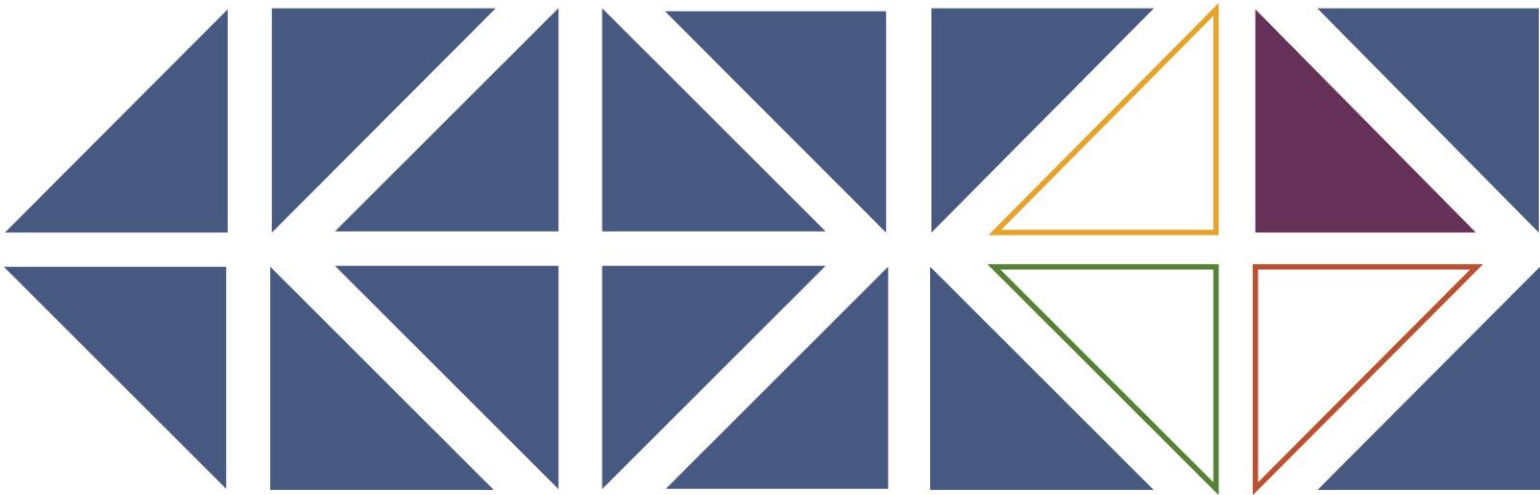# Designing a Career Pathways System
A Framework for State Education Agencies

Chapter 2
Mapping and Assessing Career Readiness Policies, Programs, and Industries

HANDOUTS
MAY 2017

Designing a Career Pathways System:
A Framework for State Education Agencies

Chapter 2: Mapping and Assessing Career Readiness Policies, Programs, and Industries

Handouts

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COLLEGE & CAREER
READINESS & SUCCESS Center
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Handout 2A. Career Readiness Policies and Programs Mapping Inventory

Understanding how a state's policies, programs, and funding streams intersect is critical to successfully implementing a career pathways system. In part, this inventory is an analysis of the degree to which your state can create alignment across systems (e.g., share and leverage resources across the systems of education, labor, and industry)—an integral component of any career pathways system.

The information in Table 1 will inform a group discussion on statewide policies, programs, and funding streams in career readiness already in place that may influence a career pathways system. (*Note*: Sources of funds can be private, such as from a foundation, or public, being allocated from federal, state, or local government budgets. If the latter, list the funding legislation, e.g., Assembly Bill (AB) XXX.)

Table 1. Mapping and Assessing State Policies, Programs, and Funding Streams

Administrator and Funding Stream	Name and Purpose	Target Population and Major Components	Timeline	Potential Barrier to Alignment	Potential Opportunity for Alignment	No Impact
Governor Funding stream:						
State legislature Funding stream:						

Administrator and Funding Stream	Name and Purpose	Target Population and Major Components	Timeline	Potential Barrier to Alignment	Potential Opportunity for Alignment	No Impact
State educational agency Funding stream:						
State higher education agency, including community colleges Funding stream:						
State labor agency Funding stream:						
State economic development agency Funding stream:						
Other: Funding stream:						
Other: Funding stream:						

Handout 2B. Resources for Surveying Local Practices

Surveying stakeholders on their career pathways efforts is one way to better understand practices that are underway in a state. Handout 2B: Resources for Surveying Local Practices identifies existing surveys that target key career pathways stakeholders. Each sample survey includes a brief description of the survey audience and purpose as well as the associated Web address. Resources marked with an asterisk (*) indicate sample survey items are available. Resources are identified by geographic scope and stakeholder group(s) surveyed.

Table 1. Example Survey Resources for Career Pathways

Name of Survey	Description	URL
Idaho superintendent survey* Cannon, J. G., Kitchel, A., & Tenuto, P. (2013). *District superintendent perceptions of Idaho secondary CTE teachers' professional development needs.*	This study examined Idaho superintendents' perceptions of CTE teachers' professional development needs and offers recommendations for CTE inservice planning. Survey items are included.	http://files.eric.ed.gov/fulltext/EJ1043179.pdf
Idaho teacher survey 1* Cannon, J. G., Kitchel, A., & Duncan, D. W. (2013). *Perceived professional development needs of Idaho secondary career and technical education teachers: Program management.*	This study examined the perceived program management professional development needs of Idaho secondary CTE teachers and offers recommendations for preservice and inservice needs of CTE teachers. Select survey topics are included.	http://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?article=1125&context=ojwed
Idaho teacher survey 2* Cannon, J. G., Kitchel, A., & Duncan, D. W. (2010). Identifying perceived professional development needs of Idaho secondary CTE teachers: Program management needs of skilled and technical science teachers.	This study examined the perceived training needs of Idaho secondary skilled and technical science teachers for a set of noninstructional competencies specifically associated with duties related to program management. Select survey items and topics are included.	http://scholar.lib.vt.edu/ejournals/JITE/v47n1/cannon.html
National employer survey* Hart Research Associates. (2013). *It takes more than a major: Employer priorities for college learning and student success.*	This report provides a detailed analysis of employers' priorities for what college students need to succeed in today's economy. The report also describes employers' recommendations for changes in educational and assessment practices. Findings were gathered through an online survey. Select survey items are included.	http://www.aacu.org/sites/default/files/files/LEAP/2013_EmployerSurvey.pdf:

Name of Survey	Description	URL
National student and teacher survey* Association for Career and Technical Education. (2014). *CTE works! 2014 results from a national survey*.	This research brief provides an overview of student and educator attitudes and opinions on CTE, their experiences in the CTE classroom, and their future plans regarding CTE courses and programs. Findings were collected through paper surveys administered by educators in high schools across the country. Snapshots of survey questionnaires are included.	https://www.acteonline.org/uploadedFiles/Assets_and_Documents/Global/files/CTE_Info/Research/2014_NRCCUA_ACTE_Research_Report_Final.pdf
AFT national teacher survey* American Federation of Teachers. (2014). *The voices of career and technical education teachers*.	This report summarizes the results of a national online survey of CTE teachers affiliated with the American Federation of Teachers. The report provides information about CTE courses currently being taught, the kinds of CTE partnerships that schools are establishing, and educators' views of CTE in preparing students for college and careers. Select survey topics are included.	http://www.aft.org/sites/default/files/cte_report_draft2.pdf
National teacher survey* Moore, C., Green, C., & Clark, K. (2015). *What career and technical education teachers really want for professional learning*.	This resource describes results from a national survey of CTE educators that was conducted to better understand the professional development needs of this group. Recommendations for CTE leaders also are discussed. Select survey items are included (additional survey items are available upon request).	http://www.air.org/sites/default/files/downloads/report/Career-Technical-Education-Teachers-Survey-Sept-2015.pdf:
California multiple stakeholder survey WestEd. (2006). *A statewide assessment of California's career technical education system*.	This resource examines the status of CTE in California and solicits feedback from administrators, CTE instructors, academic non-CTE instructors, counselors/career advisors, business/industry representatives, and students, among others.	http://extranet.cccco.edu/Portals/1/WED/CEP/PerkinsIV/cte_needs_assessment_report_030207.pdf
Michigan student survey Gaunt, D., & Palmer, L. B. (2005). *Positive student attitudes toward CTE*.	This report describes findings from a Michigan survey of student perceptions of CTE, including factors that influenced the curriculum decisions of both CTE and non-CTE students in the state. Implications for CTE educators and other CTE stakeholders also are described.	http://www.acteonline.org/search.aspx?q=gaunt

Name of Survey	Description	URL
Mississippi stakeholder survey Jordan, J., & Dechert, K. (2012). *Public perception of career and technical education in Mississippi*.	This resource provides information about Mississippi residents' perceptions of CTE programs, CTE students, CTE and college, and CTE and industry gathered through a phone survey.	https://www.rcu.msstate.edu/ Portals/0/Reports/Perceptionsreport_issuu.pdf
Nebraska multiple stakeholder survey 1 Herian, M. N. (2010). *Examining public perceptions of career and technical education in Nebraska*.	This report provides information about Nebraska residents' attitudes toward CTE courses (including delivery and development), career awareness and exploration, career information, the role of local employers, skills obtained by high school graduates, and the impact of CTE on the economy. Results are compared with Nebraska educator perceptions of CTE examined in the resource below.	http://digitalcommons.unl.edu/ cgi/viewcontent.cgi?article=1034&context=publicpolicypublications
Nebraska multiple stakeholder survey 2 Herian, M. N. (2010). *Examining the perceptions of career and technical education in Nebraska*.	This report provides information about Nebraska educators' attitudes toward the CTE topics listed in the previous resource.	https://www.education.ne.gov/ nce/DRAW/PDFs/CTE%20EDUCATOR%20Perceptions%20Study.pdf:
New York employer survey PwC. (2015). *Career & technical education in NYC: A comprehensive survey*.	This resource describes New York City employers' views of CTE initiatives and activities in partner schools as well as implications for their relationships with CTE schools, including suggestions for improvement.	http://pfnyc.org/wp-content/uploads/2016/02/CTE-Survey_Employer_Final-Results_2015.pdf

Handout 2C. Tips for Developing Surveys

In order to inventory and capture the existing career pathways work underway in the state, it is important that you develop a high-quality survey that will produce the information and trend data you need. You may want to develop a survey rather than borrow from existing surveys to guarantee that the questions are specific to your goals and local context. Ensuring that surveys are well designed is equally important to selecting survey items. Handout 2C: Tips for Developing Surveys can be used as a companion to Handout 2B: Resources for Surveying Local Practices and identifies characteristics of a quality survey.

Question Types

Selecting the appropriate question type is an important step in developing a survey. Following are the different question that you can use and the type of information each type delivers.

- **Multiple Choice**—Respondents can choose an option from a select list of possible answers.

  - Single Answer—Respondents can select only one answer from a list. For example, how many years have you been teaching?

  - Multiple Answer—Respondents can select more than one response. For example, which of these career focused courses or activities are available in your school?

- **Short Answer**—Respondents can write or type their answer in detail and can qualify responses. Unanticipated findings also may be discovered with this type of question. However, analyzing responses will be more time consuming.

- **Filter**—Respondents answer one question to help filter or determine whether or not it is appropriate to answer the next question or series of questions, which also is known as skip logic. This type of question will tell you what specific questions to ask next based on the response. For example, asking principals if they have any career pathways programs in their school and if they respond "no," the survey will skip to a set of questions appropriate for a "no" response.

- **Scaled Questions**—Scaled questions ask respondents to choose from a range of response options, usually focused on the degree to which a question resonates with the respondent. Information from this question type includes agreement, attitudes, interest, frequency, and importance. Scaled question types include:

  - Strongly agree, agree, neither agree or disagree, disagree, strongly disagree

  - Always, often, sometime, rarely, never

  - Excellent, very good, good, fair, poor

  - Very important, important, somewhat important, not at all important

Question Wording

Clearly and concisely wording survey questions is important to ensuring quality data. When writing survey questions, consider the following general guidance about practices to avoid and include.

- Avoid using "and" if it is connecting two different ideas. Have a specific and defined focus for each question.

- Avoid pushing respondents to answer a particular way. For example, consider a question such as "Experts believe that career and technical education (CTE) is important for college and career readiness. How many CTE programs does your school offer?" Adding the belief of experts may encourage respondents to inflate their answer.

- Avoid double negatives.

- Avoid words that evoke emotional connections or reactions.

- Avoid ambiguous words or phrases. Add parenthetical explanations, definitions, or additional context when needed.

- Write questions at an appropriate reading level (typically eighth grade) and avoid technical jargon.

- Avoid asking stakeholders irrelevant questions. Clearly differentiate questions for each stakeholder role.

- Include all likely answers for any multiple questions, including "other" or, where appropriate, "Not applicable" and "Choose not respond."

- Include instructions for each set of questions. For example, whether a respondent should choose only one response or all that apply.

Survey Structure

High-quality surveys typically follow a common structure and layout, enabling respondents to follow easily. Consider the following outline when developing a survey:

- **Introduction**—The introduction articulates:
  - The purpose
  - Who is conducting the survey
  - The voluntary nature of the survey
  - Whether the survey is confidential or anonymous
  - The estimated time for completing the survey
  - Contact information for questions

- **Order**—Purposefully ordering survey questions allows respondents to follow the questions easily while also reducing survey response bias. Consider the following order for the questions:
  - Begin with general demographic questions if using them to filter questions (i.e., role of stakeholder such as teacher or principal).
  - Move from general question to more specific questions. You can determine this order by anticipating the complexity of the results or data you'll receive from the question. For example, consider the potential results from the following questions.
    - Do you incorporate professional skills in your courses?
    - What professional skills do you integrate in your courses?
    - How do you integrate professional skills in your course?

- **Conclusion**—The conclusion lets participants know that the survey is complete and informs them of next steps. The conclusion:
  - Thanks participants for their contribution and time.
  - Reiterates confidentiality.
  - Shares contact information for participant questions.

- **Survey Design**—A clear layout can help make the survey easy to understand for respondents. Some tips for the survey design include:
  - Place the introduction and conclusion on separate pages from questions and avoid putting too many items on a single page.
  - Check that filter questions work as intended for online surveys.
  - Leave sufficient space or word count for short-answer questions.
  - Consider adding a progress tracker for online surveys, which will help participants know how much of the survey is left to complete.
  - Make sure paper surveys are collated and have a method of tracking response rates by including a number for each survey sent out to participants.

Handout 2D: Data Predictions Versus Actual Data Findings[1]

Instructions: Read through the survey questions. Based on the survey questions and your familiarity with career pathway systems, what do you predict will be the top four emergent themes within the survey? Write your predictions below.

1.

2.

3.

4.

Complete the following table with actual response rate data.

Stakeholder Group	Number of Stakeholder Responses
Teachers	
Students	
Administrators	
Business leaders	
Community leaders	
School counselors	
Parents	
College and university faculty	

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[1] Adapted with permission from American Institutes for Research. (2015). *Technical assistance for implementing early warning systems in rural high schools.* Washington, DC: Author.

Complete the following table. First, enter your predictions for each of the questions. After entering your predictions, review your data to identify the actual answers. As you review the data, note facts you observe in the data; look for patterns and trends or note additional questions. Avoid making inferences or drawing conclusions.

Questions	Predictions	Actual
How are businesses engaging with schools to promote career preparation?		
What percentage of students are enrolled in career preparation programs?		
What barriers exist that prevent student enrollment in career preparation programs?		
How do districts collect and use data on career preparation programs?		
What challenges exist for districts relative to using career technology funding?		

Handout 2E: Data Inferences and Implications[2]

Instructions: Using the data that you reviewed and your information from Handout 2D: Data Predictions Versus Actual Data Findings, organize the survey findings into overarching themes. In the table below, enter the theme, the corresponding findings that support that theme, and the corresponding stakeholder survey for each finding. Brainstorm and write down potential strategies for addressing each theme. This information will help prioritize the themes that should be a focus for developing/defining/refining the career pathways system.

Theme #1	Related Survey Findings	Stakeholder Survey	Strategies

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[2] Adapted with permission from American Institutes for Research. (2015). *Technical assistance for implementing early warning systems in rural high schools.* Washington, DC: Author.

Theme #2	Related Survey Findings	Stakeholder Survey	Strategies

Theme #3	Related Survey Findings	Stakeholder Survey	Strategies

Handout 2F. Labor Market Gap Analysis Template

When developing a career pathways system, stakeholders should include labor market data, which can play a vital role in designing a system that is responsive to state employment needs. Aligning career pathways with state labor market needs increases the odds that students will be able to secure gainful employment in stable and growing careers and that they will have opportunities to advance with additional experience and training or education. Encouraging youth to consider careers in the most vital businesses and industries also provides a pipeline of trained employees for local employers. This steady stream of employees, in turn, allows the state's economic development officials to further attract and retain businesses within its key industries, raising the standard of living and quality of life for the entire community.

Stakeholders will review labor market data to better understand `current and future workforce needs to inform the worker-to-job pipeline (Table 1).

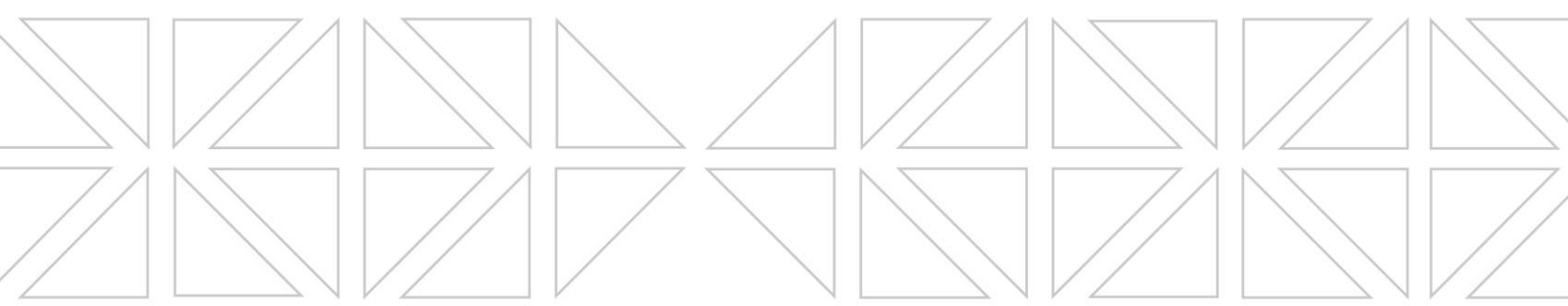**Table 1. Labor Market Gap Analysis Template**

[Name of Career Pathway] [Name of Related Industry]	[Occupation 1]	[Occupation 2]	[Occupation 3]	[Occupation 4]	[Occupation 5]
Median salary					
Annual job openings	[###,###]	[###,###]	[###,###]	[###,###]	[###,###]
Qualified annual applicants	[###,###]	[###,###]	[###,###]	[###,###]	[###,###]
Projected annual gap	[###,###]	[###,###]	[###,###]	[###,###]	[###,###]
Projected 10-year gap	[###,###]	[###,###]	[###,###]	[###,###]	[###,###]

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