



WORKFORCE INFORMATION COUNCIL SKILLS INITIATIVE

Summary Report



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Executive Summary

The Workforce Information Council (WIC) Skills Initiative is a study group created to engage federal representatives, state labor market information (LMI) Directors, and other stakeholders from public policy and higher education in a dialogue around skills concepts and data. The WIC adopted this initiative to respond to growing concerns about aligning employment demand with worker capabilities and training programs.

The new Workforce Innovation and Opportunity Act (WIOA) calls for data-driven decision-making around the development of skills and workplace readiness, yet provides little guidance on the operational definition of “skills.” The WIC Skills Initiative’s ultimate goal is to provide a baseline understanding of how various stakeholders perceive the concept of “skills,” and to identify and disseminate best practices in the provision of skills data. The project has three primary objectives:

- 1) Survey state LMI Directors regarding their thoughts on skills data.
- 2) Hold a national convening on skills data, incorporating a range of professionals from the LMI community.
- 3) Produce a report summarizing the discussion from the national convening on skills data.

The purpose of this report is to fulfill the third objective, which synthesizes the findings from the first two objectives. The following content provides detailed information about the Convening’s attendees, their concerns around and responses to skills data, and their thoughts about the future provision of skills data. Moving forward, some of the most important next steps to improving skills analyses are:

- 1) Promoting a shared understanding of skills to better align training delivery with employer needs.
- 2) Continuing the skills dialogue for the purpose of building greater consensus among LMI users.
- 3) Encouraging an inclusive workforce intelligence system to accommodate new data products, methodologies, and technology around the concept of skills.

Introduction

The Workforce Information Council (WIC) emerged as a mechanism to advance Federal-State cooperation around the national workforce and labor market information (LMI) system. The WIC established its Skills Initiative Study Group to build a framework that links key bodies of work around the concept of skills, including data sources and concepts. The April 2012 report, “LMI Customers and Their Needs: Customer-Oriented LMI Product Innovation,” the February 2012 report, “Meeting Customer Needs, Workforce Information Council State Representatives Outcomes Measurement Project Volume III,” and other ongoing skills-related projects assisted the Study Group with forming its mission and objectives. With past research and insight from workforce stakeholders—including federal, state, public policy, and higher education representatives—the WIC also wanted to create a repository for the LMI community on current and emerging practices in the use of skills information in workforce intelligence.

The WIC Skills Initiative has three primary objectives:

- 1) Survey state LMI Directors regarding their thoughts on skills data.
- 2) Hold a national convening on skills data, incorporating a range of professionals from the LMI community.
- 3) Produce a report summarizing the discussion from the national convening on skills data, and provide next steps.

The first step was to communicate with the leaders of state LMI shops about: their general understanding of skills data; for what purposes they were asked to provide skills information and how they most frequently responded; recent experiences with skills-based projections; special surveys of employers; employer focus groups; state research on the issue of skills (i.e. mismatches, gaps, or supply/demand systems); and how they prioritized the importance of skills information. This objective was accomplished through a customized online survey sent to all state LMI Directors.

The second step was to hold a face-to-face discussion among federal representatives, state LMI Directors, and public policy and higher education stakeholders to map out future actions in the provision of skills data. This meeting—the WIC Skills Initiative Convening—gave project participants the opportunity to have an interactive dialogue about aspects of skills information, establish an agenda for possible skills research, and recommend action steps for future skills-oriented initiatives.

The purpose of this report is to fulfill the third objective, which is to synthesize the findings from the first two objectives. The report content also provides information about the convening’s attendees and an overview of next steps in the development and provision of skills data. Attendees at the June 22, 2015 meeting held in Arlington, VA included:

- 1) Yvette Chocolaad – Policy Director, National Association of State Workforce Agencies
- 2) Gary Crossley – Executive Director, Workforce Information Council
- 3) Brooke DeRenzi – Senior State Policy Analyst, National Skills Coalition
- 4) Rich Froeschle – Labor Market Consultant, RC Froeschle Consulting
- 5) Pam Frugoli – O*NET/Competency Assessment Team Lead, Employment and Training Administration, U.S. Department of Labor
- 6) Teri Hinds – Director, Research and Data Policy, Association of Public Land-grant Universities

- 7) Steve Hine – LMI Director, Department of Employment and Economic Development, State of Minnesota
- 8) Lindsay Johnson – Program Assistant, LMI Institute
- 9) Jolanta Juszkiewicz – Director of Policy Analysis, American Association of Community Colleges
- 10) Ron Kelly – Vice President of Technical Assistance and Training, LMI Institute
- 11) Carrie Mayne – WRA Director and Chief Economist, Utah Department of Workforce Services
- 12) Sue Mukherjee – Executive Director, Program Alignment and Policy Development, Pennsylvania State System of Higher Education
- 13) Coretta Pettway – Bureau Chief, Ohio Department of Job and Family Services
- 14) George Putnam – Assistant Director, Economic Information & Analysis, Illinois Department of Employment Security
- 15) Andrew Reamer – Research Professor, George Washington Institute of Public Policy, The George Washington University
- 16) Rebecca Rust – Assistant Commissioner for Occupational Statistics and Employment Projections, Bureau of Labor Statistics, U.S. Department of Labor
- 17) Anneliese Vance-Sherman – Regional Labor Economist, Employment Security Department, State of Washington
- 18) Kim Vitelli – Chief, Division of National Programs, Employment and Training Administration, U.S. Department of Labor
- 19) Michael Wolf – Branch Chief, Employment Projections Program, Bureau of Labor Statistics, U.S. Department of Labor
- 20) James Woodell – Assistant Vice President, Innovation & Technology Policy, Association of Public Land-grant Universities

Despite their different professional affiliations, attendees shared many of the same interests regarding skills data. The most prevalent interests included:

- Expressing the need for appropriate and accurate use of skills data
- Identifying and promoting best practices in occupational supply and demand analysis
- Defining “skills,” particularly hard skills vs. soft skills
- Aligning educational programs (both 2-year and 4-year institutions) with industry and employer needs
- Defining federal and state roles in developing resources around skills information
- Enhancing the Occupational Information Network (O*NET) as a resource for better understanding various aspects of skills
- Identifying and building other occupational data resources to better understand and define skills
- Aligning definitions of skills so that clear communication can occur, especially between the business community and members of the education and LMI communities

Attendees expressed a few other areas of interest, which included: improving data quality of existing skills-oriented information; developing or refining software to support more accurate projections and occupational supply and demand analyses; and increasing collaboration between the Bureau of Labor Statistics (BLS) and the Employment and Training Administration (ETA) on developing and disseminating skills data.

WIC Skills Initiative Survey Results

The WIC Skills Initiative Survey—the first phase of the Skills Initiative—was conducted between March and May 2015. It is a baseline assessment of 33 state LMI representatives about how their shops provide skills data to various consumer groups. The survey’s key themes included:

- **Defining skills shortages or skills gaps:** Definitions vary. Generally, these terms refer to scenarios in which there is demand in the labor market for a skill that the labor pool does not sufficiently supply.
- **Gauging state investment in skills research:** This includes research on tools to advance the application of skills data.
- **Learning if and when states use proxy data:** In this case, a “proxy” is data used in lieu of other data, typically because the former is measurable whereas the latter is not. In the WIC Skills Initiative Survey, questions centered on educational attainment information as a proxy to address questions about skills.
- **Defining skills vs. workplace basics:** The definitions for both of these terms vary depending on who is analyzing the data, particularly with the term “skills.” The Discussion Questions section, which starts on page 7, delves further into these definitions. “Workplace basics” refer to soft skills or behavioral metrics (i.e., punctuality, outgoing personality, etc.).
- **Examining the role of employers in validating skills:** LMI professionals often hear from businesses about their skills needs. However, the extent to which the LMI system benefits from direct employer insight on in-demand skills varies considerably.
- **Utilizing Industry Competency Models:** These are models produced by the Employment and Training Administration (ETA)—in partnership with industry and professional associations, Federal agencies, and workforce development experts—that demonstrate various levels of skills, knowledge, and abilities essential for successful performance in a given industry or occupation.
- **Exploring the value of credentials:** A worker receives formal acknowledgement of his or her skills after completing a set of courses. The relationship between credentialing and skills data is a key topic in the current workforce training and educational environment.
- **Gauging interest in a computer skills database:** A database of skills that is strictly geared toward understanding workers’ computer skills and their demand in the labor market.

Carrie Mayne, Chair of the WIC Skills Initiative and LMI Director of the Utah Department of Workforce Services, reviewed the survey results (Appendix) with participants, which revealed no clear consensus among respondents on the provision of skills data. Throughout the survey discussion, attendees raised questions about implementing best practices in the area of skills data. Other takeaways from the LMI Director survey included:

- **Mixed levels of state investment in skills research**
Just over 62% of respondents to the question about skills investment claimed that their state invested in skills research. The survey indicates, however, that the type and level of investment varies among states. Investment dollars go toward initiatives such as real-time LMI data systems, occupational supply and demand analyses, skills gap analyses, and job vacancy surveys.

- Strong interest in defining and differentiating skills shortages/skills gap analysis and occupational supply/demand analysis**

65.6% of respondents differentiate between skills shortages/skills gap analysis and occupational supply/demand analysis. However, within that group, 12.5% focus on skills shortages/skills gap analysis, while 53.1% focus on occupational supply/demand analysis. Of those respondents who do not differentiate between the two concepts, 76.9% claim that it is due to practical reasons (they can only work with the data they have available).
- Defining and measuring workplace basics**

90.9% of respondents believe that defining workplace basics is important or critical, and 87.9% feel the same about measuring workplace basics. Those respondents who do not prioritize defining or measuring workplace basics focus instead on academic preparation and/or vocational skills instruction.
- Opportunities to use ETA resources**

There is significant potential to take advantage of untapped resources, particularly ETA “Industry Competency Models.” 72.7% of respondents are unfamiliar with ETA’s Industry Competency Models, which are designed to show the competencies that are essential for success in a given industry or occupation. 88.9% of respondents also note that expanding the marketing of these models and obtaining more guidance on practical applications would influence them to utilize Industry Competency Models for skills analysis. [The LMI Institute held a webinar on the Industry Competency Models on Tuesday, July 14, 2015].

During the WIC Skills Initiative Convening, the discussion about survey findings highlighted the difficulties of achieving consensus in the provision of skills data. The relationship between LMI shops, industries, and educators varies by state, which impacts the type of work the LMI Directors do throughout the country. Given these differences, the survey set the basis for a broader conversation about skills.

Industry Competency Models

Pam Frugoli, O*NET/Competency Assessment Team Lead at ETA, responded to survey findings by reviewing ETA’s Industry Competency Model Initiative, which was created to describe various levels and aspects of worker preparation. ETA created the framework for these models, which appear in the Competency Model Clearinghouse (CMC), by convening industry association partners, labor representatives, and other LMI community members to form the original Building Blocks Model. ETA found that the Department of Education had also produced additional work on employability and skills, which could be used for further CMC development. ETA built its Industry Competency Models to be flexible, knowing that users have different naming conventions for certain industry and occupational concepts.

Users may go to the CMC website, <http://www.careeronestop.org/competencymodel/> and select the industry model of their choice (i.e. Advanced Manufacturing). Each model contains a visual of the selected industry and displays information on management competencies, occupation-specific requirements, industry-sector technical competencies, industry-wide technical competencies, workplace competencies, academic competencies, and personal-effectiveness competencies. CMC serves as a resource for users from community colleges, state agencies, and regional organizations for such uses or purposes as curriculum alignment.

Ms. Frugoli also addressed the capabilities of O*NET, the Occupational Information Network (see <http://www.onetcenter.org>). O*NET is ETA's online database of 974 occupations and the respective knowledge, skills, and abilities needed to perform the activities and tasks associated with each occupation. In particular, O*NET domains (i.e. "Tools and Technology," "Knowledge, Skills, and Abilities," and "Detailed Work Activities") can play an important role in helping LMI users with skills analysis. Because it offers common and standard definitions of work characteristics, O*NET has the potential to assist with skills transferability analysis. O*NET also has various assessment tools around the concepts of work values, interests, and abilities that can help individuals explore career options and utilize their skills from one occupation to the next. ETA has projects underway to allow the LMI community to use O*NET in new ways. In response to questions regarding supply and demand analysis, Ms. Frugoli recommended using <http://benschmidt.org/jobs> and the CIP-SOC Crosswalk (see <http://www.nces.ed.gov/ipeds/cipcode/resources.aspx?y=55>) and the units of analysis files at <http://www.edeps.org> as resources.

Discussion Questions

Equipped with feedback on the WIC Skills Initiative Survey, moderator Rich Froeschle (RC Froeschle Consulting) facilitated the rest of the conversation around six main questions. These questions were geared toward defining skills, exploring the role of O*NET and soft skills, occupational supply and demand analysis, linking skills with certifications, and the ideal skills-oriented workforce system.

Question 1: What is a skill and why is it (are they) critical in the understanding of labor market dynamics?

Takeaways:

- *To more effectively align education and labor, consider basing a definition of "skills" on demand from employers, productivity requirements, and worker capabilities.*
- *While some people feel that employers focus too heavily on "soft skills," clarity of the concept is critical in distinguishing among worker qualifications.*

A predominant theme emerging from the WIC Skills Initiative Survey and Convening was establishing an accurate definition for "skills." Definitions vary from basic to elaborate, which is to be expected given the array of organizations and agencies that interact with skills data. The following remarks include some of the skills definitions that the LMI community discussed during the convening. According to attendees, a skill is:

- “Something that has a positive effect on productivity. There is value in what you are doing that is recognized.”
- “Something that you can do.”
- “A workplace outcome of education and learning that aligns an individual to the workplace and increases productivity (not necessarily wages).”
- “The capability to do tasks.”
- “Multifaceted. [Skills] are related to the labor market because you need them to get the job done.”
- “An application of somebody’s talent to his or her job. I could have a talent, but unless I apply it to a task, it is not a skill.”
- “...about demand by an employer.”

Moderator Carrie Mayne made the point that “skills” encompass a broad set of ideas, but in the context of education and labor alignment, it is important to narrow the focus to demand from employers. There are a number of ways to reinforce this focus—two examples are linking skills to wages and tying credentials to skills. Essentially, to meet employer demand, it is beneficial when skills have an explicit (or direct) relationship with productivity and worker capabilities.

Convening attendees identified two factors, the ambiguity of the term “skills” and employers’ focus on soft skills, as major challenges to a universal skills definition in the workforce context. As the LMI community considers these challenges, one solution might be codifying educational curricula. Finding a way to assign codes to skills would ideally give curricula planners an easy reference point that would preclude them from having to create new skills definitions for every curriculum.

During the Convening, members of the LMI community found that employers frequently directed conversations about hiring toward “soft skills”—punctuality, being a team player, demonstrating initiative, etc. This presents a challenge because unlike hard skills (which are technical and can be gauged through tests and certifications), soft skills are subjective and not clearly measurable. What adds to this challenge further is that in higher education, the conversation has expanded to consider “employable skills” vs. “knowledge attainment and learning skills”—in other words, skills that specifically prepare students for a career versus more general, life-long skills (i.e. communication, problem-solving). Despite this challenge, one convening attendee pointed out that some of the most consistently hard-to-fill jobs were those that did not require a postsecondary credential. When jobs have minimal education and training requirements, soft skills become increasingly important to employers. The same holds true for non-STEM jobs that prioritize education, but not necessarily technical skills beyond basic computer operations. When employers make hiring decisions based on traits that are difficult to measure, it becomes challenging for workforce development professionals to know how to identify and train the best job candidates.

Other Convening attendees questioned if soft skills were the real challenge, or if they were simply easier for employers to talk about than hard skills. Even so, one attendee noted that in highly technical jobs, soft skills become more critical to managers and executives. Some attendees felt that it would be valuable if curricula planners could refer to a pre-defined skills description to help codify training curricula, which would better meet the demand for hard and soft skills.

Question 2: What is the role and adequacy of O*NET as the nation's skills information proprietor?

Takeaways:

- *O*NET has a major role in the provision of skills data.*
- *There is consensus that the LMI community sees value in O*NET, but would like to enhance its ability to highlight skills.*
- *The vision for O*NET should be flexible to accommodate changing policies and technology.*

This second question is targeted at understanding the role of O*NET and how the LMI community can better utilize it as a resource for skills analysis. ETA plays an important role in understanding user feedback to inform future investments in the realm of skills data.

While O*NET is unarguably a helpful resource, it presents a few challenges. Some users feel that although O*NET is a strong taxonomy, it does not align with the terminology that employers and educators currently use to describe skills. Moreover, because O*NET's focus is on occupations rather than job tasks, it makes capturing skills information very time-consuming. ETA has looked into these challenges but is limited in its ability to improve the system without additional funding. ETA is currently exploring ways to draw on the potential of data mining Internet sources and other collaborative approaches.

Making the skills portion of O*NET easier to access is a common thread across the abovementioned challenges. To address this, some possible steps for ETA to take include:

- **Enhance Detailed Work Activities**
According to O*NET, Detailed Work Activities (DWAs) are "specific work activities that are performed across a small to moderate number of occupations within a job family." By enhancing DWAs, it may be easier for O*NET users to identify transferrable skills.
- **Weight skills in O*NET by employment demand**
It can be difficult to distinguish which skills are the most critical for successful job performance. If skills are weighted by employment demand, O*NET users can more effectively focus on the skills that matter most to employers in their region.
- **Develop an employer tagging schema**
Design a system that allows employers to tag or code job postings based on the skills that those jobs require. This ideally will make it easier for prospective employees and career counselors to search for jobs by skills.
- **Explore how to incorporate American Community Survey (ACS) data in metrics**
Build upon already-existing ACS data to create a more complete measurement of in-demand skills.

- **Consider crowdsourcing methods**

Where skills data are currently lacking, it may help to open up data inputs to the LMI community. With ETA oversight, this could serve as a way for O*NET users to interact and help each other develop solutions to common data problems.

Question 3: How pervasive are ‘soft skill’ inquiries among state and local customers? How important is defining and measuring workplace essentials (soft skills) in the labor exchange process and curriculum development?

Takeaway:

- *There is no simple definition for “soft skills,” but the LMI community would benefit from greater structure around the concept.*

Soft skills are not as easy to measure as hard skills; however, they undoubtedly play a role in employers’ hiring decisions. The LMI community’s challenge comes when determining whether or not to include soft skills as part of its focus—and, if so, how to prioritize soft skills. Convening moderators began this discussion by distinguishing between employability skills that are occupation-specific (vocational skills) versus those that span all occupations (i.e. communications, critical thinking). This is because one occupation might require a soft skill that is not important to another occupation. For example, a “pleasant phone voice” may be a critical soft skill for a customer-facing receptionist, but not as necessary for a computer programmer who interacts less or not at all with customers.

Soft skills also have implications for higher education. Since colleges and universities typically gear students toward developing hard skills, it will be important for them to consider their role in reinforcing soft skills. By engaging employers in the conversation about in-demand soft skills, universities will be better equipped to provide a more holistic curriculum. If the LMI community establishes a common language and definition for soft skills, it would be a good first step in facilitating meaningful discourse around skills between the business and education communities.

Question 4: Is occupational supply and demand analysis a useful proxy for skills assessment or skills gap analysis?

Takeaway:

- *The LMI community should consider partnerships between education and training institutions and business advisory groups to help improve the ability to assess skills.*

BLS and ETA believe occupational supply and demand analysis is the most efficient option available, although it presents challenges when used as a proxy for skills assessment or skills gap analysis. When conducting a skills analysis, there is always room for interpretation; therefore, it is important that users can discern the shortcomings of the analysis. With this user discretion in mind, occupational supply and demand analysis can be a useful tool. For instance, one LMI shop utilized occupational supply and demand analysis in economic development to assist a company with site selection for a new medical call center. LMI helped identify metro areas with an excess supply of professionals who were trained in the medical field, ensuring that the company would have a large labor pool from which to staff the call center.

Some members of the LMI community find that occupational supply and demand analysis can be risky given other factors in play. For example, The National Center for Education Statistics (NCES) national CIP-SOC crosswalk is a critical tool for linking labor supply and demand, but it has its limitations. One limitation is how the CIP-SOC crosswalk addresses graduates from programs with few direct occupational connections. The CIP-SOC Crosswalk links program data from the Classification of Instructional Programs (CIP) to occupational data from the Standard Occupational Classification (SOC), allowing data users to see the training programs that relate to a given occupation. However, when multiple training programs lead to the same occupation, workforce development professionals have to use their own judgement beyond the data to understand how to best serve individual workers. Even with a greater focus on educational consumer reporting systems and programmatic measures, it is difficult to tell how many educational institutions are making data-driven planning decisions. The LMI community may find that engaging in partnerships with schools and business advisory groups will help them better deploy skills assessment and occupational supply and demand analysis.

Question 5: Would knowing the core skills behind major certifications be helpful for education and workforce program operators?

Takeaway:

- *The LMI community does not necessarily feel that certifications accurately represent the breadth of skills that employers look for.*

Attendees at the WIC Skills Initiative Convening emphasized that the overarching dialogue between educators and employers was about skills, and that credentials fit into that larger conversation. Skills are difficult to define—therefore, credentials can serve as official evidence of skills acquisition through completion of an educational program. There are additional layers to credentialing, involving accreditation of the institution that confers the credentials and recognition of the accreditation by the Department of Education for federal financial aid eligibility. Degrees and certificates are recognized credentials under this scheme.

There are other mechanisms by which workforce skills are validated, such as industry certification, badges and state-licensure. The Lumina Foundation currently has an effort underway called WorkCred (see <http://www.workcred.org>) whose purpose is essentially to create “a competency-driven workforce credentialing ecosystem.” This entails having transparent exchanges of information among industry, educators, and others to agree on consistent terminology and shared quality assurance mechanisms for workforce credentials. Workforce credentials encompass a broad array of approaches to what is termed “credentialing.” Rather than focusing on how workers acquire skills—through a higher education institution, as a result of passing a certification or licensing exam, or through badges—workforce credentials focus on creating a cohesive, comprehensive, and consistent inventory of market valued and recognized skills. The Association for Career and Technical Education (ACTE) is also working on a certification data exchange project to advance the credential development effort.

This newly devised credential scheme can help employers understand a worker’s skill-set. However, some challenges remain, especially with respect to institutions of higher education. For example, students technically receive a credential if they earn a certificate or degree. Employers sometimes recruit these students before they complete their educational program, and those students may have enough valuable workforce skills to justify leaving their program early. However, without fully

completing their program, these students are not counted in the institutional completion/graduation metric and have no credential to show for their education.

Another example is that some students attend college simply to take one or a few courses to acquire the knowledge they need to pass a certification or licensing exam. The students who subsequently take and pass these exams are categorized as dropouts if these were credit-bearing courses, or not counted at all if they were not credit-bearing courses.

Finally, community colleges educate individuals both pursuing credentials and seeking to learn a specific skill that does not necessarily lead to a credential. In fact, community colleges intend for many of their students to transfer to a four-year institution in pursuit of a bachelor's degree, and many students do so without obtaining an associate degree first. Community colleges do not get credit for the students who transfer successfully to a four-year institution and are on a path to acquiring even higher level workforce skills.

These examples demonstrate the challenges faced by the current system of defining credentials or skills acquisition. Fortunately, efforts such as Lumina's WorkCred and current research on the interplay between credentials and skills are a helpful resource for the LMI community.

Question 6: If you had a 'grand vision' for what a skills-oriented system should look like, what are the key tenets of that system, who is your primary customer/stakeholder, and which additional pieces of information would you want to see collected?

This question invited attendees at the WIC Skills Initiative Convening to share their perspectives on an ideal skills-oriented workforce system. Participants contributed their input and possible action items, which generally fall into three categories: Defining Skills, Building Relationships, and Understanding the Role of Education. The paragraphs below organizes participants' thoughts into the three categories.

Defining Skills

Members of the LMI community feel that establishing a clear, universally accepted skills definition and taxonomy is the first step to creating more effective skills analyses. This not only includes actual definitions for hard skills, soft skills, etc., but it also clarifying the parameters for LMI users when it comes to discussing skills. For consistency, O*NET can serve as the nexus between job-seekers and employers as they try to make sense of the skills that matter most in their local workforce. Closer relationships between the workforce system (Workforce Investment Boards, educators, employers, and job-seekers), BLS, and ETA will help ETA more accurately update O*NET with the most critical information on skills.

Building Relationships

During the WIC Skills Initiative Convening, attendees considered that WIOA does not identify which specific entities are part of the workforce system. Therefore, the LMI community can play a role by encouraging a partner network to address the concept of skills. Attendees agreed that the workforce system should be transparent for professionals at all levels of the workforce development infrastructure, which in turn will foster a greater focus on student/employee and employer needs. Professionals on the educational side of the workforce development system will better manage its

efforts by engaging directly with employers in understanding skills, designing curricula, and creating metrics to measure program success.

Recognizing the Role of Education

The LMI community frequently discusses training and education in an occupation-oriented context. Aligning education with careers is crucial, though some members of the LMI community emphasize that not every skill needs to be geared toward labor market outcomes. In other words, not all skills gained through education need to be directly related to a student’s occupation—that students will simply benefit from education in general. Those who value this concept feel that it is important to differentiate between educational programs that are and are not occupation-focused, as skills development is shorter or longer depending on the program and individual goals. This conversation considers how skills fit into an environment of continuous learning and multiple jobs rather than a clear-cut education-to-career pathway.

Summary and Next Steps

Since the workforce system and the employer community are demanding more explicit and accurate information about occupational supply and demand analysis, members of the LMI community feel compelled to respond. However, as the WIC Skills Initiative Convening confirmed, analyzing occupational supply and demand is fraught with challenges. With the findings from the WIC Skills Initiative Survey and Convening in mind, the LMI community can better articulate an approach to these challenges, creating a more accurate and useful set of skills data. The LMI community may consider the following goals in moving forward the work of creating a more useful skills data set:

- **Promote shared understanding of skills**

The WIC Skills Initiative sheds light on concerns about creating a common language for skills. This would aid all stakeholders in the workforce system in their efforts to align education with employer needs. One way to do this might be ranking skills—not necessarily in terms of gaps, shortages, or mismatches, but singling out skills that employers consistently need. Using education and certifications as a proxy for occupational supply and demand can easily go too far, so it will be important to have a comprehensive understanding of how to fulfill in-demand skills.

- **Continue the skills dialogue for the purpose of building greater consensus**

LMI users should continue promoting the dialogue between educators, employers, job seekers, and each other. This will allow the LMI community to better grasp the most effective ways to train local workers for the top occupations in their region. To further this effort, it will be helpful to engage more groups involved with researching skills data. Some of these organizations include the National Research Center for Career and Technical Education (“Perkins Crosswalk Validation Project”) and the National Crosswalk Service Center, which are researching the links between occupations, educational programs, and career pathways. Participants in the convening also suggested holding periodic meetings of professionals with an interest in LMI and skills. It was suggested that the LMI Institute can serve as the convener for such meetings.

- **Encourage an inclusive workforce intelligence system**

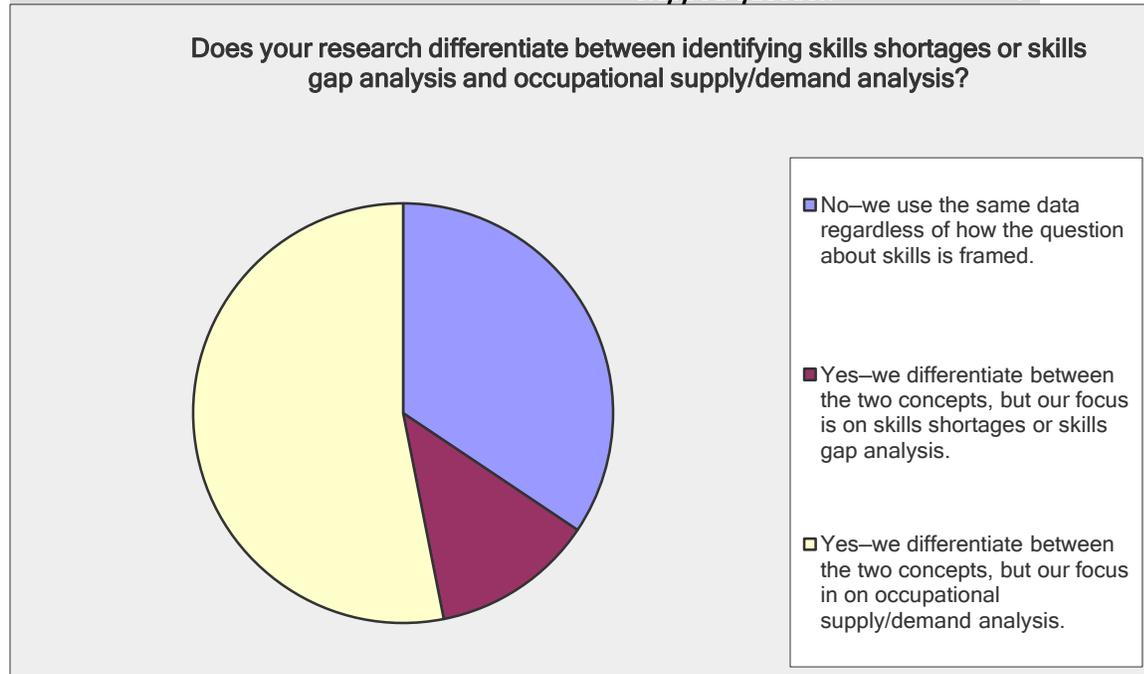
A successful workforce intelligence system is one that can grow and be flexible over time, especially as new technology, capabilities, and methodologies come into play. It also provides stakeholders from diverse professional backgrounds with the opportunity to work together to advance LMI. As the workforce intelligence system becomes more inclusive, it will be important to train: (1) LMI analysts on best practices in producing and interpreting data; (2) educators on optimizing training programs; and (3) employers on communicating their hiring needs. Through conversations with each other, LMI users can better gauge how training programs and occupational supply and demand analyses might need to adapt to changes in the future.

The WIC intends for this report to serve as a reference for further discussions and projects directed toward the provision and analysis of skills data. The inclusion of professionals from federal and state agencies, higher education, and public policy will ideally serve as an example of the type of audience that the LMI community should engage moving forward. It will be important to think about also including other stakeholders (i.e., students and employers) to create an even more comprehensive understanding of skills.

WIC Skills Initiative Survey

The following information is a summary of the WIC Skills Initiative Survey. For confidentiality purposes, survey questions that called for written responses are not included in this summary.

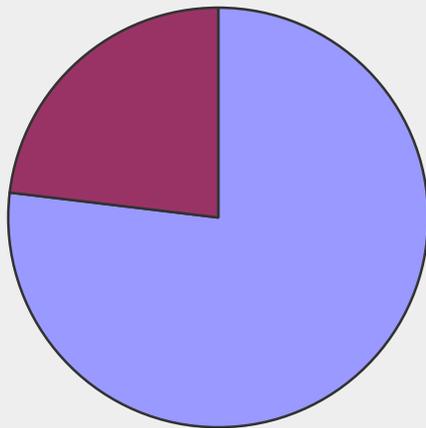
| Does your research differentiate between identifying skills shortages or skills gap analysis and occupational supply/demand analysis? | | |
|---|------------------|----------------|
| Answer Options | Response Percent | Response Count |
| No—we use the same data regardless of how the question about skills is framed. | 34.4% | 11 |
| Yes—we differentiate between the two concepts, but our focus is on skills shortages or skills gap analysis. | 12.5% | 4 |
| Yes—we differentiate between the two concepts, but our focus in on occupational supply/demand analysis. | 53.1% | 17 |
| <i>answered question</i> | | 32 |
| <i>skipped question</i> | | 1 |



If you answered "No" to the last question, is the reason for not differentiating practical (insufficient time or data) or theoretical (they are really the same thing)?

| Answer Options | Response Percent | Response Count |
|---|------------------|----------------|
| Practical reasons. We can only work with data we have available. | 76.9% | 10 |
| Theoretical reasons. For most users skills gap analysis and supply/demand are the same concept. | 23.1% | 3 |
| Other (please specify) | | 4 |
| <i>answered question</i> | | 13 |
| <i>skipped question</i> | | 20 |

If you answered "No" to the last question, is the reason for not differentiating practical (insufficient time or data) or theoretical (they are really the same thing)?

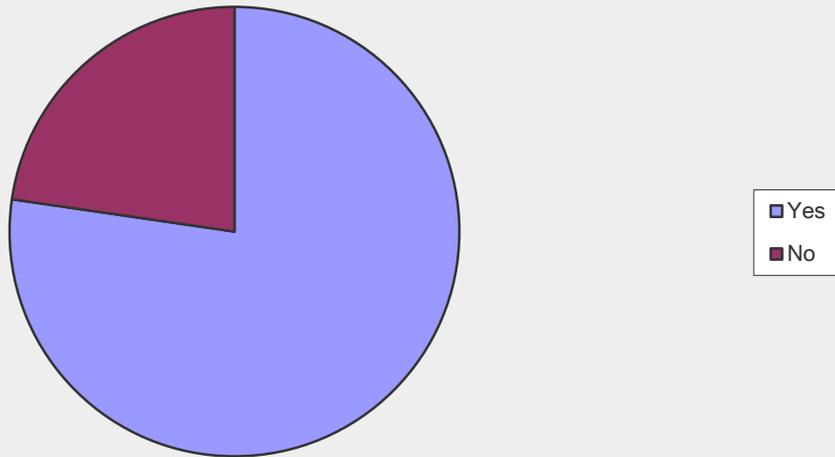


- Practical reasons. We can only work with data we have available.
- Theoretical reasons. For most users skills gap analysis and supply/demand are the same concept.

If you answered "Yes," have you or will you explore new ways to measure skills shortages or skills gaps?

| Answer Options | Response Percent | Response Count |
|--------------------------|------------------|----------------|
| Yes | 77.3% | 17 |
| No | 22.7% | 5 |
| <i>answered question</i> | | 22 |
| <i>skipped question</i> | | 11 |

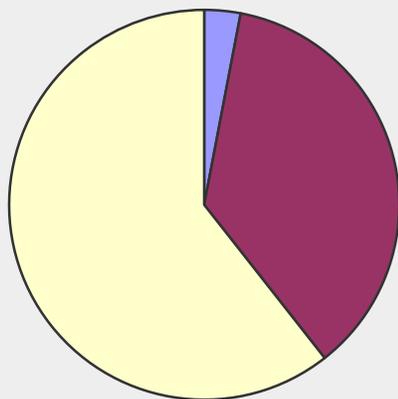
If you answered "Yes," have you or will you explore new ways to measure skills shortages or skills gaps?



Educational attainment information is often used as proxy data to address questions about skills. Which of these statements best describes your opinion of the use of educational attainment to describe skills?

| Answer Options | Response Percent | Response Count |
|---|------------------|----------------|
| Educational attainment is the same as skill levels. There is little additional benefit to make additional investments to describe skills differently. | 3.0% | 1 |
| Educational attainment may not be the same as skills, but it serves as a useful proxy for them. | 36.4% | 12 |
| Educational attainment is not the same as skills and it is not sufficient to describe and address concepts such as skill gaps, skill shortages and most in demand skills. | 60.6% | 20 |
| <i>answered question</i> | | 33 |
| <i>skipped question</i> | | 0 |

Educational attainment information is often used as proxy data to address questions about skills. Which of these statements best describes your opinion of the use of educational attainment to describe skills?

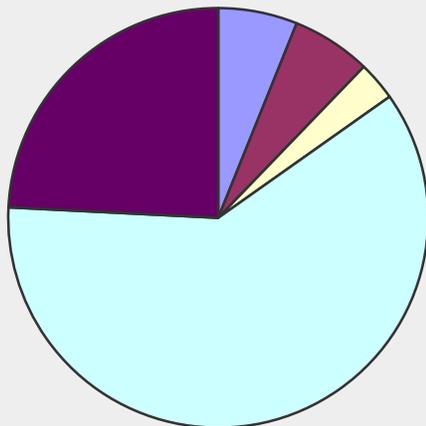


- Educational attainment is the same as skill levels. There is little additional benefit to make additional investments to describe skills differently.
- Educational attainment may not be the same as skills, but it serves as a useful proxy for them.
- Educational attainment is not the same as skills and it is not sufficient to describe and address concepts such as skill gaps, skill shortages and most in demand skills.

With which of these statements do you most agree: How important is it to have a definition of skills that can be used to describe both worker capabilities and job requirements?

| Answer Options | Response Percent | Response Count |
|---|------------------|----------------|
| Not important. We will take the best data we can get to describe either. | 6.1% | 2 |
| It is most important to be able to describe employer skill hiring requirements for available jobs. | 6.1% | 2 |
| It is most important to be able to describe worker capabilities and job requirements. | 3.0% | 1 |
| It would be ideal to have data for both, but the goal should be to describe each in the best manner possible even if it means different data items. | 60.6% | 20 |
| There is no value to having a skill database that can't be applied to both people and jobs. | 24.2% | 8 |
| <i>answered question</i> | | 33 |
| <i>skipped question</i> | | 0 |

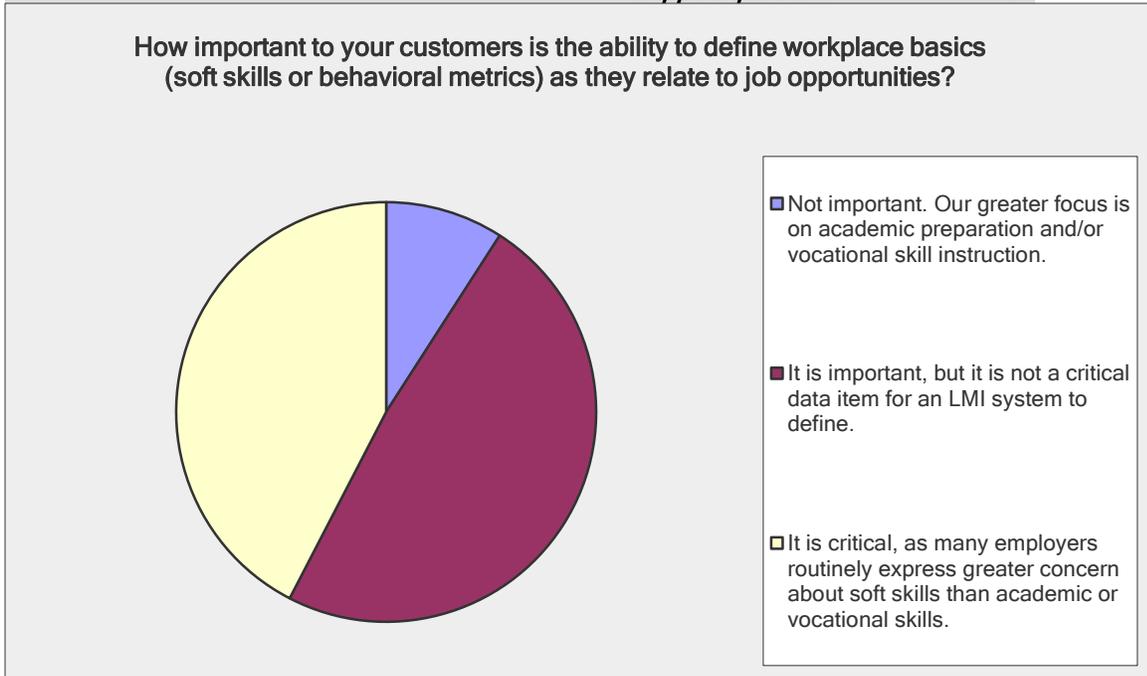
With which of these statements do you most agree: How important is it to have a definition of skills that can be used to describe both worker capabilities and job requirements?



- Not important. We will take the best data we can get to describe either.
- It is most important to be able to describe employer skill hiring requirements for available jobs.
- It is most important to be able to describe worker capabilities and job requirements.
- It would be ideal to have data for both, but the goal should be to describe each in the best manner possible even if it means different data items.

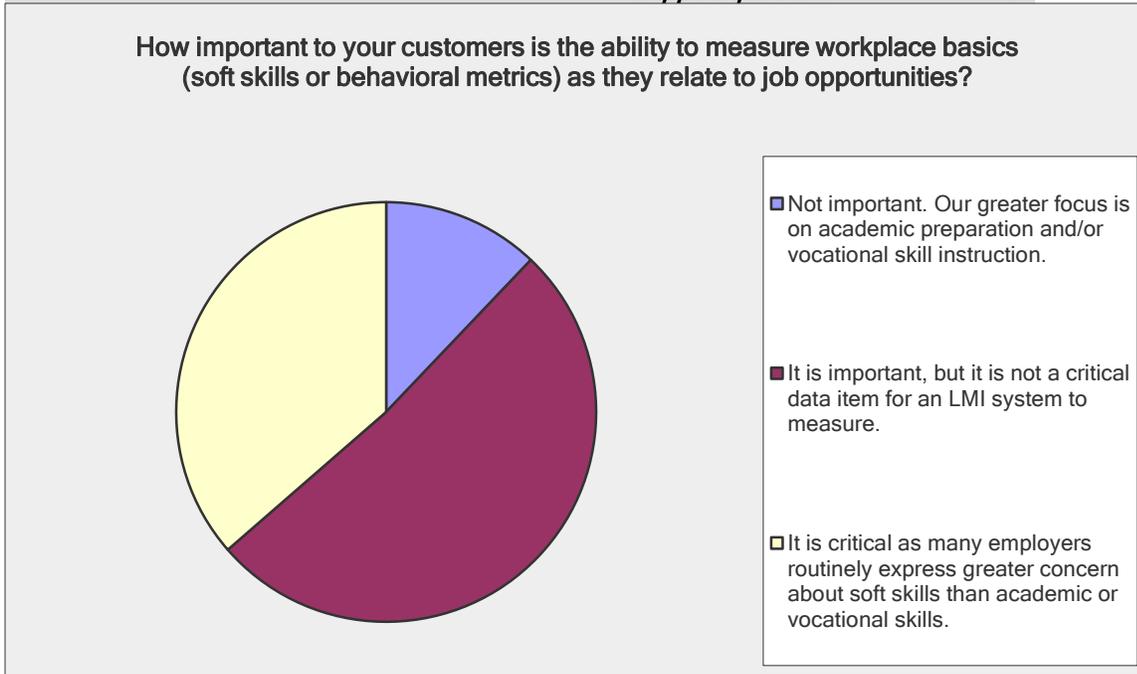
How important to your customers is the ability to define workplace basics (soft skills or behavioral metrics) as they relate to job opportunities?

| Answer Options | Response Percent | Response Count |
|---|------------------|----------------|
| Not important. Our greater focus is on academic preparation and/or vocational skill instruction. | 9.1% | 3 |
| It is important, but it is not a critical data item for an LMI system to define. | 48.5% | 16 |
| It is critical, as many employers routinely express greater concern about soft skills than academic or vocational skills. | 42.4% | 14 |
| <i>answered question</i> | | 33 |
| <i>skipped question</i> | | 0 |



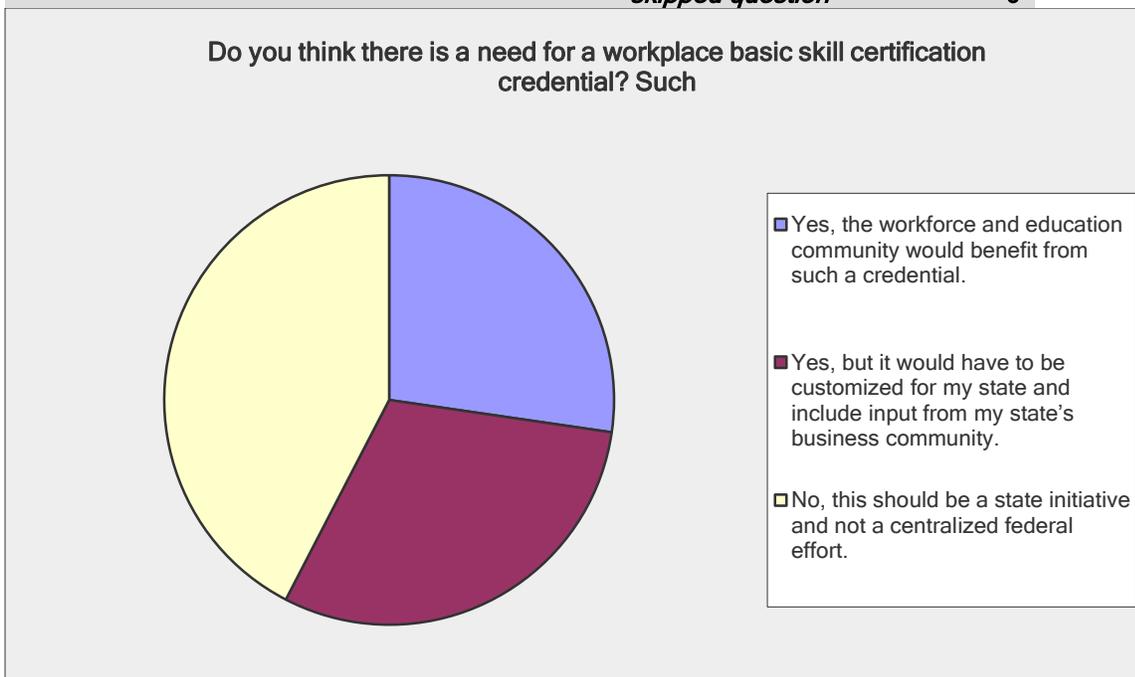
How important to your customers is the ability to measure workplace basics (soft skills or behavioral metrics) as they relate to job opportunities?

| Answer Options | Response Percent | Response Count |
|--|------------------|----------------|
| Not important. Our greater focus is on academic preparation and/or vocational skill instruction. | 12.1% | 4 |
| It is important, but it is not a critical data item for an LMI system to measure. | 51.5% | 17 |
| It is critical as many employers routinely express greater concern about soft skills than academic or vocational skills. | 36.4% | 12 |
| <i>answered question</i> | | 33 |
| <i>skipped question</i> | | 0 |



Do you think there is a need for a workplace basic skill certification credential? Such certification might include a fixed number of commonly agreed upon workplace basics skills, appropriate course materials, and relevant assessments with a goal of demonstrating to employers that a potential worker has mastered workplace basic competencies.

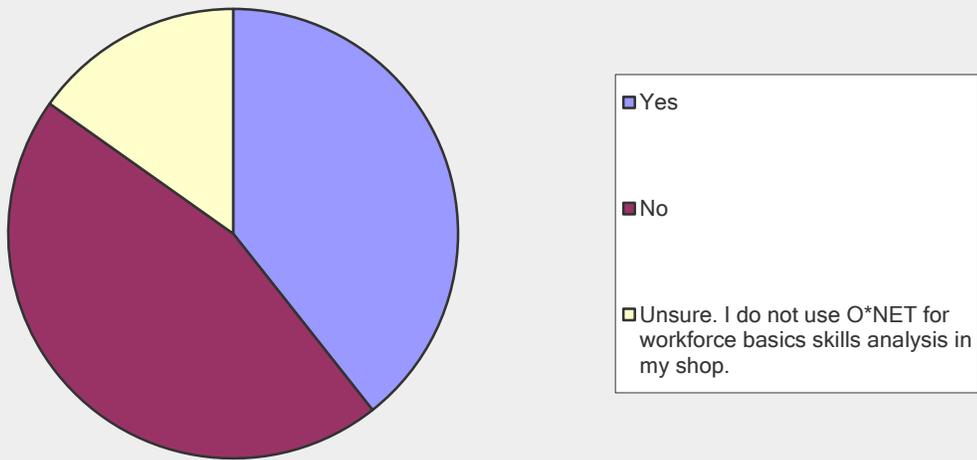
| Answer Options | Response Percent | Response Count |
|--|------------------|----------------|
| Yes, the workforce and education community would benefit from such a credential. | 27.3% | 9 |
| Yes, but it would have to be customized for my state and include input from my state's business community. | 30.3% | 10 |
| No, this should be a state initiative and not a centralized federal effort. | 42.4% | 14 |
| <i>answered question</i> | | 33 |
| <i>skipped question</i> | | 0 |



Are the federal O*NET Knowledge, Skills and Abilities (KSA) domains sufficient to define workplace basic skills?

| Answer Options | Response Percent | Response Count |
|---|------------------|----------------|
| Yes | 39.4% | 13 |
| No | 45.5% | 15 |
| Unsure. I do not use O*NET for workforce basics skills analysis in my shop. | 15.2% | 5 |
| <i>answered question</i> | | 33 |
| <i>skipped question</i> | | 0 |

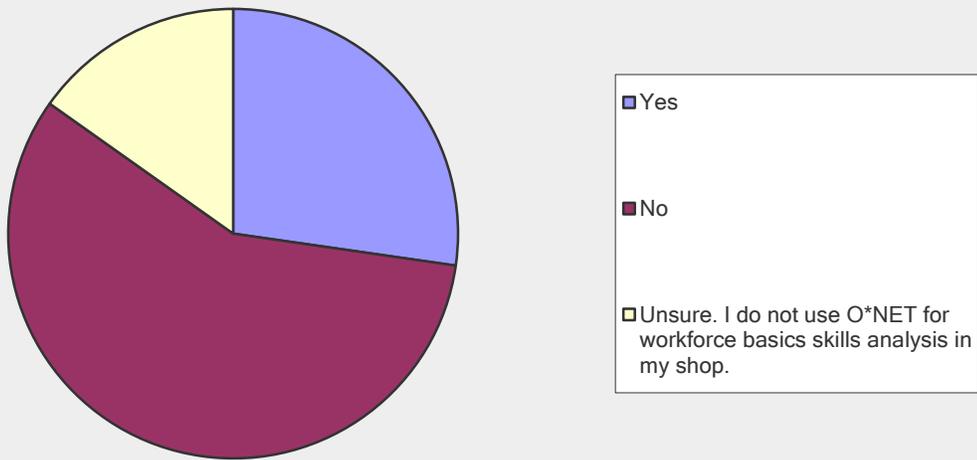
Are the federal O*NET Knowledge, Skills and Abilities (KSA) domains sufficient to define workplace basic skills?



Are the federal O*NET Knowledge, Skills and Abilities (KSA) domains sufficient to measure workplace basic skills?

| Answer Options | Response Percent | Response Count |
|---|------------------|----------------|
| Yes | 27.3% | 9 |
| No | 57.6% | 19 |
| Unsure. I do not use O*NET for workforce basics skills analysis in my shop. | 15.2% | 5 |
| <i>answered question</i> | | 33 |
| <i>skipped question</i> | | 0 |

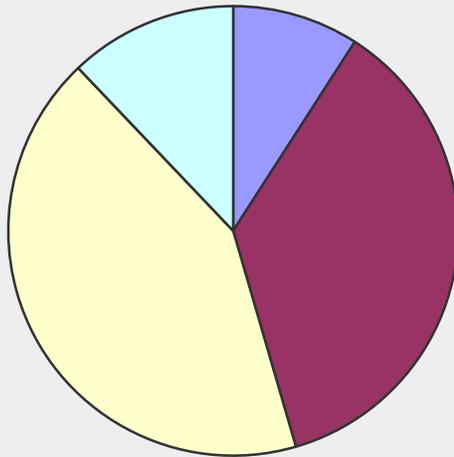
Are the federal O*NET Knowledge, Skills and Abilities (KSA) domains sufficient to measure workplace basic skills?



How important is it to have vocational skills data validated by employers in your own state?

| Answer Options | Response Percent | Response Count |
|---|------------------|----------------|
| Not important. National validation is sufficient to describe work in my state. | 9.1% | 3 |
| Important, but not enough to incur the cost of additional state-specific data collection. | 36.4% | 12 |
| Very important. My state does not currently do this, but would like to. | 42.4% | 14 |
| Very important. My state currently does this. | 12.1% | 4 |
| <i>answered question</i> | | 33 |
| <i>skipped question</i> | | 0 |

How important is it to have vocational skills data validated by employers in your own state?

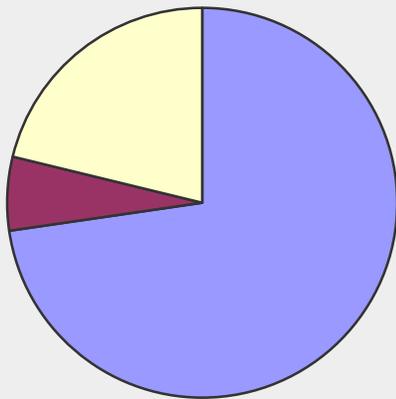


- Not important. National validation is sufficient to describe work in my state.
- Important, but not enough to incur the cost of additional state-specific data collection.
- Very important. My state does not currently do this, but would like to.
- Very important. My state currently does this.

DOL/ETA has developed a series of Industry Competency Models to describe various levels and aspects of worker preparation. Which of the following best describes your impression of these competency models?

| Answer Options | Response Percent | Response Count |
|---|------------------|----------------|
| I am not familiar with these models and I do not use them. | 72.7% | 24 |
| I am familiar with the models and I use them to guide our skills research and related activities. | 6.1% | 2 |
| I am familiar with the models but I do not use them to guide our skills research or related activities. | 21.2% | 7 |
| <i>answered question</i> | | 33 |
| <i>skipped question</i> | | 0 |

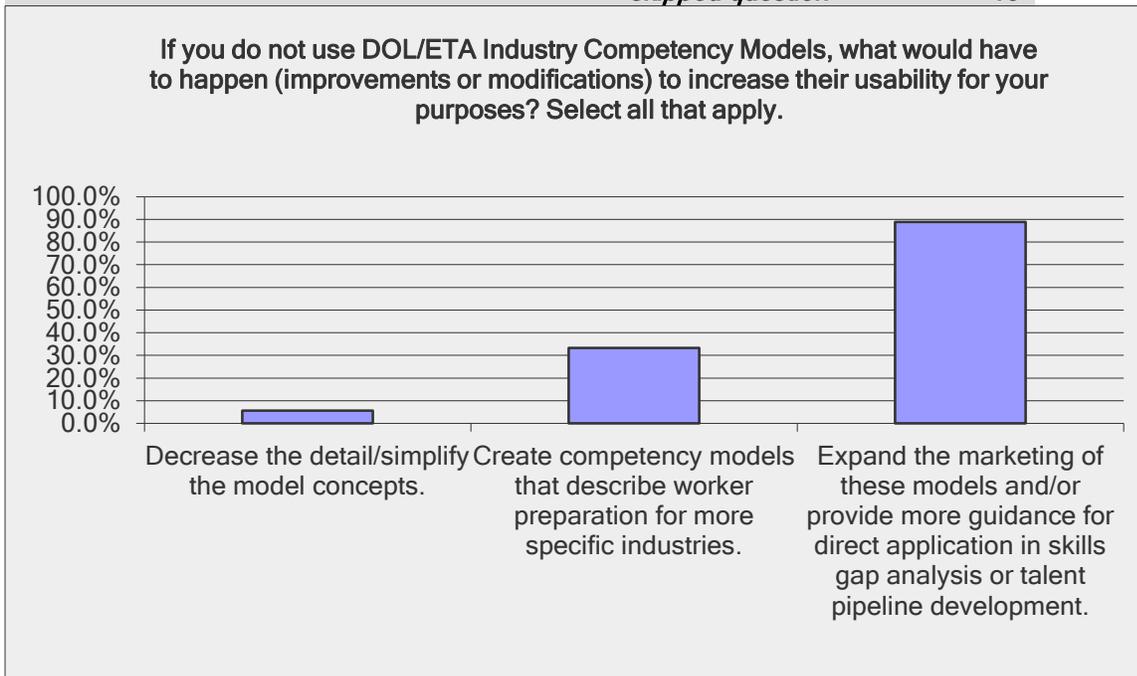
DOL/ETA has developed a series of Industry Competency Models to describe various levels and aspects of worker preparation. Which of the following best describes your impression of these competency models?



- I am not familiar with these models and I do not use them.
- I am familiar with the models and I use them to guide our skills research and related activities.
- I am familiar with the models but I do not use them to guide our skills research or related activities.

If you do not use DOL/ETA Industry Competency Models, what would have to happen (improvements or modifications) to increase their usability for your purposes? Select all that apply.

| Answer Options | Response Percent | Response Count |
|---|------------------|----------------|
| Decrease the detail/simplify the model concepts. | 5.6% | 1 |
| Create competency models that describe worker preparation for more specific industries. | 33.3% | 6 |
| Expand the marketing of these models and/or provide more guidance for direct application in skills gap analysis or talent pipeline development. | 88.9% | 16 |
| Other (please specify) | | 9 |
| <i>answered question</i> | | 18 |
| <i>skipped question</i> | | 15 |



Computer use is often referred to as a critical skill. Should there be a separate skill database that addresses various aspects of the use of computers in the workplace?

| Answer Options | Response Percent | Response Count |
|--------------------------|------------------|----------------|
| Yes | 75.8% | 25 |
| No | 24.2% | 8 |
| Comments | | 8 |
| <i>answered question</i> | | 33 |
| <i>skipped question</i> | | 0 |

