and beliefs about students by blaming students. To counter paralogical beliefs and behaviors leaders should visit other secondary or postsecondary institutional settings with career and technical education programs that are generally successful with students of color by observing the support services these institutions offer, student advising, as well as classroom instruction and faculty student connections.

Consequently, it is imperative that P-20 school leaders both understand the nature of and complexities of equity as well as identify equity traps. Only then can leaders "(a) bring the unconscious...to a conscious level by assisting educators, including ourselves, in reflecting on the traps; b) reframe our thinking and (c) begin the process of restructuring schools so that they become democratic institutions that promote equity and educate everyone's child" (McKenzie & Scheurich, 2004, p. 604). Therefore, it is important that leaders acknowledge the equity traps they personally hold, and how their own deficit views and practices may impact institutional decision making, structures, and students' opportunities to learn.

### The Equity Scorecard™

The conceptualizations of equity in P-20 scholarship afford leaders rich ways of thinking about and actualizing equity. One tool for leaders to use in their equity audits and to facilitate equity analyses is the University of Southern California's Center for Urban Education (CUE) Equity Scorecard<sup>™</sup>. As of August 2013, approximately 40 colleges and universities in the U.S. have participated in the Equity Scorecard process (CUE website). Based on the Funds of Knowledge approach (Gonzalez & Moll, 2002), this tool, concept, and process was founded under the premise "that practitioners can make a marked difference in the educational outcomes of minoritized students if they recognize that their practices are not working and participate in designed learning opportunities to develop funds of knowledge necessary for equityminded practice" (Bensimon, 2012, p. 19). According to Bensimon (2012) when conducting an equity audit practitioners should begin to understand how they unconsciously use their personal background knowledge and assumptions (background knowledge, tacit knowledge, implicit theories, cognitive frames, and cultural frameworks) in their everyday actions. This process enables practitioners to acquire funds of knowledge that affect "equity-minded institutional transformation" (Bensimon, p. 20) by answering two central questions: "In what ways are my practices, or the practices of this institution, related to racial inequities in outcomes? And, in what ways are the

### How is Equity Defined in P-20 Scholarship? (continued)

institutional practices enabling or reinforcing racial inequities in outcomes?" (Bensimon, p. 25).

To do so, a broad-based team of practitioners engages in a five-stage equity audit. The composition of the team is determined by strict criteria and according to the nature of the audit. It always includes institutional researchers in order to dialogue about in-depth data that often point to inequities at various milestones (Bensimon, 2012). The activities and processes that ensue are guided by sociocultural, organizational, practice, and critical theories. These theories underpin the core principles (Table 1) and guide the phases (Table 2) of the Equity Scorecard process. As mentioned earlier, the Equity Scorecard is a philosophy, a tool, and a process. It certainly is not the only way for leaders to shed light on equity issues in conversations and practice around college and career readiness; however, this process certainly does make visible evidence of practices that inhibit students' potential and impede students' opportunities to excel. Through team conversations, equity traps are exposed, and practitioners are forced to turn inward and reflect on their beliefs and behaviors.



### Table 1. The Principles of the Equity Scorecard<sup>™</sup> Process

**Principle 1:** Practitioners learn and change through their engagement in a joint productive activity. (Sociocultural theories of learning)

**Principle 2:** Inequity in educational outcomes is characterized as an indeterminate situation produced by a failure of practice. (Practice theory)

**Principle 3:** Practitioner-led inquiry is a means of developing awareness of racial inequity and self-change. (Practice theory and organizational learning theory)

Principle 4: Equity-minded practitioners are race-conscious (Critical theories of race)

Source: Center for Urban Education. (2013). *The Principles of the Equity Scorecard*<sup>™</sup> *Process*. Retrieved from http://cue.usc.edu/our\_tools/the\_equity\_scorecard.html

### Table 2. The Five Phases of the Equity Scorecard<sup>™</sup> Process

### Phase 1: Laying the Groundwork

CUE facilitators collaborate with campus/system leadership to align the Scorecard with existing efforts and identify individuals to serve on the evidence team. The team meets to learn about data and the use of CUE's tools.

### Phase 2: Defining the Problem

Evidence team members use the Vital Signs as a starting point to investigate campus data and increase their knowledge about existing student outcomes.

### Phase 3: Assessing Interventions

The evidence team uses the Benchmarking Equity and Student Success Tool<sup>™</sup> (BESST) to identify and prioritize intervention points. They then identify institutional practices that positively or adversely affect student success through the use of Self-Assessment Inventories.

### Phase 4: Implementing Solutions

The evidence team sets short-term, actionable objectives and long-term equity goals for priority areas of concern.

### **Phase 5: Evaluating Results**

The evidence team completes the Equity Scorecard<sup>™</sup> and with CUE's support shares its findings and goals with the system/campus.

Source: Center for Urban Education. (2013). *The five phases of the Equity Scorecard*<sup>™</sup> *process*. Retrieved from http://cue.usc.edu/our\_tools/the\_equity\_scorecard.html

### Equity-Minded Leadership In Practice: Spotlight on the Pathways to Results Process

The similarities and differences between conceptualizations of equity among secondary and postsecondary leadership were visible in a recent pilot study that explored how high school and community college partners use the Pathways to Results (PTR) continuous improvement process to come together and frame approaches to equity.

### Background

PTR was borne out of the Office of Community College Research and Leadership's interest in improving the Illinois Programs of Study (POS) across secondary-postsecondary settings. With support from the Illinois Community College Board and the Illinois State Board of Education, as of August 2013, OCCRL PTR coaches and staff have supported 27 distinct PTR processes, which have engaged approximately 54 high schools and community colleges. PTR is aligned closely with the Illinois Career Cluster Model, which is comprised of 16 Career Clusters. (See Appendix A at the end of this report for a brief description of each of these clusters.) Each cluster is closely associated with Career Pathways, Bridge Programs, and POS. Non-duplicative sequences of academic, career, and technical elements from secondary to postsecondary, POS are the means by which students move along their chosen Career Pathways. Appendix B provides a glossary of these terms, and Appendix C offers a visual example of the Pathways, Bridge Programs, and POS associated with the Health Science cluster.

The PTR process thus intends to strengthen the robustness of POS. PTR is grounded in the Illinois POS Guiding Principles, one of which is Access, equity and opportunity: "Each and every student has access to educational opportunities and services that enable their success" (Bragg & Bennett, 2012, p. 1). PTR is a cyclical process that spans five phases: 1) engagement and commitment, 2) outcomes and equity assessment, 3) process assessment, 4) process improvement, and 5) review and reflection (Table 3). Focusing on a particular POS, the PTR team convenes over the course of one academic year to develop solutions that can be sustained and extended to other programs of study. This interdisciplinary team includes leaders from

community colleges, secondary schools, industry, and community members. Often these team members' relationships are sustained, as "once begun, the cycle of continuous improvement that is integral to PTR never ends" (Bragg & Bennett, p. 3).

PTR defines equity as a process that focuses on improving student outcomes by ensuring all students thrive and graduate at equitable rates at both the secondary and postsecondary levels (Taylor et al., 2012). By using an equity lens to disaggregate student outcome data, PTR teams can identify the structural origins of inequities that impact student groups (Taylor et al., 2012). In the Outcomes and Equity Assessment phase PTR teams use a number of templates and worksheets to remain focused on equity-minded goals. Teams disaggregate data by the following characteristics: race/ethnicity, socioeconomic status (SES), gender, age, special populations (as defined by federal law), and other characteristics determined relevant by the team (Taylor et al., 2012).

This pilot study took a cursory look at leadership, partnership, and issues of equity among secondary and postsecondary institutions involved in the PTR process. Thirteen representatives from a combination of four high schools and six community colleges who participated in PTR between 2009 and 2012 were interviewed. In the equity section of our semistructured interview protocol, we asked participants to share their perspectives on equity. We specifically asked for their definitions of equity, reflections on the Outcomes and Equity Assessment phase of PTR, equity gaps in POS at their respective institutions, and their overall impressions of using a continuous improvement process like PTR to address equity issues. These findings illuminate previously discussed scholarship on equity as well as raise further considerations for equity conscious leadership across P-20 settings.

### Table 3. The Pathways To Results Process

### **Engagement and Commitment**

Partners and team members collaborate to focus on critical problems that need to be addressed to improve student outcomes and enhance program quality. Analysis of existing data on student outcomes and programs of study quality feed into initial decisions about the PTR project's focus.

### **Outcomes and Equity Assessment**

Teams use student-level data to examine outcomes and identify gaps in results between racial, ethnic, low income, and other groups and special populations. Using these data, teams identify areas where outcomes are especially successful and areas where short- and long-term improvements are needed.

### **Process Assessment**

Teams analyze core processes (e.g., advising, teaching, learning assessment) that relate to the problem the team has decided to address. Teams probe existing processes to understand why desired results are not being produced.

### **Process Improvement and Evaluation**

Teams reach consensus on solutions and develop implementation and evaluation plans to assess student outcomes and improve Programs of Study quality over time.

### **Review and Reflection**

Team members, individually and collectively, review and reflect on lessons learned from engaging in the PTR process. The team develops a plan to ensure that solutions are sustained and determines the feasibility of scaling up the PTR process to other programs of study.

Source: Bragg, D., & Bennett, S. (2012). *Introduction to Pathways to Results* (Rev. ed.). Champaign, IL: Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign. Retrieved from http://occrl.illinois.edu/files/Projects/ptr/Modules/PTR%20Intro%20Module.pdf



### Findings

## 1. Equity means deliberately providing opportunities for all students.

During the equity portion of our interviews we asked leaders about their definitions of and engagement with equity. Only three out of 13 participants offered a specific definition of equity, followed up by a detailed description of the ways in which this conceptualization guided their individual and/or their PTR team's engagement with equity. These definitions were similar in that they focused on "everyone" and "all" students. The remainder of the participants did not offer a specific definition of equity and instead began to describe the "state" of equity in their POS and/or institution. Several community college leaders explained how during the PTR Outcomes and Equity Assessment phase they first examined data for "all" students in order to identify gaps. For example, one community college leader explained that the PTR process encouraged the team to look at the "entire student body," whereas they previously only considered students whom they deemed "likely to be interested in" Early Childhood Education. However, once this particular team used the PTR process to view their student needs through an equity lens, the data provoked their interest in providing more opportunities for males and displaced workers. These data revealed that the notion of collecting data on "all" students was a new and novel concept for several leaders. They included several subpopulations of students that they had previously never considered for their respective POS equity assessments. Once the data revealed inequities, this exposure sparked leaders to assess and improve their processes. In a few instances, leaders noted that they replicated equity assessments for other POS. In other words, when leaders engaged with colleagues on issues of equity in the PTR process, they became inclined to practice sustained equity conscious leadership beyond the PTR process and in other POS across their respective institutions.

2. Leaders are beginning to redefine equity to include race and a multitude of factors.

While the PTR process encourages leaders to attribute their attention to "all" students in order to achieve equitable outcomes, leaders also commented on how the equity assessment scan revealed "surprising" or "overwhelming" data about specific subpopulations that would have otherwise remained unknown. One community college leader noted that in their Nursing POS they considered older students carefully and asked themselves, "what does it mean to be 50 (years old) and start a career?" To address this question, the team decided to turn their attention to advising services and focused heavily on exit counseling in order to garner deeper awareness of why, when, and how students exit. Another community college leader explained that because of the equity assessment, the PTR team decided to focus specifically on "Hispanic," young, and female students for their Computer Assisted Design (CAD) POS. To do so, they brought teenage mothers to the community college campus for a day. The team at the time was in the process of crafting plans for a CAD-specific career exposition to be held at nearby secondary schools to generate interest in and dispel myths about CAD among female high school students.

Yet another PTR Leader similarly commented: "We can't get bogged down here when we don't have race diversity. We have to put that piece aside and look at other equity issues." This particular leader's institution is predominately Latino/a and for this reason he suggested to his PTR team that they gather data that would display differences within this single student population. Assumptions are frequently made that racial/ethnic groups have homogeneous educational, social, and cultural experiences and rarely acknowledges the heterogeneity within student groups (see Teranishi, 2002; Martinez, 2010; and Welton & Martinez, 2013 for examples). Thus, this PTR leader was considerate of heterogeneity within the Latino/a student population and looked at the nine high schools that fed into their Area Career Center and assessed the attrition from the Area Career Center enrollment to enrollment in the community college. As a result, this PTR leader uncovered severe attrition issues among Latino/a

### Equity-Minded Leadership In Practice: Spotlight on the Pathways to Results Process (continued)

students, nontraditional students, and females, and the team promptly made programmatic changes by appealing to language minority students within these groups: "We developed materials in Spanish and put up billboards in Spanish." While many leaders noted that identifying solutions for particular subpopulations was indeed challenging, they remained committed to improving programs for a range of diverse student populations.

# 3. Data drives leaders' analysis of (in)equitable practices and processes in secondary-postsecondary settings.

Leaders' level of interaction with data influenced how equity discussions unfolded. Types and limitations of data were a part of every conversation with secondary and postsecondary leaders. In instances of particularly robust secondary-postsecondary relationships, high school counselors were a critical element of the process, as they had school-level data and institutional knowledge that became highly valuable for PTR teams to identify secondarypostsecondary gaps by race, socioeconomic status, gender, and other special populations.

Yet, preliminary conversations showed that this was the exception, not the rule. Community college leaders who interfaced heavily with secondary school leaders noted that garnering secondary school data analysis proved challenging because most secondary schools did not have the financial resources to employ personnel who were specifically dedicated to such analysis. This was far different from postsecondary institutions, where at least a handful of people were employed across each campus whose sole job responsibility was to work with data. One community college leader when explaining the details regarding sliding scale tuition, a pertinent equity issue, lamented that their institution wishes to work more closely with secondary leaders on income data to tackle transitions for underrepresented students but noted that it was "hard to get the principal to sit in a meeting...there's whole boxes of data, graphs, and templates. We can't get it (secondary level data), though. The only way to get the transition piece is to

plot out admissions data, which is really cumbersome and time consuming." This community college leader wanted to find a solution for assisting high school leaders with data management resources that would help improve POS.

Despite some data management issues, leaders still acknowledge that data-based decision making is powerful and instrumental to garnering institutional support for program improvement, the PTR process, and sustained continuous improvement in other POS. The PTR process was seen as a beneficial process:

PTR helps develop some different data models and coaching with an equity focus. We took a stab at it. It's paid off. We've got institutional support...it's a priority of administration...data and overwhelming negative aspect of it provoked changes in priorities because of the levels of attrition and unsuccessful students...we're not doing students service when they spin in and out of financial aid.

High school and community college leaders alike commented that this problem of data access and analysis was a particularly tenuous issue. Though they had made positive strides, the presence of personnel who specialized in equity-driven data analysis would have likely improved the PTR process in several situations; yet, they also acknowledged that many educational institutions did not have sufficient financial resources to create and staff these positions.

### 4. High school leaders are beginning to see enrollment and retention rates at the postsecondary level as measures of equity at the secondary level.

The high school leaders whom we interviewed were particularly instrumental to the PTR process and focused intently on improving postsecondary transitions for underrepresented students by developing strong relationships with community college and industry leaders. As exemplified in the comment by the high school leader in Figure 2, high school leaders' notions of equity and access seemed to expand through the PTR process to include evidence of success. In another example of a high school Curriculum Director who worked closely with a community college dean in a PTR process on computer science, the high school leader helped bring issues of equity to light in their highly Latino/a school community: "Paperwork is an issue (because) undocumented students are afraid to fill out paperwork. Students and parents say they can't trust (us). We have gotten people to provide more info on the Dream Act." This leader also brought to light issues of equity with placement exams: "There are true equity problems in community college with placement...Students placed into English language courses are not correctly placed...I brought it to attention of the admin(istration)...and explained they should take into (account the) whole academic history rather than taking into (account) just one test."

In one high school, PTR helped improve their already robust POS. This high school leader explained that their PTR team shifted from simply focusing on 9-12 pathways to pathways beyond high school, which included preparation for both college and careers. This broader focus also came with a shift in school improvement strategy:

We don't necessarily start with the high school anymore. In order to make sure students are "ready" we start with what courses are offered at postsecondary, the community college, and start going backwards from there to plan our pathway. It just serves kids better by articulating and understanding what happens at [community college] or [four-year university].

In facilitating this backward mapping, these high school leaders worked with postsecondary institutions and industry near and far, and sometimes even in different states, in order to truly elevate their POS to a rigorous level.

### Equity Conscious Leadership in the PTR Process

As mentioned earlier, our pilot study addressed leadership, partnership, and equity in the PTR process. For sure, equity must be integrated with leadership and partnership, as the PTR process demonstrates each concept heavily relies on the other to achieve equitable outcomes. It is in fact the strong leadership and partnership of secondary and postsecondary leaders that facilitated program improvements and outcomes that are more equitable for students at these high schools and community colleges. It is the commitment of these strong leaders that will help them face equity traps at the individual, organizational, and community level.

Still though, equity conscious leaders certainly are not exempt from equity traps. In fact, they are perhaps most vulnerable because they position equity at the forefront of their decision-making and strategic thinking. A few participants when asked to define equity responded with the definition for equality and commented that equity means "all students being treated the same" in terms of resource allocation. Additionally, when reflecting upon the equity process, one community college leader commented, "We got pushback from retired teachers. They felt people should be learning English. So we have to be more subversive about our advertising." For these leaders and others, PTR's emphasis on and supplemental materials and professional development to explain equity help equity conscious leaders resist deficit-oriented actions toward language minority students. This pilot study offered a glimpse into the efforts of leaders who are working toward becoming more equity conscious and modeling equitable practices. Through their efforts, we can see partnership, strong data analysis, dialogue, and commitment are integral to equity conscious leadership.

### Figure 2. Perspectives on Pathways to Results and Equity

1. Equity means deliberately providing opportunities for all students.

"Equity means everyone gets a shot. Everyone can get engaged in and finish a program" (Community College Leader).

2. Leaders are beginning to redefine equity to include race and a multitude of factors. "We struggled with issues of equity because we always think about race or ethnicity. But we're a (racially) homogenous district. We have to put that piece aside and look at other equity issues" (Community College Leader).

3. Data drives leaders' analysis of (in) equitable practices and processes in secondary-postsecondary settings.

"As an institution we started looking at data. The data on Black males in particular was overwhelming. (It) uncovered gaps in precollege enrollment, completion, and milestones" (Community College Leader).

4. High school leaders are beginning to see enrollment and retention rates at the postsecondary as measures of equity at the secondary level.

"Before, once students left, I didn't know what happened to them. (Now) I see the process as guiding students on their next step and being successful, like learning about bridges for transitions. Part of our improvement is seeing what happens next. I'm much more career and college oriented now" (High School Leader). These leaders' experiences with equity in the context of further developing Programs of Study (POS) across secondary-postsecondary settings are telling. Throughout the PTR process, they both grappled with and remained committed to equity in strengthening secondary-postsecondary transitions. Insights from the research literature as well as findings from the pilot study informed the following key lessons and considerations for strengthening one's equity conscious leadership.

## Consideration #1: Extend beyond simply examining data. Dialogue about data.

The findings from the pilot study suggest that PTR's Outcomes and Equity Assessment phase provided the resources and supports necessary to use data to have honest and candid conversations about equity issues. Some team leaders used a number of data points, not just standardized measurements, to explore differences within racial/ethnic groups, such as language and gender, but also had to search for more culturally responsive means to collecting data on a population that is severely misrepresented and misunderstood, undocumented students. Designing systems for collecting and managing data is an intensive process that demands strong leaders who can establish an institutional vision and culture for data use and decision making (Hamilton et al., 2009).

Discomfort and limited experience with data use and analysis are common reasons given for why educators may shy away from discussions about data (Hamilton et al., 2009). Pilot study participants found that consistent mentoring from PTR coaches and professional development provided through PTR cross-site meetings as well as the modules associated with each phase of the process, helped their PTR teams craft a common language for equity and served as an anchor for using data to identify equity issues, discuss, and problem solve. Also, engendering a collaborative culture of data use is key, and PTR aims to do just this, as it is not only rooted in equity, but the process strengthens collaborations between secondary and postsecondary leaders as a path to equity. The Obama Administration's blueprint for a reauthorized Perkins

Act urges states to build stronger collaborations between secondary and postsecondary, institutions, employers, and industry partners to improve the quality of career and technical education programs (U.S. Department of Education, 2012). We extend this recommendation by also urging secondary and postsecondary institutions collaboratively examine data to capture a more profound understanding of inequities in the secondary to postsecondary pipeline, and PTR is one way in which to facilitate dialogue about data among P-20 leaders.

However, the study participants identified disconnects between secondary and postsecondary institutional data-use, which is cause for concern. Participants expressed that secondary leaders did not have the resources to adequately design systems and practices for using student outcome data, which made it challenging when it came time to merge data from various institutions involved in a particular POS. Inadequate district and school supports for data use made it challenging for PTR teams to fully capture secondary to postsecondary equity issues. Thus, it is suggested that states continue to secure federal and foundational funds to design databases and systems that seamlessly and longitudinally reveal student outcomes in the P-20 pipeline, as well as designated data facilitators who provide professional development that fosters a data-driven culture in secondary school settings (Hamilton et al., 2009).

# Consideration #2: Remain keenly aware of the distinct difference between equity and equality by reframing "what is fair."

"Equity" and "all" echoes across Obama's Blueprint for Reform and is the focus of states who have agreed to adopt federal policy initiatives such as the Common Core State Standards and Race to the Top. There is a widespread misnomer that equity and equality are one in the same, however this could not be more false. In fact, inherent in an equitable education for all learners is the recognition of difference (Crockett, 2011). Acknowledging, addressing, and thinking critically about differences enables equity conscious leaders (or any practitioner) to: a) think about what is possible

### Strengthening Equity-Minded Leadership Across the Secondary-Postsecondary Pipeline (continued)

and what is not (p. 186); b) recognize that "some students many need 'more' or 'different' educational experiences" (Barbara, 2010, p. 9); and c) understand equity at both intellectual and affective levels (Barbara, 2010). To be fair is to recognize difference, and to recognize difference is to act equitably.

At this juncture, considerations of "fairness" often arise. Leaders may experience tension, perhaps raised by teachers or parents, regarding their "fairness" of education programs that are created or enacted to support equity. Fairness and sameness can be likened to the distinct difference between equity and equality. To treat all learners the same, in the name of fairness, may (and often does) "support the status quo and diametrically opposes social justice" (Furman & Shields, 2005, p. 124). Affording every person the opportunity to participate in college is deemed by some as the fair and equitable option, but a closer look reminds one that access is just one vital sign (Center for Urban Education, 2013), and opportunities for retention, excellence, and rigor must be considered in setting up students for success (Bragg & Durham, 2012).

As emphasized in the first consideration, in order to act equitably PTR team leaders must have a common language for what equity is and a common understanding for how to address their institutions' context specific equity issues. Without a common language for examining inequities (i.e. equity lens), deficit-oriented institutionalized norms and practices can go unchallenged (see Okun, 2010; Welton et al., in press). A few study participants were still unclear about how to define equity, and instead responded to the question by generally re-counting their institutions' equity issues, or confused equity with equality all together. While understanding the issues at hand is important, team leaders must have a clear and common understanding of what equity is, as misinterpretations of equity could create divergence in the PTR project focus, result in misidentification of the problem, exacerbating student inequities. Since PTR is a cyclical process it is recommend that coaching is offered at each phase of the continuous improvement process, especially at the Review and Reflection phase, on how to lead with an equity lens, asking team leaders to review "what is equity" as well as the common language and goals for achieving equity. This way all PTR team members are on the same page about equity-minded goals and have a clear understanding of what equity is throughout the continuous improvement process.

## Consideration #3: Critically assess how your identity impacts your conceptualizations of equity.

It is not uncommon for educators to use their personal experiences, identities, and funds of knowledge as the barometer for student success. Unfortunately, what we as leaders consider to be the best supports, strategies, resources, and interventions for students may not necessarily be what is best for an individual student. This is especially so if leaders do not consider how our own identities (race, ethnicity, gender, social class, and sexuality), experiences, and assumptions may conflict and affect how we view our students and their academic potential. Using data to explore equity gaps is just one step in the pathway to equity. As leaders we must also consider how our identity, especially our assumptions, may impact how we make decisions to address equity gaps. According to Bensimon (2012) leaders need to develop funds of knowledge to make equity-minded decisions. Thus, when crafting solutions to address inequities, leaders should be cautious of hastily jumping to solutions based on what they believe is right for students, and instead consider solutions that validate and affirm students' cultural identities and context specific needs (see Rendón, 2002; Yosso, 2005).

The Outcomes and Equity Assessment phase of PTR provided a platform for using data to get at the core of equity issues, but the Process Assessment phase pushed leaders to consider what processes may be deficit oriented, culturally unresponsive, and a disservice to certain groups of students. As such, leaders considered how their institutional identities/assumptions (ways of knowing), or conceptualizations of what is "normal" may in fact be insensitive to the needs of and further marginalize certain student groups. For example, in the Process Assessment phase leaders questioned

### Strengthening Equity-Minded Leadership Across the Secondary-Postsecondary Pipeline (continued)

placement exam policies, which did not capture the full academic potential of language minority students, and documentation processes that may be unresponsive to the needs of and further isolate undocumented students. Even though participants used an equity lens to question how institutional norms may negatively impact students from historically marginalized groups, we heard little from participants about how their personal assumptions and attitudes influence their decisions and could negatively impact student access to college and workforce preparedness.

Yes, it can be emotional for a leader to critique how their personal beliefs may not be responsive to the needs of the most underserved students, but it is true leaders who are willing to acknowledge how their personal equity traps may contribute to larger structural inequities in college and workforce readiness. Thus, we emphasize that continuous improvement processes such as PTR not only use an equity lens to examine equity gaps in the data, but also provide leaders with ongoing professional development on issues of diversity that challenges leaders to critique their own deficit views. It is only when leaders face their personal equity traps that they can then make positive attitudinal changes that enable them to use data to make decisions that best meet the needs of all students.

## Consideration #4: Be a champion for equity. Encourage other stakeholders to also face equity.

Once leaders become conscious of equity traps they must then work with others to recognize and thwart the damaging effects of these traps (McKenzie et al., 2006). It is one thing to resolve our personal equity traps, but structural inequities cannot be fully resolved until we encourage other leaders involved in preparing students for college and the workforce to face equity. Pilot study participants shared with us how they used PTR as a starting point to challenge their colleagues' deficit viewpoints. Participants disclosed approaches used to encourage colleagues to face and dismantle their deficit views and processes that prove to be harmful to language minority students. Also one participant got others on board with making it an institutional priority to be cultural responsive and pay recognition to the varied needs of Latino/a students (see Rodriguez, 2012).

The PTR process encourages stakeholders from secondary, postsecondary, as well as industry to work in collaboration with the end goal of building more equitable access to quality career and technical education programs. This network provides a supportive setting for leaders to encourage each other to forthrightly face equity issues. Also, getting various stakeholders to see first-hand how they can make meaningful contributions to increasing student access to quality career and technical education is one way to advocate for and get other leaders involved in working toward equitable student outcomes in college and career. We witnessed this firsthand at a PTR high school's advisory board meeting where school administrators took a back seat and allowed student and industry leaders run the board meeting. At the advisory board meeting partners from industry discussed how being a part of improving a POS helped them feel like an integral member of the high school faculty. Giving industry partners, and even students, a leadership role helped strengthen their commitment to equity. Therefore, like the PTR process, we suggest placing various stakeholders involved in career and technical education in leadership roles so they are then personally bought into advocating for equity.



### **Concluding Thoughts**

The urgency and logic of the readiness message is clear: "High schools can and should prepare students for both college and careers. Programs that contextualize academic learning in the real world of adults will improve learning, reduce the dropout rate, and bring economic benefits" (Oakes & Saunders, 2008, p. 5). Yet, a wealth of data show us that many high schools do not prepare students, and particularly students of color and of less wealth, for college and careers. What is worse, when they do move through pathways to college and careers, students who were previously labeled "at-risk" persist and achieve less than White, middle to high-income students. As Bensimon (2012) laments:

first-generation, low-income, immigrant, or from marginalized racial and ethnic groups have been disadvantaged by highly segregated high schools that lacked the resources to prepare them, academically and culturally, for college. Upon entering college these students are further disadvantaged by a college culture that expects them to know the rules and behaviors of academic success: seeking help when in academic trouble, visiting faculty members during office hours, knowing how to study, and having goals and being committed to them. (pp. 19-20)

As we have discussed at length, understanding this breakdown in "readiness" and repairing pathways to equity requires leaders to genuinely and purposefully face equity and access issues. This process includes: a) understanding the complexities of (in)equity, b) recognizing the ways in which secondary and postsecondary leaders approach equity on both intellectual and affective levels, and c) acknowledging and confronting equity traps. In other words, leaders can create and sustain pathways to equity when they avoid scripts and formulas and face equity genuinely and wholeheartedly. In doing so, leaders can affect equity-driven transformative change in preparing students for their next steps and begin to repair pathways to equity.



#### References

- Aragon, A., & Brantmeier, E. J. (2009). Diversity-affirming ethics and critical epistemology: Institutional decision making in community colleges. *New Directions for Community Colleges*, 2009(148), 39-51.
- Baker, D. B., Clay, J. N., & Gratama, C. A. (2005). The essence of college readiness: Implications for students, parents, schools, and researchers. *The BERC Group*. Retrieved from http://www.tacoma.k12.wa.us/ information/departments/guidancecounseling/secondaryguidance/Shared%20Documents/College%20 Information/College%20Readiness%20Report%20Fouts%20v1%20Jan%2006.pdf
- Barbara, M. (2010, September/October). Leading the equity agenda. *Leadership*, pp. 8-11. Retrieved from http://www.pivotlearningpartners.org/sites/default/files/ACSAarticle\_MBarbaraSept2010.pdf
- Bensimon, E. M. (2012). The equity scorecard: Theory of change. In E. M. Bensimon & L. Malcolm (Eds.), *Confronting issues of equity on campus: Implementing the equity scorecard in theory and practice* (pp. 17-44). Sterling, VA: Stylus Publishing.
- Bragg, D., & Bennett, S. (2012). *Introduction to Pathways to Results*. (Rev. ed.). Champaign, IL: Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign. Retrieved from http://occrl.illinois.edu/files/Projects/ptr/Modules/PTR%20Intro%20Module.pdf
- Bragg, D. D., & Durham, B. (2012). Perspectives on access and equity in the era of (community) college completion. *Community College Review*, 40(2), 106-125.
- Brooks, J. S., Gaetane, J. M., Normore, A. H., & Hodgins, D. W. (2007). Distributed leadership for social justice: Exploring how influence and equity are stretched over an urban high school. *Journal of School Leadership*, *17*, 378-408.
- Brown, T. M., & Rodriguez, L. F. (2009). School and the co-construction of dropout. *International Journal of Qualitative Studies in Education*, *22*(2), 221-242.
- Cammarota, J. (2004). The gendered and racialized pathways of Latina and Latina/o youth: Different resistances in the urban context. *Anthropology and Education Quarterly*, *35*(1), 53-74.
- Castro, E. L. (in press). Racialized readiness for college and career: Toward an equity grounded social science of intervention programming. *Community College Review*.
- Casner-Lotto, J., & Benner, M. W. (2006). Are they really ready to work: Employers' perspectives on the basic knowledge and applied skills of new entrants to the 21stcentury U.S. workforce. Retrieved from http://www.p21.org/storage/documents/FINAL\_REPORT\_PDF09-29-06.pdf
- Carnevale, A. P., Smith, N., & Strohl, J. (2010). *Help wanted: Projections of jobs and education requirements through 2018.* Georgetown University Center on Education and the Workforce. Retrieved from http://www9.georgetown.edu/grad/.../HelpWanted.ExecutiveSummary.pdf
- Center for Urban Education. (2013). *The five phases of the Equity Scorecard*<sup>™</sup> *process*. Retrieved from http://cue.usc.edu/our\_tools/the\_equity\_scorecard.html

- The College Board. (2011). *The 7th annual AP report to the nation*. Retrieved from http://apreport.collegeboard.org/sites/default/files/downloads/pdfs/AP\_RTN\_2011.pdf
- Conley, D. T. (2007). *Redefining college readiness*, *Volume 3*. Eugene, OR: Educational Policy Improvement Center. Retrieved from http://inside.redwoods.edu/basicskills/documents/1.RedefiningCR\_Vol3\_Copy.pdf
- Cooper, C. W. (2009). Performing cultural work in demographically changing schools: Implications for expanding transformative frameworks. *Educational Administration Quarterly*, 45, 694-724.
- Crockett, J. B. (2011). Conceptual models for leading and administrating special education. In J. M. Kauffman & D. P. Hallahan (Eds.), *Handbook of special education* (pp. 351-362). New York, NY: Routledge.
- Flores, S. M., Horn, C. L., & Crisp, G. (2006). Community colleges, public policy, and Latino student opportunity. *New Directions for Community Colleges*, 2006(133), 71-80.
- Furman, G. C., & Shields, C. M. (2005). How can educational leaders promote and support social justice and democratic community in schools. In W. A. Firestone and C. Riehl (Eds.), *A new agenda for research in educational leadership* (pp. 119-137.) New York, NY: Teachers College Press.
- Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice*. New York, NY: Teachers College Press.
- Gonzalez, N., & Moll, L. C. (2002). Cruzando el Puente: Harnessing funds of knowledge in the Puente project. *Journal of Educational Policy*, *16*, 623-641.
- Hamilton, L., Halverson, R., Jackson, Mandinach, E., Supovitz, J., & Wayman, J. (2009). Using student achievement data to support instructional decision making (NCEE 2009-4067). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov//ncee/wwc/publications/practiceguides/.
- Holme, J. J., Diem, S. D., & Welton, A. D. (in press). Suburban school districts and demographic change: The technical, normative, and political dimensions of response. *Educational Administration Quarterly*.
- hooks, b. (1992). Black looks: Race and representation. Cambridge, MA: South End.
- Jankowski, N. A., Kirby, C. L., Bragg, D. D., Taylor, J. L., & Oertle, K. M. (2009). *Illinois' career cluster model*. Retrieved from http://occrl.illinois.edu/files/Projects/perkins/Report/POSmailerFINAL.pdf
- Jerald, C. D., Haycock, K., & Wilkins, A. (2009). *Fighting for quality and equality, too. How state policymakers can ensure the drive to improve teacher quality doesn't just trickle down to poor and minority children.* Washington, DC: Education Trust.
- Katz, S. R. (1999). Teaching in tensions: Latino immigrant youth, their teachers and the structures of schooling. *Teachers College Record*, *100*, 809-840.

- Larson, C. L. (2011). Responsibility and accountability in educational leadership. Keeping democracy and social justice central to reform. *Scholar-Practitioner Quarterly*, *4*, 323-327.
- Leonardo, Z. (2007). The war on schools: NCLB, nation creation and the educational construction of whiteness. *Race Ethnicity and Education, 10*, 261-278.
- Martinez, M. A. (2010). *Traversing literal and figurative borders in South Texas: Mexican Americans and college choice*. Unpublished doctoral dissertation, The University of Texas at Austin.
- McNeil, L. M., Coppola, E., Radigan, J., & Heilig, J. V. (2008). Avoidable losses: High-stakes accountability and the dropout crisis. *Education Policy Analysis Archives*, *16*(3). Retrieved from http://epaa.asu.edu/epaa/v16n3/
- McKenzie, K. B., & Scheurich, J. J. (2004). Equity traps: A useful construct for preparing principals to lead schools that are successful with racially diverse students. *Educational Administration Quarterly*, 40, 601-632.
- McKenzie, K., Skrla, L., & Scheurich, J. (2006). Preparing instructional leaders for social justice. *Journal of School Leadership*, *16*, 158-170.
- Milner, H. R. (2012). Beyond a test score: Explaining opportunity gaps in educational practice. *Journal of Black Studies*, 43, 693-718.
- National Governors Association. (n.d.). *Implementing the Common Core State Standards*. Retrieved from http://www.corestandards.org/
- Nieto, S., & Bode, P. (2009). *Affirming diversity: The sociopolitical context of multicultural education*. New York, NY: Pearson/Allyn and Bacon.
- Oakes, J., Welner, K., Yonezawa, S., & Allen, R. (2005). Norms and politics of equity-minded change: Researching the "zone of mediation." In M. Fullan (Ed.), *Fundamental change: International handbook on educational change* (pp. 282-305). Dordrecht, The Netherlands: Springer.
- Oakes, J., & Saunders, M. (Eds). (2008). *Beyond tracking: Multiple pathways to college, career, and civic participation.* Cambridge, MA: Harvard Education Press.
- Patterson, J. A., Hale, D., & Stessman, M. (2007). Cultural contradictions and school leaving: A case study of an urban high school. *The High School Journal*, *91*, 1-15.
- Perna, L. W., & Thomas, S. L. (2009). Barriers to college opportunity: The unintended consequences of statemandated testing. *Educational Policy*, 23, 451-479.
- Rendón, L. I. (2002). A community college Puente: A validating model of education. Educational Policy, 6, 642-647.
- Robinson, J. P., & Espelage, D. L. (2011). Inequities in educational and psychological outcomes between LGBTQ and straight students in middle and high school. *Educational Researcher*, 40, 315-330.

- Rodriguez, L. F. (2012). "Everybody grieves, but still nobody sees": Toward a praxis of recognition for Latina/o students in U.S. schools. *Teachers College Record*, *114*(1), 1-31.
- Rumberger, R. W. & Rodriguez, G. M. (2010). Chicano dropouts: An update of research and policy issues. In R. R. Valencia (Ed.) *Chicano school failure and success: Past, present, and future* (3rd ed., pp. 101-116). New York, NY: Routledge: Falmer.
- Symonds, W. C., Schwartz, R. B., & Ferguson, F. (2011). Pathways to prosperity: Meeting the challenge of preparing young Americans for the 21st century. Report issued by the Pathways to Prosperity Project, Harvard Graduate School of Education. Retrieved from http://www.gse.harvard.edu/news\_events/features/2011/Pathways\_to\_Prosperity\_Feb2011.pdf
- Taylor, J., Castro, E., Swanson, J., Harmon, T., Kristovich, S., Jones, A., & Kudaligama, V. (2012). Outcomes and equity assessment. (Rev. ed.). Champaign, IL: Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign.
- Teranishi, R. T. (2002). Asian Pacific Americans and critical race theory: An examination of school racial climate. *Equity & Excellence in Education, 32*, 144-154.
- Teranishi, R. T., Suarez-Orozco, C., & Suarez-Orozco, M. (2011). Immigrants in community colleges. *Future of Children, 21*(1), 153-169.
- United States Department of Education. (2010). *A blueprint for reform: The reauthorization of the Elementary and Secondary Education Act.* Washington, DC: United States Department of Education.
- United States Department of Education (2012). *Investing in America's future: A blueprint for transforming career and technical education*. Washington, DC: United States Department of Education Office of Vocation and Technical Education, Career and Technical Education. Retrieved from http://www2.ed.gov/about/offices/list/ovae/pi/cte/transforming-career-technical-education.pdf
- Valencia, R. R. (2008). Chicano students and the courts. The Mexican-American legal struggle for educational equality. New York, NY: New York University Press.
- Valencia, R. R., Valenzuela, A., Sloan, K., & Foley, D. E. (2001). Let's treat the cause, not the symptoms: Equity and accountability in Texas revisited. *Phi Delta Kappan*, *83*, 318-321.
- Valenzuela, A. (1999). *Subtractive schooling: US-Mexican youth and the politics of caring*. Albany, NY: State University of New York Press.
- Wayman, J. C. (2002). Student perceptions of teacher ethnic bias: A comparison of Mexican American and Non-Latino White dropouts and students. *The High School Journal*, *85*, 27-37.
- Welton, A. D., Diem, S. L., & Holme, J. J. (in press). Color conscious, cultural blindness: Suburban school districts and demographic change. *Education and Urban Society*.

- Welton, A. D., & Martinez, M. A. (2013). Coloring the college pathway: A more culturally responsive approach to college readiness and access for students of color in secondary schools. *The Urban Review*, 1-27. doi:10.1007/s11256013-0252-7.
- Welton, A. D., Williams, M. M., & Forbes, D. (2013, April). *Accountability strain and college readiness drain. Critically examining the college-going culture of a high minority and high poverty high school.* Paper presented at the American Educational Research Association annual meeting, San Francisco, CA.
- Yosso, T. J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race, Ethnicity and Education*, 8, 69-91.
- Zamani-Gallaher, E. M., & Choudhuri, D. D. (2011). A primer on LGBTQ students at community colleges: Considerations for research and practice. *New Directions for Community Colleges*, 2011(155), 35-49.
- Zuckerbrod, N. (2007). *Dropout factories: Take a closer look at failing schools across the country*. Retrieved from http://hosted.ap.org/specials/interactives/wdc/dropout/index.html?SITE=AP

### **Additional Recommended Readings**

- American Association of Community Colleges. (2012). *Reclaiming the American dream: A report from the* 21st-Century Commission on the Future of Community Colleges. Washington, DC: Author. Retrieved from http://www.aacc.nche.edu/21stCenturyReport
- Aud, S., Hussar, W., Johnson, F., Kena, G., Roth, E., Manning, E., Wang, X., & Zhang, J. (2012). *The condition of education 2012* (NCES 2012-045). Washington, DC: U.S. Department of Education, National Center for Education Statistics.Washington, DC. Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2012045
- Baber, L. D. (in press). When aspiration meets opportunity: Examining transitional experiences of African American males in college readiness programs. *Community College Journal of Research and Practice*.
- Barbatis, P. (2010). Underprepared, ethnically diverse community college students: Factors contributing to persistence. *Journal of Developmental Education*, *33*(3), 14-24.
- Chapman, C., Laird, J., Ifill, N., & Kewal Ramani, A. (2011). Trends in high school dropout and completion rates in the United States: 1972–2009 (NCES 2012-006). Washington, DC: National Center for Education Statistics, U.S. Department of Education. Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2012006
- Chang, J. C. (2005). Faculty-student interaction at the community college: A focus on students of color. *Research in Higher Education*, 46, 769-802.
- Davies, T. G., Safarik, L., & Banning, J. H. (2003). The deficit portrayal of underrepresented populations on community college campuses: A cross case analysis. *Community College Journal of Research and Practice*, 27, 843-858.

### Additional Recommended Readings (continued)

- Hackmann, D. G. (2013). *Promoting college and career readiness: Recommendations for Illinois high schools.* Champaign, IL: Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign.
- Hackmann, D. G., & Ratner, T. (2012). *PTR high school supplement*. Champaign, IL: Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign.
- Office of Community College Research and Leadership (2012). *Strengthening partnerships workbook*. Champaign, IL: Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign. Retrieved from http://occrl.illinois.edu/projects/pathways/phases/1
- Pazey, B. L., & Cole, H. A. (2012). The role of special education training in the development of socially just leaders: Building an equity consciousness in educational leadership programs. *Educational Administration Quarterly*, 49, 243-271.
- Reddick, R. J., Welton, A. D., Alsandor, D., Denyszyn, J., & Platt, S. (2011). Stories of success: High minority, high poverty public school graduate narratives on accessing higher education. *Journal of Advanced Academics*, 22, 594-618.
- Tierney, W. G., Bailey, T., Constantine, J., Finkelstein, N., & Hurd, N. F. (2009). *Helping students navigate the path to college: What high schools can do: A practice guide* (NCEE #2009-4066). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov/ncee/wwc/practiceguide.aspx?sid=11

### Appendix A. The 16 Career Clusters™

### Agriculture, Food & Natural Resources

The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/ resources.

### Architecture & Construction

Careers in designing, planning, managing, building and maintaining the built environment.

### Arts, A/V Technology & Communications

Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

### **Business Management & Administration**

Careers in planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.

### **Education & Training**

Planning, managing and providing education and training services, and related learning support services such as administration, teaching/training, administrative support, and professional support services.

#### Finance

Planning and related services for financial and investment planning, banking, insurance, and business financial management.

### **Government & Public Administration**

Planning and executing government functions at the local, state and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.

### **Health Science**

Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

### Hospitality & Tourism

Preparing individuals for employment in career pathways that relate to families and human needs such as restaurant and food/beverage services, lodging, travel and tourism, recreation, amusement and attractions.

### Human Services

Preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care, and consumer services.

### Information Technology

Building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia and systems integration services.

### Law, Public Safety, Corrections & Security

Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.

### Manufacturing

Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.

### Marketing

Planning, managing, and performing marketing activities to reach organizational objectives such as brand management, professional sales, merchandising, marketing communications and market research.

### Science, Technology, Engineering & Mathematics

Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.

### Transportation, Distribution & Logistics

The planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

Source: National Association of State Directors of Career Technical Education Consortium. (2012). *The 16 career clusters*™. Retrieved from http://www.careertech.org/career-clusters/glance/careerclusters.html

### Appendix B. Key Concepts and Definitions

**Career Clusters** are groups of occupations and industries that have in common a set of foundational knowledge and skills. There are 16 nationally recognized clusters within which are multiple career pathways.

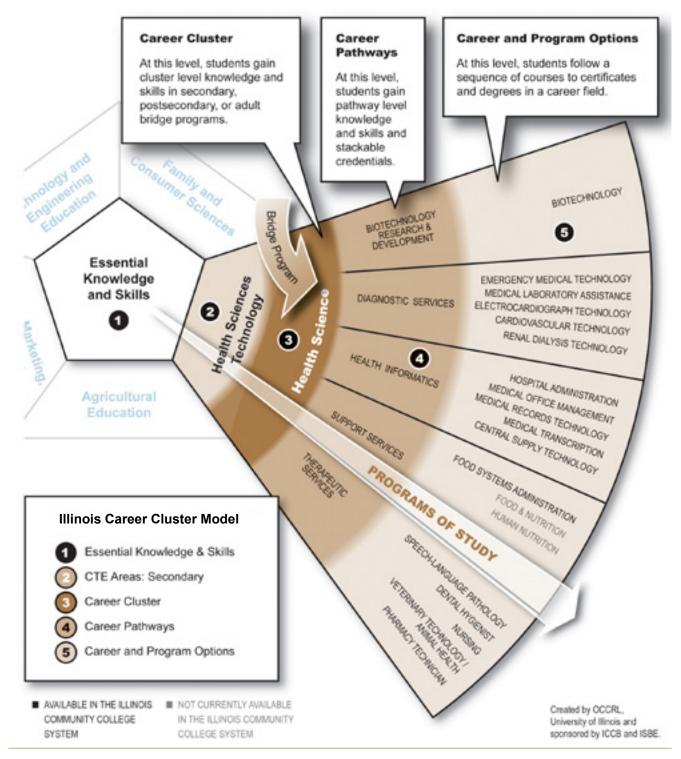
*Cluster Level Knowledge and Skills:* The cluster level knowledge and skills set is built on a common core required for career success in the multiple occupations included in the cluster. This shared core consists\ of the following elements: academic foundations; communication; problem solving and critical thinking; information technology applications; systems; safety, health, and environment, leadership and teamwork, ethics and legal responsibilities; employability and career development, and technical skills.

**Career Pathways** are multi-year programs of academic and technical study that prepare high school students for a full range of postsecondary options within each of the 16 clusters. Currently, there are 79 nationally recognized pathways, each with specific pathway level knowledge and skills. These pathways provide a context for exploring career options at all levels of education and a framework for linking learning to the knowledge and skills needed for future education and employment.

*Pathway Level Knowledge and Skills:* The pathway level knowledge and skills set is built on a common core of knowledge and skills required for career success in all programs of study aligned with the pathway. This core is specific to the pathway and consists of elements selected by secondary and postsecondary educators with input from business and industry and other stakeholders.

**Programs of Study (POS)** are sequences of courses that incorporate a non-duplicative progression of secondary and postsecondary elements which include both academic and career and technical education content. Programs of study should start no later than the ninth grade and continue through at least two years of postsecondary education. Programs of study include opportunities to earn college credit (dual credit) in high school, an industry-recognized credential or certificate at the secondary/postsecondary level, and an associate or baccalaureate degree.

Source: Jankowski, N. A., Kirby, C. L., Bragg, D. D., Taylor, J. L., & Oertle, K. M. (2009). *Illinois' career cluster model*. Champaign, IL: Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign (p. 8). Key concepts and definitions also are included on the Illinois Community College Board website: http://iccbdbsrv.iccb.org/programsofstudy/keyconcepts.html



Source: Bragg, D., & Bennett, S. (2012). *Introduction to Pathways to Results* (Rev. ed.). Champaign, IL: Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign. Retrieved from http://occrl.illinois.edu/files/Projects/ptr/Modules/PTR%20Intro%20Module.pdf



### **OCCRL's Mission**

OCCRL researchers study policies, programs, and practices designed to enhance outcomes for diverse youth and adults who seek to transition to and through college to employment. OCCRL's research spans the P-20 education continuum, with an intense focus on how community colleges impact education and employment outcomes for diverse learners. Results of OCCRL's studies of pathways and programs of study, extending from high school to community colleges and universities and to employment, are disseminated nationally and internationally. Reports and materials are derived from new knowledge captured and disseminated through OCCRL's website, scholarly publications, and other vehicles.