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Transforming Pathway Performance: Leveraging Key Knowledge of Pathways Principles, Populations, and Practices

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Over the last decade the discussion of career pathways, into employment, as well as transfer pathways to four-year degree programs, has increased in Illinois as it has nationwide. Career pathways typically include intensive and proactive academic advising and supportive services, transparent roadmaps to guide student progression, integrated academic and career-focused curriculum alignment, attention to experiential (clinical, work-based and service-) learning, and employment opportunities, for students from various backgrounds and multiple exit and entry points.

Thinking about educational programs as coherent and supported pathways provides an opportunity to carefully address equity gaps in the way data are collected, disaggregated, and assessed at critical milestones in student progression. These data must then be put to use in order to customize pathway supports and curriculum to serve students from diverse backgrounds and with diverse strengths to attain equitable outcomes. Such an undertaking is complex and needs to be highly contextual: What works in one setting for one student population is not necessarily a cure-all for the success of all students.

“All students need pathways that enable their success in college and careers. This lofty but necessary goal is important to supporting all of Illinois’ citizens in achieving productive and fulfilling lives.”

--Illinois’ Guiding Principles for Pathway Design and Implementation, Kirby & Bragg (2015)

Aligning What We Know With What We Do in Pathways

Scanning the landscape of resources relevant to closing outcomes gaps, we sometimes see disconnects between what we *know* works for student success and what we *do and invest in* to achieve student success. Achieving goals varies by institutions, systems, or states. The Pathways to Results (PTR) initiative, which has now been used to guide more than 100 pathway improvement projects in 47 of the 48 Illinois community colleges and in other community colleges in at least five other states, has given OCCRL the advantage of learning about how practitioners support and understand pathways design and assessment from diverse, on-the-ground perspectives.

HIGHLIGHTS

- 1) Matching identified gaps in student outcomes with evidence-based solutions is challenging
- 2) This tool leverages principles of strong pathways design and multiple forms of evidence to link problems with solutions
- 3) Provides a step-by-step facilitation process and template for use by individuals, teams, and partnerships

Through our experience with PTR, we have learned that the connections between local implementation, student-level data, and scholarly research on student success are not intuitive and often not translated into practice. We know that it is hard to implement and navigate inquiry-oriented activities dedicated to improving equitable pathways that extend from recruitment to outcomes (e.g., learning, retention, completion). Finding transformative solutions is complex and implementing these solutions can be overwhelming.

Informed by observations from leading both PTR and the development of *Illinois' Principles to Guide Career Pathways and Programs of Study Implementation and Improvement*, this brief will share a systematic way for a team of local practitioners to use and seek out research and resources to support conversations about meaningful and equitable improvements to students' progression through pathways. This approach, or framework, is built upon *Illinois' Principles to Guide Career Pathways and Programs of Study Implementation and Improvement*.

Illinois' Pathway Principles as a Framework for Transformation

The Illinois Community College Board (ICCB) supported an initiative led by the Office of Community College Research and Leadership (OCCRL) to develop a set of guiding principles and design elements for career-technical education (CTE) programs of study in 2009, and again in 2015 to integrate this earlier work into guiding principles and design elements to guide the implementation of career pathways. The resulting product, *Illinois' Principles to Guide Career Pathways and Programs of Study Implementation and Improvement* (Kirby & Bragg, 2015), highlights six critical areas that together create the student experience and the environment for change in a pathway. Each principle features six individual indicators or design elements that provide an inventory that practitioners and teams can use to assess and improve their pathway (See Figure 1 for a list of these principles and a sample design element).¹ In the context of this framework for institutional problem solving, these principles can be separated into two groups: the foundational principles and the student-facing principles.

Leadership and Accountability: The Foundational Principles. Institutions are largely held accountable for aggregate outcomes of all students that can mask inequities in outcomes for disaggregated student subgroups. Because of this, it is critically important for colleges to understand how various student subgroups experience and respond to curriculum, student support, and other programs, policies and practices. In the context of creating a more equitable and culturally relevant environment for student success, the *Leadership, Organization, and Support and Program Improvement and Accountability* principles provide the foundation for responsive change and double-loop learning, respectively. These two principles form the bookends so that the other four principles can create the student-facing elements of the pathway experience.

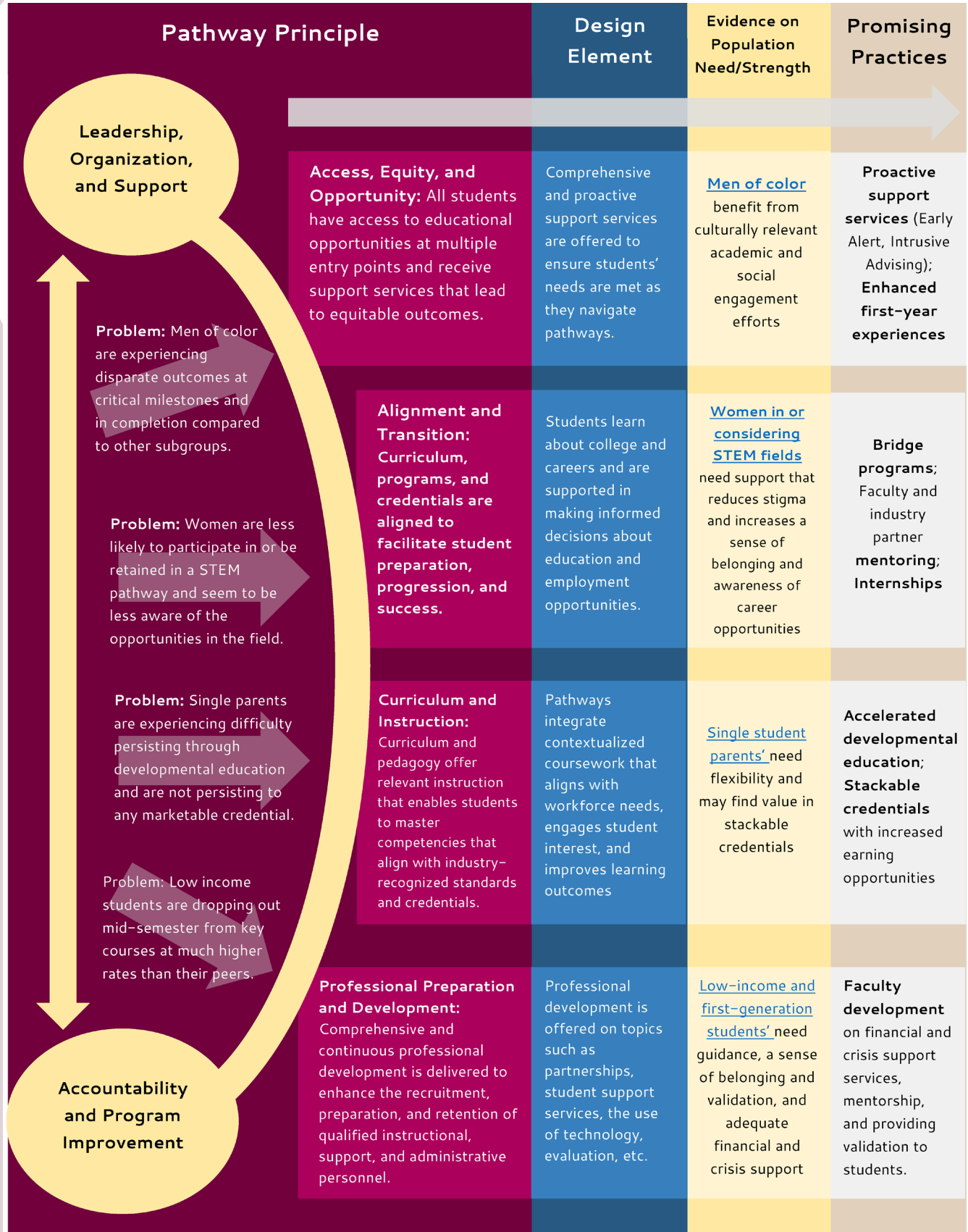
The Four Student-facing Principles: Connecting Principles, Populations, and Practice. Institutional practices and policies must address the specific needs and strengths of diverse populations in innovative and reflective ways in order to change long-standing achievement gaps. For this reason, the four student-facing pathways principles: *Access, Equity, and Opportunity; Alignment and Transition; Enhanced Curriculum and Instruction; and Professional Preparation and Development*, can be used in conjunction with knowledge of the strengths and needs of specific student populations and evidence-based practices in order to identify focused strategies for pathway improvement.

Using the Framework: A Step-by-Step Guide

Figure 1 (i.e., “the framework”) provides a visual model with illustrative examples of how pathways principles and elements can be aligned with existing bodies of evidence on specific populations and educational practices in order to facilitate evidence-based problem solving. This framework can be used as described in the sections that follow as a facilitation tool to guide conversations and evidence-finding processes to address a pathway problem. A **Facilitator Template** is provided at the end of this brief for individuals or teams using this approach to explore their own pathway problem.

¹ For a full description of *Illinois' Principles to Guide Career Pathways and Programs of Study Implementation and Improvement*, including the six guiding principles and design elements, see <http://occril.illinois.edu/files/Projects/pos/cp-principles-2015.pdf>

Figure 1: A Framework for Transforming Pathways Performance with Examples



This visual model shows how Illinois' Guiding Principles for Career Pathways Design can help to focus and bridge efforts to solve pathways problems by connecting evidence on what works for certain student populations and promising practices to transform pathways outcomes. Find a step-by-step approach to using this model on the next page.

1. **Get Started.** This approach assumes that improvement processes are rooted in a local, data-driven approach like Pathways to Results (PTR) that uses disaggregated student outcomes and assessment (mapping) of processes and practices that may contribute to problems in the pathway and student outcomes (successful or not). *For support in identifying these gaps, you may consider using the Pathways to Results Outcomes & Equity Module and the Pathways to Results Process & Practice Improvement Module.*

2. **Select a pathway principle and design element(s) for improvement.** The next step requires reflection on how this pathway problem may be ameliorated by various improvements. This conversation can be focused through the review and selection of a design principle that must be addressed in light of the identified student outcomes gap, as well as elements that may speak to gaps in the pathway in terms of supports, investments, improved practitioner capacities, or necessary infrastructure.

3. **Explore existing evidence about your critical student population.** Before selecting a solution to address the principle and design elements identified in the previous step, discuss what is known from your own faculty, staff, and students about the strengths and needs of this particular student population. Explore evidence-based resources like OCCRL's *Insights on Outcomes and Equity* briefs, to inform this discussion (see Resources box). Consider how these strengths and needs could or should be reflected in pathway curriculum, co-curriculum, and processes. Be sure your discussions focus not only on student *deficits* (e.g. underpreparedness) but also on their *strengths* (e.g. grit, cultural competency) including learning from the successes of the students in these groups who are doing well in the pathway.

4. **Select one or more aligned practices.** The selection of a pathway principle, related design elements, and the exploration of knowledge about your selected student population's strengths and needs should align with your search for an intervention. Begin to review evidence-based solutions (see Resources box), looking for practices that have the potential to improve the selected design elements and to leverage the strengths and meet the needs of the student population in question. Be sure the solutions hold promise to improve the outcome you originally identified.

Action Step: Create a problem statement that frames the specific student population or populations experiencing a pathway problem and the specific outcomes being affected.

For example, from Figure 1: *Men of color are experiencing disparate outcomes at critical milestones and in completion compared to other subgroups.*

Action Step: Review the *Principles to Guide Career Pathways and Programs of Study Implementation and Improvement* and determine where the defined problem is best described by the six principles and one or more associated design elements.

For example, from Figure 1: The collected student outcomes and process data might lead a team to decide that the issue facing men of color in the pathway is best described by the **Access, Equity, and Opportunity** guiding principle, and specifically the design element suggesting that pathways must feature **comprehensive and proactive support services... to ensure students' needs are met as they navigate pathways.**

Action Step: Document one or more key strengths as well as one or more key needs specific to this student population that should be reflected in any proposed intervention.

For example, from Figure 1: In the context of completion, men of color may benefit, in particular, from building relationships that connect them socially and academically in a manner inclusive of their racial and cultural identity.

Action Step: Select one or more potential interventions to be vetted by a wider institutional planning group (that should include students) or to be piloted and evaluated for effectiveness. Document the strengths and needs within this population that will be addressed by this intervention and its alignment with the identified outcomes gap and the pathway principle and design element(s).

For example, from Figure 1: Given the parameters specific to men of color and the selected design element focusing on clear and proactive support, potential viable practices include an Early Alert system intended to connect men of color very early on to academic and cultural supports at the first sign of academic difficulty. Alternatively, a First Year Experience cohort designed specifically to provide support, mentoring, and social connections among men of color could also be a strong option to improve completion outcomes.

Conclusion

This framework for aligning existing knowledge with meaningful practices encourages a commitment and investment from institutional leadership, coupled with ongoing analysis of disaggregated student outcomes and assessment of institutional policies and practices to better inform how and for what purposes changes are made to educational pathways. Once a problem is identified, leaders or teams can use the framework to create evidence-based parameters for selecting a potential solution by exploring the issue using the “three P’s” of transforming pathway performance: pathways principles, populations, and practices.

Perhaps one of the most important things to keep in mind about this framework is that it is meant to be used in an iterative manner. Like the adage from Ovid, “Dripping water hollows out stone, not through force but through persistence,” so too must agents for educational change tackle local achievement gaps in context and on an ongoing basis. It takes a collective effort and focus on the institution’s role in student success to change systems to best meet the needs of today’s diverse learners.

Resources

The Guiding Principles

Kirby, C., & Bragg, D. (2015). *Principles to guide career pathways and programs of study implementation and improvement*. Champaign, IL: Office of Community College Research and Leadership (OCCRL), University of Illinois at Urbana-Champaign. Retrieved from <http://occril.illinois.edu/docs/librariesprovider4/pos/cp-principles-2015.pdf?sfvrsn=8>

Pathways to Results Modules

Outcomes & Equity Module

Taylor, J., Castro, E., Swanson, J., Harmon, T., Kristovich, S., Jones, A., & Kudaligama, V. (2015). *Outcomes and equity assessment*. (Rev. ed.). Champaign, IL: Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign. Retrieved from <http://occril.illinois.edu/docs/librariesprovider4/ptr/outcomes-module.pdf?sfvrsn=16>

Process & Practice Assessment Module

McCambly, H., Rodriguez, J., & Bragg, D. (2015). *Process and practice assessment*. (Rev. ed.). Champaign, IL: Office of Community College Research and Leadership, University of Illinois. Retrieved from <http://occril.illinois.edu/docs/librariesprovider4/ptr/process-assessment.pdf?sfvrsn=14>

On Populations

OCCRL's Insights on Equity & Outcomes Brief Series available at <http://occril.illinois.edu/ptr/products>. This series includes:

- Low-Income Students' Intersecting Identities
- A Portrait of Single Student Parents
- The Role of Community Colleges in Offsetting Challenges Faced by Student Veterans
- Enrollment and Credential Attainment Among Underrepresented Males of Color Attending Community Colleges in Illinois
- Guiding Principles for Programs of Study and Career Pathways
- Examining Equitable Representation in Programs of Study
- Gender Equity in CTE and STEM Education
- Cultural Competence in Pathways to Results
- Students with Disabilities in Post-secondary Education
- Rethinking Asian American Students' Educational Pathways
- Barriers to Retention and Degree Completion of African American Males in Illinois
- Siquiendo Tu Sueno "Chasing Your Dream": What Research Says about Barriers and Supports to Latino Student Community College Persistence

On Practice

OCCRL's Insights on Equity & Outcomes Brief Series available at <http://occril.illinois.edu/ptr/products>.

- Exploring the Role of First-Year Experiences in Enhancing Equity & Outcomes
- Improving a Path to Equity: Engaging Student Voices

OCCRL's Transformative Change Initiative Strategy Briefs available at <http://occril.illinois.edu/tci/strategies>.

The Strategies for Transformative Change brief series provides summaries of strategies employed by TAACCCT consortia. Included in each two-page brief is a description of the innovative strategies and any available evidence of success. The briefs are organized below in the following five areas of innovation:

- Career Pathways and Program Redesign
- Curriculum Redesign
- Developmental Education Redesign
- Intentional Partnerships
- Student Engagement and Supports

Other Trusted Resources for Promising Practices

Association of American Colleges & Universities, High-Impact Practices for Student Success: <https://www.aacu.org/leap/hips>

Achieving the Dream, Interventions Showcase: <http://achievingthedream.org/resources/achieving-the-dream-interventions-showcase>

Complete College America, Game Changing Strategies: <http://completecollege.org/>

Excelencia in Education, Growing What Works Database: <http://www.edexcelencia.org/growing-what-works>

Center for Community College Student Engagement, High-Impact Practices: http://www.ccsse.org/docs/Matter_of_Degrees_2.pdf

Facilitator Template: Using Multiple Types of Evidence to Transform Pathway Performance

| Problem Statement | Guiding Principle | Design Element | Evidence on Population Need or Strength | Promising Practices |
|--|---|----------------|---|--|
| <p>This problem statement should be based on local student outcomes data in a pathway and should specify one or more outcomes (e.g. completion, job placement, GPA) and one or more specific student subgroup(s). For support in collecting these data, see the Outcomes & Equity Assessment module referenced in the Resources box.</p> | <p>Select a guiding principle and specific design element(s) that reflect the concern you see reflected in your student outcomes data and your efforts to map institutional practices and processes supporting these outcomes. Discuss and describe why you chose this/these principle(s) and element(s).</p> | | <p>Collect evidence on the needs and strengths of this student population both from literature and research in the field (see resources) as well as from your own students.</p> | <p>Using the problem statement, principle, design elements, and evidence on the student subgroup as parameters, review promising practices (see resources) in the field as potential interventions for the most promising fit to your pathway problem.</p> |
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