

Measures that Matter
Workforce
Development Pilot

LITERATURE REVIEW

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Introduction

The first phase of the Measures that Matter Workforce Development Pilot Evaluation project is to conduct a literature review to ground the research team in the library field and inform subsequent steps of the effort. Mt. Auburn Associates reviewed literature relevant to the following three areas:

- a synthesis of the literature on public library roles in workforce development and business development, including what research has been done to date and what are the key learnings from the field;
- a review of libraries' existing outcome and measurement processes, including national and voluntary outcome initiatives; and
- a review of current efforts to measure outcomes in the workforce development field, including the development of common measures and efforts to expand cross-program data alignment.

Together, these components will inform the research framework, data collection plans, and analysis lens of the pilot evaluation project.

Role of libraries in the workforce development and business development systems

Overview

Workforce development is a term that describes the broad set of public and private initiatives that seek to raise the skill level of residents, assist residents in accessing employment and work, and address the workforce needs of businesses. Usually, this term applies to efforts focusing on the working-age population and distinguished from education, most specifically the K-12 system. There is, however, no clear consensus on what is and is not included in a community's workforce development system. For the Measures that Matter project on workforce development, Mt. Auburn is including in the definition all services that seek to raise the basic and occupational skills of working-age residents; assist residents in finding, keeping, or advancing in a job; and support local businesses in accessing the workforce they need to succeed.

Early in the project, the question emerged about whether or not to include in this overall evaluation the role of libraries in supporting entrepreneurship and small business development. Many in the workforce system view self-employment and starting a business as an element of a comprehensive workforce development strategy. Moreover, both efforts to connect residents to jobs and efforts to support residents in their business pursuits align with the overall economic health of the community. Finally, interviews conducted as part of the research effort with those in the library field found that some library systems view their services related to workforce and business development as interconnected. As a result, this project is exploring both the workforce-related activities defined above as well as the library's role in supporting residents who want to start or grow a business.

It is rare for either the workforce development literature or the small business development literature to include the role of public libraries in the system. This alone is telling. Most of the literature that does exist on the subject reflects the libraries' perspective. The following describes,

first, the relevant literature on the role of libraries in the community and then the specific literature related to libraries and workforce development and small business development.

General literature on the role of libraries in the community

While not specifically related to workforce or business development, embedded in the more general literature that looks at the broad community role of libraries is a discussion of the role of libraries around community jobs and employment.

A 2016 survey fielded by the International City/County Management Association (ICMA), in partnership with the Aspen Institute and the Public Library Association (PLA), and an annual survey administered by the Pew Research Center, provide some insights into how government officials and residents view the priorities of libraries in their communities.¹

- In the ICMA survey of government officials on the role of libraries in advancing community goals, 32 percent of respondents stated that libraries should provide training, technology, and resources for job-related skills. This priority was lower than others such as education, digital literacy, and civic engagement. The survey also found that respondents in communities with over 100,000 reported this as a much higher priority than those in smaller communities. In terms of small business development, fewer government officials, only 22 percent felt libraries should provide information on how to start a business, and 23 percent said libraries should provide a workspace for mobile workers or entrepreneurs.
- The Pew Research Center provides data on the use of and perceptions of libraries by Americans in its annual survey.² The 2012 Pew survey found that in the wake of the Great Recession, 36 percent of individuals reporting visiting the library did so to look for or apply for a job. In the 2015 survey, this number decreased to 23 percent, but still represented a substantial number of patrons who reported a workforce-related reason for visiting the library. The 2016 survey found that 22 percent of respondents thought that libraries contribute a lot and 34 percent thought libraries contribute somewhat to their community through helping people find jobs or pursue job training. Pew's 2015 survey found that 48 percent of all Americans 16 and older said that libraries help people find jobs "a lot" or "somewhat," but this was much higher among certain groups. For example, 58 percent of Hispanics, 55 percent of African Americans, and 53 percent of those in households with annual incomes under \$30,000 reported that libraries help people find jobs. This survey also found that 87 percent of Americans believe libraries should offer programs to support small businesses.

The Bill & Melinda Gates Foundation and the Institute of Museum and Library Services (IMLS) provided funding to the University of Washington Information School in 2010 to research how technology in public libraries impacts the lives of individuals, families, and communities. The resulting report, *Opportunity for All: How the American Public Benefits from Internet Access at U.S. Libraries*, focused specifically on the use of public computers and internet access in public libraries. The study included a national telephone survey and nearly 45,000 online surveys at public libraries. This study found that the three most common uses of computers and the Internet in public libraries were: education (42 percent), employment (40 percent), and health (37 percent). Within the group of users reporting employment uses, 76% used

¹ Horrigan, J. (2017). *The Role of Libraries in Advancing Community Goals*. Washington DC: Aspen Institute.

² Horrigan, J. (2015). *Libraries at the Crossroads*. Washington DC: Pew Research Center.

the computers specifically for their search for job opportunities, 68% submitted an application online, 46% used library computers to work on their resumes, and 23% obtained job related training.³

Beyond the multiple survey efforts, several reports examine the value of libraries to their communities. The Aspen Institute Dialogue on Public Libraries, a project of the Aspen Institute Communications and Society Program in partnership with the Bill & Melinda Gates Foundation, had a 35-member working group that met twice to explore the essential role of public libraries in a networked world and to raise the profile of libraries to the center of the knowledge society.⁴ Their study concluded that the value proposition of libraries encompasses three key assets:

- *People*. Libraries are a hub of civic engagement connecting individuals to resources and are natural conveners to foster civic health.
- *Place*. Libraries are welcoming spaces and can be an anchor for economic development and neighborhood revitalization.
- *Platform*. Libraries have a user-centered platform that provides opportunities for individuals in the community to gain access to a variety of tools and resources and are a “third place” to support learning and the civic needs of a community. Libraries are “trusted to be objective and operative in the interests of its users.”

Of significant relevance to this study are the Aspen report’s recommendations related to creating good community outcomes. In this area, public libraries play many roles including lifelong learning partners, jobs and economic development partners, and literacy champions.

The Urban Libraries Council commissioned a study in 2007 that focused more specifically on the role of public libraries in contributing to local economic development.⁵ The Urban Libraries Council teamed with the Urban Institute, and they released *Making Cities Stronger: Public Library Contributions to Local Economic Development*. This significant report looked at the multiple ways libraries impact the local economy including improving early literacy and school readiness, small business support, place-making, and building workforce participation. This study concluded that “job information resources and specialized workforce programs in local libraries have the potential to reach a much wider group of jobs seekers than One-Stop centers because of their reputation as trusted, quality community information sources, their high volume of use and their geographic distribution of facilities across the country.” The report identified the following four public library strategies for workforce development:

³ Becker, S., Crandall, M. D., Fisher, K. E., Kinney, B., Landry, C., & Rocha, A. (2010). *Opportunity for All: How the American Public Benefits from Internet Access at US Libraries*. Washington DC: Institute of Museum and Library Services.

⁴ Garmer A. K. (2014). *Rising to the Challenge: Re-Envisioning Public Libraries*. Aspen Institute Dialogue on Public Libraries. Washington DC: Aspen Institute.

⁵ Manjarrez, C. A., Cigna, J., & Bajaj, B. (2007). *Making Cities Stronger: Public Library Contributions to Local Economic Development*. Washington DC: Urban Institute.

1. creating job information centers;
2. expanding access to technology and technical training;
3. providing targeted employment outreach; and
4. serving as adult literacy training and community support centers.

The Urban Libraries Council report also examined the role libraries play in small business support. Because of the advent of online databases, the report concluded that business information services are becoming an even more important component of library services. The report identified four specific strategies for small business support:

1. on-demand business information through online business resources;
2. integrating business support services;
3. providing business basics workshops; and
4. partnerships with local business support organizations.

This study is also one of the few that sought to identify the potential outcomes of workforce and small business support activities. The outcomes identified include:

Potential Outcomes of Workforce Development Strategies	Potential Outcomes of Small Business Support Strategies
<ul style="list-style-type: none"> • Expanded individual technical skills and competencies • Reduced barriers to employment through job search assistance • Reduced costs to local workforce development agencies • Reduced recruitment costs to employers 	<ul style="list-style-type: none"> • Reduced market entry barriers and costs for prospective entrepreneurs • Reduced costs and improved business performance for existing small business owners • Reduced operation costs and more effective outreach for small business development agencies through libraries

Beyond the surveys and studies, several short articles and blog posts examine the general role of libraries as “community anchor” institutions or “third spaces” that provide a range of community and economic benefits.⁶ Much of this literature focuses on the critical role that libraries play in terms of connectivity through access to public computers and free internet. These studies often mention the importance of computer access for those looking for jobs or seeking to start a small business.⁷ Other

⁶ Norton, M. H., & Dowdall, E. (2016). Strengthening Networks, Sparking Change: Museums and Libraries as Community Catalysts. Washington DC: Institute of Museum and Library Services.; and Hildreth, S. (2012). Inspiring libraries as community anchors. *National Civic Review*, 101(4), 44-47.

⁷ Bertot, J.C., Real, B., Lee, J., McDermott, A.J., & Jaeger, P.T. (2015). *2014 Digital Inclusion Survey: Findings and Results*. College Park, MD: Information Policy & Access Center, University of Maryland College Park.; and Goodman, E. P. (2013). Smart Cities Meet Anchor Institutions: the Case of Broadband and the Public Library. *Fordham Urban Law Journal*, 41, 1665.

studies focus more on the general role libraries can play in terms of the types of programs and services they provide, some mentioning specifically career transition and skill attainment support.⁸

Role of libraries in workforce development: policy context

Libraries have long played a role in helping residents to develop their skills and access jobs. In fact, at various points in time the federal government has acknowledged this role through the design of special programs or efforts to better align libraries with the federal workforce development system.

In her series of studies on education information centers (EICs) in public libraries, Joan Durrance describes the history of specific types of workforce-related centers that emerged in the 1980s.⁹ According to Durrance, “EICs were first developed at seven sites in the state of New York in the early 1980s. Those pioneering experiments were designed to create services around the need to provide people with comprehensive educational and career information and advisement.” The Kellogg Foundation eventually funded additional experiments in four other states: Michigan, Nebraska, Pennsylvania, and Washington. While Durrance evaluated this initiative, the approach was to collect data on the number of people who used the services and to supplement that data with anecdotal and case study information. The evaluation did not assess the actual outcomes in terms of employment or community impact.

The Great Recession following the financial crisis in 2008 is the other relevant period that provides a context for the current efforts related to libraries’ role in workforce development. Research finds a number of references related to the significant role that libraries played during this time to address rising unemployment. For example, IMLS awarded a grant to OCLC WebJunction and the State Library of North Carolina to launch Project Compass, an effort designed to demonstrate the importance of libraries in economic recovery. A study of this effort found “there were increased urgent patron needs related to the economic downturn and an increased demand for corresponding library services. The survey also verified that state and public libraries had already risen to the demand in a number of ways. The highest increases were reported for patrons’ job-seeking needs—finding and applying for jobs, writing resumes, developing interview skills, and preparing for tests... A substantial percentage (65.3%) had established some level of collaboration with state-level workforce agencies; another 26.5%, formed alliances with local workforce agencies, such as One-Stop Career Centers.”¹⁰

Also in response to the economic crisis, in 2009, the U.S. Department of Labor Employment and Training Administration entered into a partnership with IMLS focused on encouraging libraries and the workforce system “to collaborate in the delivery of employment and training services at the state and local levels, resulting in increased and enhanced employment and training services to job seekers

⁸ Mersand, S., Gasco-Hernandez, M., Udoh, E., & Gil-Garcia, J. R. (2019, January). Public libraries as anchor institutions in smart communities: Current practices and future development. In *Proceedings of the 52nd Hawaii International Conference on System Sciences*.; and Young, R. (2012), More Than Just Books: The Role of Public Libraries in Building Community and Promoting Civic Engagement. *National Civic Review*, 101: 30-32

⁹ Durrance, J. C. (1991). Kellogg Funded Education and Career Information Centers In Public Libraries. *Journal of Career Development*, 18(1), 11–17.

¹⁰ Gutsche, B., & WebJunction. (2010). *A year with Project Compass: Libraries provide direction in tough times*. Dublin, OH: OCLC Online Computer Library Center.

that lead to good jobs, including career pathways and sustainable wages.”¹¹ This partnership brought a more intentional focus to the types of relationships that libraries and workforce development actors could develop and included a range of activities and programs to further support these partnerships such as training for librarians on the national workforce information portal, dissemination of models, and the sharing of information across the systems.

Finally, the Workforce Innovation and Opportunity Act (WIOA) of 2014, the primary federal workforce development legislation, formally recognized libraries as potential partners for the American Job Center network. This formal acknowledgment of libraries as one of the potential partners in the One-Stop structure of the workforce development system was a critical step in deepening the relationships between libraries and workforce development providers in many communities.

Role of libraries in workforce development: studies and models

The John J Heldrich Center for Workforce Development at Rutgers University released a significant study on the relationship between public libraries and workforce development.¹² This study included surveys and interviews with state and local library staff across the U.S. The study distinguished between job-seeking activities, which involve support in job searching and applications, and workforce development services, which involve connecting individuals with training and human capital development. The survey found:

- 75 percent of respondents reported that libraries in their state provide some type of career services;
- 59 percent of respondents described the demand for career services in their state library system as medium;
- 29 percent of respondents described the demand for career services as high; and
- 89 percent of respondents stated the role of public libraries in workforce development would increase.

The study also identified the unique value provided by libraries in the system, noting, “Public libraries are often the only free option for computer and Internet access in communities, and they are able to fill workforce development gaps by offering career services that are tailored to community needs and local economic demand.”¹³ Moreover, libraries are open more hours than other facilities that are part of the workforce system, serve a broader range of patrons, and since they do not collect information on patrons, are seen as more open to all residents.¹⁴

The team at Rutgers also provided an overview of the specific types of employment-related services public libraries offer and the efforts to collect data on outcomes related to these services. In terms

¹¹ Oates, J. (2010, June 29). Encouraging Partnerships between the Workforce Investment System and Public Libraries to Meet Career and Employment Needs. [Internal U.S. DOLETA Training and Employment Notice]. Washington DC: Department of Labor, Employment and Training Administration.

¹² Holcomb, S., Dunford, A., & Idowu, F. (2019). *Public Libraries: A Community's Connection for Career Services*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University.

¹³ Ibid.

¹⁴ Holcomb, S. (2020). Public Libraries and the Workforce. *Workforce Currents*. Atlanta, GA: Federal Reserve Bank of Atlanta.

of the types of services, the study found the common career services libraries offer are online job search support, resume development, job application assistance, literacy programs, test preparation, and cover letter development. In terms of measuring outcomes, while about half of the libraries reported collecting data on participation (number of people served), few collected data on long-term employment outcomes. The barriers to collecting these data included inadequate data collection tools, privacy concerns, and lack of staff training on data collection techniques.

Larra Clark of the American Library Association (ALA) also undertook a significant effort to study the role of public libraries in workforce development and looked more specifically at the partnerships between libraries and agencies in the workforce development system. As part of this effort, John Amundsen completed a literature review that provided an overview of the 2014 WIOA and where libraries are included in its various titles. This report also provides a detailed overview of how different state workforce plans reference libraries. The report found that 43 states and territories detailed specific involvement of libraries and acknowledge their role in the system.¹⁵ Specific examples cited in the report include:

- Alaska has identified rural libraries as part of the state’s strategy to provide workforce services to residents facing barriers due to distance and isolation.
- Colorado lists rural libraries as essential partners in providing access to and assistance in using the state’s online job-matching portal.
- In Connecticut, the state’s American Job Center lists libraries as alternative sites.
- Minnesota has set aside a seat on the Governor’s Workforce Development Board for a representative of the state’s public library system.
- In New Jersey, 19 libraries provide access to and assistance with the state’s American Jobs Center portal.
- In Utah, the governance of the state’s online workforce portal includes the state’s libraries.

In addition to reviewing the partnerships at the state level, the report provides examples of specific partnerships with the workforce development system at the local level. As a follow-up to this initial report, Larra Clark is completing in-depth case studies of a set of libraries that have developed strong partnerships with the workforce system.

Beyond these two studies, multiple blog posts and opinion pieces report on specific state and local models or provide general recommendations for what libraries can do to improve their workforce-related activities.¹⁶

¹⁵ Amundsen, J.L. (n.d.). *Libraries and Workforce Development*. Washington DC: Public Policy and Advocacy Office, American Library Association.

¹⁶ See Conroy, C. (2018, Jan. 19). Lifelong Leveraging of Human Potential: The role of Public Libraries in Lifelong Workforce Training. Retrieved from <http://gppreview.com/2018/01/19/lifelong-leveraging-human-potential-role-public-libraries-lifelong-workforce-training/>; and Open Door Collective (2020). Why Public Libraries and Adult Basic Education Programs Should Advocate for and Partner with Each Other. Retrieved from <https://www.opendoorcollective.org/why-public-libraries-and-adult-basic-education-programs-should-advocate-for-and-partner-with-each-other.html>.

Role of libraries in entrepreneurship and small business development

As in the case of workforce development, libraries have historically engaged in efforts to support entrepreneurs and small businesses in their communities. A literature review on the subject completed as part of a Ph.D. thesis on the relationship between libraries and small business development centers (SBDCs)¹⁷ notes that Newark, New Jersey had a library branch devoted to business services in 1935. With interest in how this center compared nationally, the Newark Public Library fielded a survey of 119 cities in 1942 and those involved in the Newark center published a report *Public library service to business: A comparative study of its development in cities of 70,000 and more*.¹⁸ This study found that a few other large cities had branches devoted to business and that small businesses frequently sought business information in the libraries.

This thesis also reviewed other studies on how businesses in local communities access information and found that service providers and businesses have a general lack of knowledge of the relevant resources of libraries.

While there is a recognition that libraries play a key role in providing support to entrepreneurs and access to market information and resources for small businesses, the literature related to the role of libraries in this area is somewhat limited, with some of the studies that do exist focusing on academic libraries. Relevant studies that provide case materials and examples of the role libraries play in this arena include:

- In 2016, Charlie Wapner wrote an article as part of the ALA's Office for Information Technology Policy (OITP): Perspectives series that provided an overview of the types of services libraries provide to support entrepreneurs and small businesses. Services noted included business plan assistance, information on access to small business financing, information related to intellectual property, enabling prototyping through access to 3D printers, providing workspaces for startups, and providing specialized programs for youth and immigrants interested in starting a business. This article provides many examples of public libraries providing services under each of these areas.¹⁹
- A paper out of Purdue University, "The Future of Innovation: How Libraries Support Entrepreneurs," provides case material on three libraries, one of which was a public library, the Mount Prospect Public Library in Illinois.²⁰
- A series of papers, which were part of a planning grant awarded by IMLS, examined the role of libraries in small business development in rural areas of Tennessee. As part of this effort, the

¹⁷ Polhamus, N. (2004). A study of cooperative relationships between small business development centers and public libraries [Masters Thesis].

¹⁸ Manley, M. (1942). *Public library service to business: A comparative study of its development in cities of 70,000 and more*. Newark, NJ: Newark Public Library.

¹⁹ Wapner, C. (2016). The People's Incubator: Libraries Propel Entrepreneurship. *OITP Perspectives*, 4.

²⁰ Stonebraker, I., Howard, H. A., Collier, J., & Raza, S. (2018). The Future of Innovation: How Libraries Support Entrepreneurs. In *Libraries Faculty and Staff Scholarship and Research*. Retrieved from https://docs.lib.purdue.edu/lib_fsdocs/211.

researchers surveyed 120 small businesses and found very limited use of the library among respondents.²¹

While the literature is limited, two relevant initiatives focus on the role libraries play in small business and entrepreneurship:

1. In May 2018, the Urban Libraries Council (ULC) launched an initiative on “Strengthening Libraries as Entrepreneurial Hubs.”²² This initiative, in collaboration with the Ewing Marion Kauffman Foundation, sought to strengthen the role of public libraries in nurturing and promoting entrepreneurship in their communities. As part of this effort, ULC completed a national scan of how libraries were supporting entrepreneurs in their communities and surveyed 116 members. The survey found that more than 96 percent of respondents indicated that their libraries provided services to support entrepreneurs; 63 percent responded that they provided one-on-one assistance to support business development activities, and 40 percent indicated they had dedicated space to support entrepreneurs. This survey also found that most of the libraries wanted greater recognition of their role as an essential partner in building an entrepreneurial community. Despite this goal, only 35 percent collected outcome data, and only 28 percent maintained contact with those who used their services to monitor progress. Commitment to privacy was the primary reason that they did not follow up on outcomes.
2. More recently, in 2020, the ALA and Google.org embarked on a new initiative, Libraries Build Business. This initiative included a survey of 48 libraries and will include more in-depth case studies around how a selection of public libraries is serving the small business development needs in their communities.

These two initiatives provide evidence of the strong interest in this subject. The surveys of libraries and users provide evidence that this is an area of both need and activity on the part of libraries, and there are a large number of examples of libraries providing small business support services. However, there are few in-depth studies that look at the relationship of libraries within the broader small business support ecosystem or seek to assess the outcomes of the services that libraries provide.

Existing library outcome measurement efforts

Libraries, like other publicly funded agencies, are increasingly seeking program data to understand patron outcomes, communicate program results, and improve service implementation. Libraries are also using data to identify service gaps and evaluate the needs of users against existing service offerings.²³

There are multiple data collection efforts, including surveys, outcome efforts, and benchmark tools, that libraries can access to facilitate data collection and learning. The measures typically collected through these efforts focus primarily on library-reported program inputs (e.g., staffing, resources, and materials), program outputs (e.g., classes, activities, or services provided), and patron self-

²¹ Mehra, B., Bishop, B. W., & Partee, R. P. (2017). Small Business Perspectives on the Role of Rural Libraries in Economic Development. *The Library Quarterly*, 87 (1), 17–35.

²² Urban Libraries Council (2019). *Strengthening libraries as entrepreneurial hubs*. Washington DC: Urban Libraries Council; and Urban Libraries Council (2019). *Strengthening libraries as entrepreneurial hubs: Summary of National Scan*. Washington DC: Urban Libraries Council

²³ Chavira, C. (2018, July 9). Libraries, Technology, and the Route to Relevance. *Governing: The Future of States and Localities*.

reports on content learned or applied and behavior changed because of participation in library programming. Although the existing library outcome measurement tools provide flexible capacity to measure diverse program activities, there are limited examples in the literature of libraries pursuing more complex data collection or outcome measurement processes. For example, it is rare to find libraries collecting individual-level program or outcome data that includes personally identifiable information (e.g., Social Security numbers or birthdates), linking with other data sources to measure outcomes through secondary sources (e.g., education or labor data), or pursuing long-term follow up to develop a longitudinal database of patron participation and outcomes.

The following section describes the four primary outcome measurement efforts currently underway on a national scale, including the annual Public Libraries Survey, the Impact Survey, the Edge benchmarking effort, and the Project Outcome initiative.

Public Libraries Survey

The Public Libraries Survey (PLS) is an online survey completed by librarian respondents. At the state level, the state library agency from each state appoints data coordinators who administer the survey annually. The state data coordinators request the data from local public libraries and report it to the IMLS via a web-based reporting platform. The U.S. Census Bureau acts as the collection agent for these surveys, but the data themselves are available through the IMLS. The PLS is the most widespread data collection effort, with roughly 9,000 public libraries and 17,000 individual public outlets from every state and territory reporting.

Data collected through the PLS include content on the number of library visits, circulation, size of collection, service hours, staffing, electronic resources, operating revenues, expenditures, and number of service outlets. There are limited survey elements in the PLS related to workforce development; however, several states have added data elements that cover this area. For example:

- Colorado asks librarian respondents whether their library offers training (in the form of programs, access to software, or one-on-one help) and on the economy and workforce development, such as resume development, job search, or online business resources.
- Minnesota asks librarian respondents whether their library provides outreach services related to workforce development.
- Missouri asks whether libraries partner with or provide workforce development programs or services, and who their economic or workforce development partners are.
- Nevada asks how many of their adult programs were related to workforce or economic development, and with which agencies the library partnered to provide workforce development programs.
- South Dakota asks whether the libraries assist patrons with workforce development, such as finding employment resources, filing job applications, writing resumes, or practicing interview skills.
- Virginia also asks whether libraries provide workforce development assistance such as creating resumes or applying for jobs online.

Many other states have also added supplemental questions to the PLS survey to ask whether the library provides young adult or adult services related to literacy, GED, or ELS services, which may also overlap with traditional workforce development offerings.

The PLS provides consistent administrative, fiscal, and programmatic data that can be tracked over time. Key areas of research that stem from the PLS survey include analysis on public library financial health, library resources, services, usage, and staffing variation across libraries. These broad data elements can provide consistent baseline or administrative context to compare variation in programming outcomes and patron experience.

Edge

Edge is an online assessment tool that facilitates the evaluation of libraries' community value, engagement with the community and decision-makers, and organizational management. The ULC leads the national coalition of library and local government organizations that developed the Edge Initiative with support from the Bill & Melinda Gates Foundation. The coalition includes the ALA Office for Technology Policy, the ICMA, OCLC, and WebJunctionLyrasis, among others. The Edge toolkit provides participating libraries with resources to help them gauge their results compared to national benchmarks and peer libraries. Participation in Edge is by subscription and library administrator subscribers determine the frequency of updating assessment responses. Approximately 27,000 libraries, or 30 percent of libraries nationally, participate in Edge.

Related to education and workforce development, Edge asks libraries about their provision of technology classes, their content and e-resources for workforce development support, and how libraries use their resources and technology to assist in patron education. Edge can help libraries evaluate their technology offerings, better align technology to user needs, and communicate the value of their services.

Immediately after a library completes the Edge assessment tool, they receive a set of standardized reports that include comparison to other peer libraries, national benchmarks, and case studies. These resources help libraries to consider their technology programming and utilization, assess opportunities for improvement, and benchmark their progress with peer institutions.

Project Outcome

The PLA, with funding from the Bill & Melinda Gates Foundation, launched Project Outcome, a free data collection, utilization, and communication effort that helps public libraries understand and share the impact of essential library services and programs. The theory of change underlying the initiative is that if public libraries have access to comprehensive resources that support collection, use, and engagement of library outcome data, the public library field as a whole will increase the use of outcome data for program planning, improvement, decision making, communication, and broader community engagement and partnership. The goal is that long-term, these changes will result in increased library funding and library-community alignment.

Project Outcome has two key pillars: 1) a set of deployable patron surveys developed and piloted by field experts; and 2) a web-based portal for data entry, automated analysis and reporting, and interactive visualizations. Project Outcome designed the "immediate surveys" to capture information immediately after completion of a program or service. The goal of immediate surveys is to help libraries understand the immediate patron impact and intention to change behavior as a

result of library programming.²⁴ Libraries are then able to deploy follow-up surveys six weeks or later after participation in library programming to gain a better understanding of whether a patron has changed their behavior or perceived other outcomes resulting from service participation.²⁵ Findings from an evaluation of Project Outcome suggest that few libraries were implementing follow-up surveys compared to immediate surveys, but that they planned to increase the use of follow-up surveys in the future.

The Project Outcome standardized surveys are available across seven content areas: civic/community engagement, digital learning, early childhood literacy, economic development, education/lifelong learning, job skills, and summer reading. Libraries may also use Project Outcome to develop their own surveys based on the same format. Project Outcome data are available immediately and the initiative offers data collection and analysis tools to support staff in aggregating and making meaning of the results.

As of June 2017, more than 400 libraries had implemented Project Outcome surveys, with over 60,000 survey responses collected between 2015 and 2017. Project Outcome surveys' streamlined design imposes minimal burden on patron respondents. Most surveys have six or seven questions and take five minutes or less, per area, to complete.²⁶

An evaluation of Project Outcome suggests that participation in the program can help libraries track their impact across time, improve and expand programs, support new partnerships, and increase library championship in the community.²⁷ Libraries also indicated that participation in Project Outcome enabled them to reach more people with the same amount of resources and secure more funding or resources.²⁸ From a program management perspective, Project Outcome evaluation findings suggest that participation in the initiative increases a culture of support for outcomes measurement and an interest in impact. Findings also show that although it was harder for smaller libraries to progress to data collection, once they did, they were more likely to increase regular use of outcome data compared to larger libraries. The evaluation also notes that although state library agencies appreciated the value of Project Outcome for libraries, they had not yet internalized the value of Project Outcome for state library agency use.²⁹

²⁴ Immediate survey questions include whether patrons learned something new, felt confident about using what they learned, and intended to apply what they learned. They also ask about awareness of library services, what they liked about the program, and suggestion for additional library activities.

²⁵ Follow-up surveys ask patrons if they used what they learned and if they discussed or shared what they learned. They also asked what they liked about the program, if they used another library program, and suggestions for additional library programming.

²⁶ Smith, J. L., Matthews, J., Crandall, M., Nyberg, S., & Cherubini, T. (2017). *Landscape of Major US Public Library Data Collection Efforts: A Working Paper for the Measures that Matter Initiative*.

²⁷ Lopez, S. (2018). Project Outcome results in action. *Public Library Quarterly*, 37(2), 150-165.

²⁸ ORS Impact (n.d.). *Project Outcome: Final Evaluation Findings*. Chicago, IL: Public Library Association.

²⁹ Ibid.

Impact Survey

PLA now houses Impact Survey, which was originally part of the University of Washington's Information School.³⁰ The survey collects patron feedback on their use of technology in several program areas, including education, employment, entrepreneurship, health and wellness, civic engagement, and social inclusion.

The Impact Survey included several data elements related to workforce development and/or employment and training, including:

- whether patrons had started a personal business, and how libraries supported entrepreneurs and small business development, including business-related research, locating potential customers, or finding business-to-business contract opportunities;
- patron use of library computers or internet connection;
- employment or career purpose for using library computer or internet connection, including taking an online class or workshop, completing coursework, or taking a school-related test;
- how patrons used libraries for employment or career purposes, such as looking for work, preparing job application materials, completing work for current job, or getting job training;
- whether patron use of library internet or computer results in a job interview or hire; and
- how libraries use resources and technology to assist in the education of library patrons, including to learn about or apply for a degree or certificate program.

Libraries that participate in the survey receive a comprehensive report of responses as well as five other targeted narrative reports designed for different audiences. They also receive the dataset for their site and tools to facilitate the use of data. Libraries can choose how frequently they administer the Impact Survey. Between 2013 and 2017, 746 libraries ran 1,126 technology surveys annually or semi-annually. The survey takes approximately 10 to 15 minutes to complete. Libraries collected over 85,000 responses within that timeframe.³¹

Status of workforce development outcome measurement

Multiple workforce development programs from diverse funding sources work together to provide education, training, and support for workers and employers. This section provides an overview of the public workforce development programs, existing outcomes measurement systems, and efforts to align and share metrics across programs. Detailed information on each outcome measurement system follows this overview.

Workforce development programs serve youth, adults, dislocated workers, and people with disabilities. Key programs that form the foundation of the workforce development field include:

- WIOA Title I programs for adults, dislocated workers, and youth;

³⁰ See Public Library Association (n.d.). *Impact Survey* [Survey instrument]. Retrieved from http://www.ala.org/pla/sites/ala.org.pla/files/content/initiatives/impactsurvey/Access_at_a_Glance_survey.pdf

³¹ Smith, J. L., Matthews, J., Crandall, M., Nyberg, S., and Cherubini, T. (2017). *Landscape of Major US Public Library Data Collection Efforts: A Working Paper for the Measures that Matter Initiative*.

- WIOA Title II adult education programs;
- WIOA Title III employment services;
- WIOA Title IV vocational rehabilitation services;
- Temporary Assistance for Needy Families (TANF) Employment and Training;
- Supplemental Nutrition Assistance Program (SNAP) employment and training;
- secondary career and technical education;
- community and technical college workforce education and training (postsecondary career and technical education);
- apprenticeships;
- corrections employment and training; and
- customized training for employers, including incumbent worker training.

Each of these workforce development programs conducts outcome measurement focusing on individual, program, and organizational-level outcomes. This reflects a recent shift in the field from measuring process elements to measuring outcomes and has galvanized efforts to align measures across programs to better connect low-income individuals with programs that lead to in-demand skills and credentials.³² Several recently initiated workforce data advocacy efforts, such as the Workforce Data National Advisory Panel and the SkillSPAN network for state advocacy coalitions, convene diverse stakeholders in pursuit of meaningful workforce development data collection and use. Sharing and analyzing data across programs in this way provides utility to diverse stakeholders, such as students and workers selecting which training programs provide the best employment or education outcomes, policymakers managing public resources and pursuing equity, business leaders seeking skilled employees, and educators using long-term outcomes to inform program improvements.³³

The goal of the WIOA is to strengthen the nation's public workforce system, facilitate access to and retention in high-quality jobs and careers for all Americans, and meet employer demand for skilled workers. WIOA performance measures serve as the most universal and systematic workforce data collected across the country. Community programs providing workforce development services outside of the WIOA system may incorporate WIOA performance measures into their outcome reporting to improve their ability to benchmark program progress and communicate program outcomes in a common language.

Other community providers may use alternative or supplemental data measures to capture program outcomes, including those collected through the Workforce Benchmarking Network (WBN), a robust association of public and private workforce programs committed to sharing data to benefit the field as a whole. The State Workforce and Education Alignment Project (SWEAP), an initiative of National Skills Coalition, intends to create better cross-program information to inform workforce

³² Desjardins, K., Kaleba, K., & Wilson, B. (2019). *Measuring what matters: Shifting Temporary Assistance for Needy Families to an outcome-based model*. Washington DC: National Skills Coalition.

³³ National Skills Coalition (2019). *Smart Data for a Skilled, Inclusive 21st Century Workforce*. Washington DC: National Skills Coalition.

development policy and assist individuals in achieving postsecondary credentials and higher-paying employment. Several organizations also advocate for a robust longitudinal data system to better map workforce development paths and outcomes. These could include state longitudinal data systems that replace student survey data and allow consumers to view enrollment, retention, graduation, cost, employment, earnings, and further education rates, among other measures, or a student-level data network that includes cross-state unemployment insurance data and enables matching postsecondary data elements to postsecondary and workforce outcomes.³⁴

Outside of the program-specific data collected through WIOA or initiatives like the WBN or SWEAP, organizations may draw on labor market and public use data to build economic or workforce development programs. Additionally, workforce development programs draw on field-derived best practices to measure and improve organizational outcomes related to workforce development, including key success drivers required for robust program implementation.

WIOA performance measures

WIOA common performance measures collect common data across a variety of employment and training options and support evidence-based and data-driven federal investments in workforce development. The WIOA performance indicators provide joint measurement across core WIOA programs, including Title I (Adult, Dislocated Workers, and Youth), Title II (Adult Education), Title III (Wagner-Peyser), and Title IV programs (Vocational Rehabilitation). Programs report on the same indicators, using the same definition and data elements.

The Integrated Performance Information Project, consisting of state leaders from five states, the National Governors' Association, and the Ray Marshall Center at the University of Texas, formed the basis for the development of the WIOA performance measures.³⁵ The group included broad representation from WIOA, TANF, adult education, community and technical colleges, secondary career and technical education, and vocational rehabilitation stakeholders who considered what the best measures would be if all programs helping to prepare people to work were assessed by the same indicators. The resulting small set of measures became the foundation of the WIOA common performance measures.

The six WIOA common performance measures, collected on an ongoing basis through the public workforce development system and its partners, include:³⁶

- percentage of program participants who are in unsubsidized employment during the second quarter after program exit;
- percentage of program participants who are in unsubsidized employment during the fourth quarter after program exit;

³⁴ Ibid.; and Pena, C. (2018). *Workforce Success Relies on Transparent Postsecondary Data*. Washington DC: National Skills Coalition.

³⁵ Desjardins, K., Kaleba, K., & Wilson, B. (2019). *Measuring what matters: Shifting Temporary Assistance for Needy Families to an outcome-based model*. Washington DC: National Skills Coalition.

³⁶ Workforce Innovation Technical Assistance Center. (n.d.). *Transition to the Common Performance Accountability System*. Retrieved from <http://www.wintac.org/topic-areas/transition-to-the-common-performance-accountability-system>.

- median earnings of participants who are in unsubsidized employment during the second quarter after exit from the program;
- percentage of participants in a postsecondary education or training program and received a credential/certificate during the program or within one year after exit or received a diploma or equivalent from a secondary education program while in program or within one year of exit **AND** who were employed or enrolled in an education or training program leading to a recognized postsecondary credential within one year after exit;
- percentage of participants, who during a program year, are in an education or training program that leads to a recognized postsecondary credential or employment **and** who are achieving measurable skill gains toward such a credential or employment; and
- effectiveness in serving employers.

The performance measures include data from individuals who have participated in qualifying services, such as comprehensive assessments, career counseling, individualized assistance, and training or prevocational services. The data collection also includes data from individuals who participated in limited services only, such as eligibility determination, self-services, or receiving general information, but these data do not count toward performance measures.³⁷ Employment performance data can come from Unemployment Insurance records, federal employment records, or supplemental data.³⁸

Measurement of effectiveness in serving employers looks at data around retention with the same employer, repeat business customers, or the employer penetration rate. Several researchers in the field have advocated for more complex measurement of employer engagement, including a point menu system that would award varying levels of points to workforce development boards based on the degree of intensity and value of services provided to employers. In this model, higher points would reflect deeper, longer-term relationships, and states would accumulate points toward their aggregate goal as local entities complete activities and outcomes defined in a master menu.³⁹ Although WIOA reporting requirements have not fully captured this level of nuance, it illustrates field-based proposals to use performance measurement to stimulate innovation in employer engagement and other workforce development activities.

Workforce Benchmarking Network

The Corporation for a Skilled Workforce's Workforce Benchmarking Network (WBN) facilitates workforce data quality and improved field capacity to use data to improve services and policies. The WBN pursues this mission through four key activities: a workforce data survey and reports on performance benchmarks and peer comparisons; peer learning workshops, tools, and technical assistance; guidelines for effective practices; and policy and systems change efforts.

³⁷ DOLETA (2017). *Beyond 101: WIOA Performance Accountability*. Continuing the Conversation, 2017 WIOA National Convenings. Washington DC: Department of Labor, Employment and Training Administration

³⁸ D'Amico, R. (2017). *Introduction to WIOA Common Performance Measures: Measurement and Data Collection*. Oakland, CA: Social Policy Research Associates.

³⁹ Choitz, V., Helmer, M., & Conway, M. (2016). *A New WIOA Measure Deserves a New Way of Measuring. A Point-Menu System for Measuring Effectiveness in Service Employers*. Washington DC: Workforce Strategies Initiative, Aspen Institute.

The workforce data collected through the WBN survey provide broad organizational, programmatic, and outcome measures.⁴⁰ Program information includes the types of services provided and approximate participation rates, employer engagement activities, and the number of participant hours in pre- and post-employment activities. The survey also captures participant demographic information. Outcome measures collected through the survey include initial completion and placement outcomes, including median wage, full-time status, and benefit status at placement, as well as employment retention and financial security outcomes. Organizational data include the type of organization and number of years providing workforce development services, sources of program revenue, number of staff and volunteers engaged in the program, and enrollment and acceptance selectivity processes.

A broad sample of community-based organizations and other workforce providers and intermediaries submit data to WBN in aggregate form. They submit data for participants who enrolled in a program over a one-year period. Although programs that participate would need access to individual-level data to collect the needed elements, the aggregate nature of data submission eliminates the need for data sharing agreements between organizations and WBN as there is no sharing of personally identifiable information.

Programs may elect to provide outcomes disaggregated by race, ethnicity, and gender for more nuanced analysis and learning. Hundreds of organizations have provided WBN survey data since 2008, resulting in the largest national dataset of community-based organization workforce results. The collective data provide field-wide performance benchmarks and highlight critical factors for participant success.⁴¹ Programs that participate in the WBN receive:⁴²

- confidential, customizable reports comparing their program results to an “apples to apples” peer group;
- additional data about how others in the field are implementing program strategies; and
- access to webinars to assist with completing the survey, understanding the survey reports, and putting survey data to use.

Funders that support organizations’ participation gain additional technical assistance for organizations and more refined data analysis.

State Workforce and Education Alignment Project

The State Workforce and Education Alignment Project is an initiative of National Skills Coalition designed to create better cross-program information that enables policymakers to understand how workforce programs work together and how individuals can advance in education, training, and employment. The SWEAP initiative is helping to provide comprehensive information about the range of programs providing education and training, how these programs align, and how they collectively coordinate with labor market demand. SWEAP works collaboratively with states and stakeholders in

⁴⁰ See Corporation for a Skilled Workforce (2008). *Workforce Benchmarking Survey* [Survey Instrument]. Retrieved from <https://skilledwork.org/what-we-do/workforce-benchmarking-network/wbn-national-survey/>.

⁴¹ Information provided online at <https://skilledwork.org/what-we-do/workforce-benchmarking-network/>.

⁴² Information provided online at <https://skilledwork.org/what-we-do/workforce-benchmarking-network/wbn-national-survey/>.

the development of three key data tools that can provide system-wide information: dashboards, pathway evaluators, and supply and demand reports. During Phase 1, SWEAP developed its suite of data tools and identified states with the capacity to use the tools. During Phase 2, SWEAP worked with four states it identified as part of Phase 1 and piloted its tools.

Data dashboards display a limited number of common metrics to report consistent education and employment outcomes across programs. Stakeholders can use dashboards to compare programs, assess outcomes compared to program resources, and understand key participant outcomes, such as whether participants earn credentials, gain employment, and receive livable wages. Key dashboard steps include setting key metrics (research suggests that WIOA measures are a good starting point), choosing which programs to include, and measuring data over time.⁴³

Pathway evaluator tools illustrate how individuals access a range of education and training programs to earn credentials and move into employment. They help policymakers and prospective participants understand if programs are creating pathways to middle-skill jobs, which pathways work best for which people, and whether people with different needs have access to the right programs. Pathway evaluator tools require information related to the populations of interest (in which programs they have enrolled, their skill needs, and their socioeconomic or demographic characteristics), the pathways of cross-program participation (whether individuals are participating in more than one program at the same time, or in multiple programs sequentially), and shared outcome measures across different pathways.⁴⁴

Supply and demand reports can help policymakers, funders, and program operators ensure alignment between programming and labor market needs. They help answer fundamental questions of what occupations have skills gaps, how the supply of newly credentialed workers compares to demand, and how many more skilled workers are needed and with what skills.⁴⁵ Supply and demand reports measure credential attainment, identify demand through labor market information, and use forward-looking analysis to compare supply to future demand.⁴⁶

More broadly, labor market and workforce development data can help policymakers and program providers understand their communities and hone service options. Publicly available demographic, administrative, and economic data can help stakeholders answer the following questions:⁴⁷

- Who is and who is not working in my region?
- What barriers to obtaining and sustaining employment do residents face?
- What jobs are available in my region?

⁴³ Prince, H., King, C. T., Wilson, B., & DeRenzi, B. (2015). *Are People Getting Credentials That Lead to Jobs? Using Dashboards for State Workforce Planning*. Washington DC: National Skills Coalition.

⁴⁴ Prince, H., King, C. T., Wilson, B., & DeRenzi, B. (2015). *Who is Being Served Well? Using Pathway Evaluators for State Workforce Planning*. Washington DC: National Skills Coalition.

⁴⁵ National Skills Coalition (2017). *State Workforce and Education Project (SWEAP) Phase Two Report*. Washington DC: National Skills Coalition.

⁴⁶ Wilson, B. (2014). *How Many More Skilled Workers Do We Need?* Washington DC: National Skills Coalition.

⁴⁷ Corporation for a Skilled Workforce (2019). *Understanding Your Community: Labor Market and Workforce Development System Data Toolkit*. Ann Arbor, MI: Corporation for a Skilled Workforce

- How is the workforce development system in my region helping achieve, retain, and advance employment?

Focused conversation and relationship building with regional industries and employers regarding skill gaps and training needs can improve the assessment and development of responsive programs.

Success drivers for organizational outcomes

Beyond the fundamental individual-level participation and outcome data that illustrate programs' success in moving participants toward education, credential, employment, and earning targets, research has identified critical success drivers that lead to positive organizational outcomes. Practitioners involved in the WBN who work with higher-performing organizations developed this framework based on benchmarking data.⁴⁸ Although there is no systematic collection of these data across programs, they can provide a useful opportunity for self-assessment and reflection as organizations develop or modify workforce services.

The first success driver for positive organizational outcomes is **engaged businesses**. Do programs have a defined organizational strategy for engaging business? Do they have a deep understanding of industry and employer needs, and how is that information gathered and refreshed? Do they provide a value-add in their relationship with employers and, if so, how? Have they developed an ongoing feedback loop to stay up to date on employer needs and refine services based on feedback?

The second success driver is a **qualified workforce**. Do program staff conduct intentional participant recruitment and engagement? Do they provide career-focused coaching and supportive services, and can they support demand-driven experiential training, such as contextualized programming and access to training that leads to industry-recognized credentials? Do staff strengthen participants' essential skills, such as workplace readiness, community, and critical thinking, and do they develop a community of support through a cohort approach, peer learning, and consistent contact and communication with participants?

The third identified success driver is **organizational adaptability**. Are leaders actively engaged with stakeholders? Do staff have diverse perspectives, skills, and experiences? Does the organization facilitate staff development around best practices and support a data-informed culture of learning?

The final success driver is **funding sustainability**. Does the organization pursue intentional resource development? Are board members, staff, and partners all active in seeking resources? Do all stakeholders share feedback and communicate about the organization's value and results?

Although these critical success drivers are not participant or program specific, fledgling or established workforce development organizations can use this framework to build or fortify services for greater success. Libraries may be able to apply these questions to their workforce development-specific services to grow or improve related practices.

⁴⁸ Corporation for a Skilled Workforce (2017). *Success Drivers*. Ann Arbor, MI: Corporation for a Skilled Workforce.

Synthesis

This literature review suggests the following:

- There is clear evidence that libraries are important components of both a community's workforce and small business development system and there is considerable interest in seeing libraries play an even more enhanced role in these areas.
- While the literature includes many examples of public libraries that are playing an important role in their community workforce and small business systems, there is no framework for these efforts nor a more comprehensive set of models under each activity.
- Many libraries are increasing data collection and outcome measurement efforts to assess library services, improve implementation, communicate progress, and ensure alignment with community needs. Each of these efforts includes targeted questions related to a library's workforce development programs or activities and focuses on program inputs, outputs, or patron-reported immediate- or short-term outcomes of participation.
- While many surveys provide data on the number of libraries providing workforce and small business support services, as well as data on users' interests in these services, there is virtually no study that has sought to assess the outcomes of the activities—the actual employment-related outcomes for individuals or business outcomes for the community.
- Some of the characteristics of libraries that define their unique value in the community (respect for privacy, openness, etc.) are also the barriers that make more intentional efforts to track outcomes problematic.
- The workforce development field has been increasing its use of performance measurement to improve data alignment across the multiple programs providing education, employment, and training services and to increase the policy and programmatic utility of data. Fully aligned performance measurement across workforce development programs and funding streams is still in development; resources needed to facilitate continued alignment across programs include data sharing agreements that link administrative records and employment and education data sets, as well as required use of Unemployment Insurance wage records as the primary source of employment and earnings data.⁴⁹

There are many implications for the current study based on this review:

1. There is a need in the field for a framework for categorizing libraries' role in their community related to workforce development and small business support.
2. A compendium of case materials and best practices that is easily accessible would be a significant contribution in the field.

⁴⁹ Desjardins, K., Kaleba, K., & Wilson, B. (2019). *Measuring what matters: Shifting Temporary Assistance for Needy Families to an outcome-based model*. Washington DC: National Skills Coalition.

3. Workforce development performance measurement in libraries will likely vary based on program structure, partnership, and capacity to collect and use performance data.
4. For workforce development programs or ad hoc services provided within a contained library ecosystem, maintaining current outcome measurement focused on inputs, outputs, and self-reported outcomes may be sufficient to inform program improvement and community library benefits.
5. For library programs that include formal partnerships with community agencies, data sharing agreements with WIOA, community colleges, or other service providers operating in partnership with libraries could provide needed data collection and measurement capacity and enable libraries to learn from and showcase more nuanced outcome data. Short of data sharing agreements, access to data analysis and participant outcomes from joint programs can help libraries improve services and communicate progress.
6. Workforce development programs run independently by libraries or in partnership with community providers may benefit from joining collective impact efforts that promote attribution and share cross-program data.

Bibliography

- Amundsen, J.L. (n.d.). *Libraries and Workforce Development*. Washington DC: Public Policy and Advocacy Office, American Library Association.
- Becker, S., Crandall, M. D., Fisher, K. E., Kinney, B., Landry, C., and Rocha, A. (2010). *Opportunity for All: How the American Public Benefits from Internet Access at US Libraries*. Washington DC: Institute of Museum and Library Services.
- Bertot, J.C., Real, B., Lee, J., McDermott, A.J., and Jaeger, P.T. (2015). *2014 Digital Inclusion Survey: Findings and Results*. College Park, MD: Information Policy & Access Center, University of Maryland College Park.
- Bishop, B. W., Mehra, B., & Partee, R. P. (2016). The role of rural public libraries in small business development. *Public Library Quarterly*, 35(1), 37-48.
- Chavira, C. (2018, July 9). Libraries, Technology, and the Route to Relevance. *Governing: The Future of States and Localities*. Retrieved from <https://www.governing.com/gov-institute/voices/col-public-libraries-leverage-technology-build-relevance.html>.
- Conroy, C. (2018, Jan. 19). Lifelong Leveraging of Human Potential: The role of Public Libraries in Lifelong Workforce Training. *Georgetown Public Policy Review*. Retrieved from <http://gppreview.com/2018/01/19/lifelong-leveraging-human-potential-role-public-libraries-lifelong-workforce-training/>
- Choitz, V., Helmer, M., and Conway, M. (2016). *A New WIOA Measure Deserves a New Way of Measuring. A Point-Menu System for Measuring Effectiveness in Service Employers*. Washington DC: Workforce Strategies Initiative, Aspen Institute. Retrieved from <https://assets.aspeninstitute.org/content/uploads/2017/05/A-New-WIOA-Measure-Deserves-a-New-Way-of-Measuring.pdf>.
- Corporation for a Skilled Workforce (2008). *Workforce Benchmarking Survey* [Survey Instrument]. Retrieved from <https://skilledwork.org/what-we-do/workforce-benchmarking-network/wbn-national-survey/>.
- Corporation for a Skilled Workforce (2017). *Success Drivers*. Ann Arbor, MI: Corporation for a Skilled Workforce. Retrieved from <http://skilledwork.org/wp-content/uploads/2019/05/Success-Drivers-Fall-2017.pdf>.
- Corporation for a Skilled Workforce (2019). *Understanding Your Community: Labor Market and Workforce Development System Data Toolkit*. Ann Arbor, MI: Corporation for a Skilled Workforce. Retrieved from <http://skilledwork.org/wp-content/uploads/2018/12/CSWLaborMarketReport-SinglePage-Jan-2019.pdf>.
- D'Amico, R. (2017). *Introduction to WIOA Common Performance Measures: Measurement and Data Collection*. Oakland, CA: Social Policy Research Associates. Retrieved from <https://ina.workforcegps.org/resources/2018/04/09/19/32/-/media/0DA23FD0806B4DE184BE16BF2A15CBEB.ashx>.
- Desjardins, K., Kaleba, K., and Wilson, B. (2019). *Measuring what matters: Shifting Temporary Assistance for Needy Families to an outcome-based model*. Washington DC: National Skills Coalition. Retrieved

from <https://m.nationalskillscoalition.org/resources/publications/file/NSC-TANF-FINAL-6.24.19-MED-RES-pdf.pdf>.

- DOLETA (2017). *Beyond 101: WIOA Performance Accountability*. Continuing the Conversation, 2017 WIOA National Convenings. Washington DC: Department of Labor, Employment and Training Administration.
- Durrance, J. C. (1991). Kellogg Funded Education and Career Information Centers In Public Libraries. *Journal of Career Development*, 18(1), 11–17.
- Garmer A. K. (2014). *Rising to the Challenge: Re-Envisioning Public Libraries*. Washington DC: Aspen Institute Dialogue on Public Libraries, Aspen Institute. Retrieved from <https://csreports.aspeninstitute.org/documents/AspenLibrariesReport.pdf>.
- Goodman, E. P. (2013). Smart Cities Meet Anchor Institutions: the Case of Broadband and the Public Library. *Fordham Urban Law Journal*, 41, 1665.
- Gutsche, B., and WebJunction. (2010). *A year with Project Compass: Libraries provide direction in tough times*. Dublin, OH: OCLC Online Computer Library Center.
- Hildreth, S. (2012). Inspiring libraries as community anchors. *National Civic Review*, 101(4), 44-47.
- Holcomb, S., Dunford, A., and Idowu, F. (2019). *Public Libraries: A Community's Connection for Career Services*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University.
- Holcomb, S. (2020). Public Libraries and the Workforce. *Workforce Currents*. Atlanta, GA: Federal Reserve Bank of Atlanta.
- Horrigan, J. B. (2015). *Libraries at the Crossroads*. Washington DC: Pew Research Center.
- Horrigan, J. B. (2017). *The Role of Libraries in Advancing Community Goals*. Washington DC: Aspen Institute.
- Lopez, S. (2018). Project Outcome results in action. *Public Library Quarterly*, 37(2), 150-165.
- Manjarrez, C. A., Cigna, J., and Bajaj, B. (2007). *Making cities stronger: Public library contributions to local economic development*. Washington DC: Urban Institute. Retrieved from <http://www.urban.org/url.cfm?ID=1001075>.
- Manley, M. (1942). *Public library service to business: A comparative study of its development in cities of 70,000 and more*. Newark, NJ: Newark Public Library.
- Mehra, B., Bishop, B. W., and Partee, R. P. (2017). Small Business Perspectives on the Role of Rural Libraries in Economic Development. *The Library Quarterly*, 87 (1), 17–35.
- Mersand, S., Gasco-Hernandez, M., Udoh, E., and Gil-Garcia, J. R. (2019, January). Public libraries as anchor institutions in smart communities: Current practices and future development. In *Proceedings of the 52nd Hawaii International Conference on System Sciences*.
- National Skills Coalition (2017). *State Workforce and Education Project (SWEAP) Phase Two Report*. Washington DC: National Skills Coalition. Retrieved from <https://m.nationalskillscoalition.org/state-policy/body/SWEAP-Phase-Two-Report.pdf>.

- National Skills Coalition. (2019). *Smart, Data for a Skilled, Inclusive 21st Century Workforce*. Washington DC: National Skills Coalition. Retrieved from <https://www.nationalskillscoalition.org/national-initiatives/workforce-data-quality-campaign>.
- Norton, M. H., & Dowdall, E. (2016). *Strengthening Networks, Sparking Change: Museums and Libraries as Community Catalysts*. Washington DC: Institute of Museum and Library Services. Retrieved from <https://www.ims.gov/sites/default/files/publications/documents/community-catalyst-report-january-2017.pdf>.
- Oates, J. (2010). *Encouraging Partnerships between the Workforce Investment System and Public Libraries to Meet Career and Employment Needs*. [Internal U.S. DOLETA Training and Employment Notice]. Washington DC: Department of Labor, Employment and Training Administration. Retrieved from <https://wdr.doleta.gov/directives/attach/TEN/ten2009/ten50-09.pdf>.
- Open Door Collective (2020). Why Public Libraries and Adult Basic Education Programs Should Advocate for and Partner with Each Other. Retrieved from <https://www.opendoorcollective.org/why-public-libraries-and-adult-basic-education-programs-should-advocate-for-and-partner-with-each-other.html>.
- ORS Impact (n.d.). *Project Outcome: Final Evaluation Findings*. Chicago, IL: Public Library Association.
- Pena, C. (2018). *Workforce Success Relies on Transparent Postsecondary Data*. Washington DC: National Skills Coalition. Retrieved from https://m.nationalskillscoalition.org/resources/publications/file/Workforce-success-relies-on-transparent-postsecondary-data_web.pdf.
- Polhamus, N. (2004). A study of cooperative relationships between small business development centers and public libraries [Masters Thesis].
- Prince, H., King, C. T., Wilson, B., and DeRenzis, B. (2015). *Are People Getting Credentials That Lead to Jobs? Using Dashboards for State Workforce Planning*. Washington DC: National Skills Coalition. Retrieved from https://nationalskillscoalition.org/resources/publications/file/SWEAP_Using_Dashboards_for_State_Workforce_Planning.pdf.
- Prince, H., King, C. T., Wilson, B., and DeRenzis, B. (2015). *Who is Being Served Well? Using Pathway Evaluators for State Workforce Planning*. Washington DC: National Skills Coalition. Retrieved from https://m.nationalskillscoalition.org/resources/publications/file/SWEAP_Pathway_Evaluator_Report.pdf.
- Public Library Association (n.d.). *Impact Survey* [Survey instrument]. Retrieved from http://www.ala.org/pla/sites/ala.org.pla/files/content/initiatives/impactsurvey/Access_at_a_Glance_survey.pdf.
- Smith, J. L., Matthews, J., Crandall, M., Nyberg, S., and Cherubini, T. (2017). *Landscape of Major US Public Library Data Collection Efforts: A Working Paper for the Measures that Matter Initiative*. Retrieved from <https://digital.lib.washington.edu:443/researchworks/handle/1773/40725>.

- Stonebraker, I., Howard, H. A., Collier, J., and Raza, S. (2018). The Future of Innovation: How Libraries Support Entrepreneurs. In *Libraries Faculty and Staff Scholarship and Research*. Retrieved from https://docs.lib.purdue.edu/lib_fsdocs/211.
- Wapner, C. (2016). The People's Incubator: Libraries Propel Entrepreneurship. *OITP Perspectives*, 4.
- Wilson, B. (2014). *How Many More Skilled Workers Do We Need?* Washington DC: National Skills Coalition. Retrieved from <https://nationalskillscoalition.org/resources/publications/file/how-many-more-skilled-workers.pdf>.
- Workforce Innovation Technical Assistance Center. (n.d.). *Transition to the Common Performance Accountability System*. Retrieved from <http://www.wintac.org/topic-areas/transition-to-the-common-performance-accountability-system>.
- Young, R. (2012), More Than Just Books: The Role of Public Libraries in Building Community and Promoting Civic Engagement. *National Civic Review*, 101: 30-32
- Urban Libraries Council (2019). *Strengthening libraries as entrepreneurial hubs*. Washington DC: Urban Libraries Council. Retrieved from: <https://www.urbanlibraries.org/initiatives/strengthening-libraries-as-hubsfor-entrepreneurship>.
- Urban Libraries Council (2019). *Strengthening libraries as entrepreneurial hubs: National Scan*. Washington DC: Urban Libraries Council. Retrieved from: <https://www.urbanlibraries.org/assets/2018-Entrepreneurship-National-Scan-Summary.pdf>.