The Power of Performance: Outcome Measurement in Modern Times

Denise M. Davis
Sacramento Public Library, USA

Emily Plagman
Public Library Association, USA

Abstract

In 2015, the Public Library Association, in partnership with the Performance Measurement Task Force, launched its latest field driven initiative: Project Outcome. Project Outcome is dedicated to helping public libraries understand and share the true impact of essential library services and programs. Project Outcome provides libraries with patron-focused surveys for seven primary service areas, online, interactive tools for collecting and analyzing the data, and practical guidance using the results for advocacy, planning, and decision making. The paper will study the participation rates and activity of its enrolled users, examining the participation and outcome measurement adoption rates across the field. It will also review the aggregated patron response data, collected by libraries across the country, in order to determine national trends of the outcomes of library programs and services. Lastly, it will identify areas where its users have analyzed the patron data and taken action as a result of their findings. The research design is simple and straightforward: aggregate library-participant data and patron responses were pulled and analyzed using Excel. The results represent data collected between January and April 2016. The results of this research will provide a clearer understanding of how the public library field is adopting outcome measurement and using the data to make better and more informed decisions about their library.

Background

Project Outcome identified seven essential library service areas that could be easily and directly linked to improving or changing patrons' knowledge, behavior, skills/application, and awareness: civic/community engagement, digital learning, economic development, education/lifelong learning, early childhood literacy, job skills, and summer reading.

Immediate surveys are uniformly designed with a purpose of capturing agreement scale responses regarding the knowledge, behaviors, skills/application, and awareness of the program or service after participating in a program or service offered by the public library. Follow-up surveys were launched in June 2016 with a purpose of capturing adoption information from program or service participants. Guidelines for advanced assessment are in development and will be available in early 2017. The project's online toolkit offers a survey portal for scheduling surveys in each category and data dashboards to review aggregate responses using a range of data visualization tools. Survey responses can also be output to standardized summary reports for use with stakeholders and staff, and are available for export in spreadsheet format.

Methodology

Project Outcome's immediate surveys input by registered libraries between January 1 and April 12, 2016, were pulled for analysis. Immediate surveys use a Likert agreement scale, strongly agree to strongly disagree, and two open-ended questions for narrative feedback from service and/or program participants. Range response questions capture participant agreement with changes in four outcome areas—learning, confidence, use/learn, and awareness. For this preliminary study, only range response results were analyzed, and limited to the two highest response program areas—Education and Life Long Learning (ELL) and Early Childhood Literacy (ECL). Total survey response, program attendance reported, and survey response rate were used in analysis. Total responses by population of legal service area ranges as reported in the Public Library Association (PLA) Public Library Data System survey (PLDS) also are presented.

Broad program subcategories were established based on program title in order to cluster ELL responses. The subcategories were reviewed by Project Outcome staff and task force members, and have been applied only for the purposes of more meaningful analysis of aggregated responses. Categories for ELL include book groups, crafts, ESOL/languages, gardening, general programming, health/food, history/genealogy, skills, technology, and workforce development/job skills. Program titles for ECL programs were more difficult to cluster into subcategories and were, therefore, not established.

Responses

Survey inputs in the sample file represent public libraries in the United States and Canadian provinces. ELL surveys are from public libraries in CA, FL, HI, IN, KY, NY, PA, TX, UT, VA and the Canadian province Ontario; ECL surveys are from public libraries in CA, FL, and NY.

Figure 1 presents survey totals by PLDS population served ranges (see http://publiclibrariesonline .org/2014/05/2013-plds/). The ELL results include responses from 1,307 paper surveys and 80 web-based surveys for a total of 1,387 responses. No libraries with population served ranges below 10,000 are in the ELL test dataset. Notably, libraries utilizing web-based surveys were in population served ranges of 500,000 or more.

The ECL results include responses from 2,236 paper surveys and 16 web-based surveys for a total of 2,252 responses. No libraries with population served ranges of 10,000–24,999 and 50,000–99,999 are in the ECL test dataset.

Caveats

There were some quality observations noted in the sample data pulled for analysis. The first was attendance figures—in a few cases, survey responses recorded exceeded reported program attendance. This occurred twice in the ELL data sample and once in the ECL data sample. The second observation was blank cells—blanks ("not recorded") in attendance occurred only in the ELL dataset for one program. All records were retained in the sample file for the purposes of learning. The Project Outcome team is investigating alternative solutions to collecting and reporting attendance as part of future improvements to the portal.

Additional findings are available in Project Outcome's Annual Report, published in late October 2016, at www.projectoutcome.org.

Findings

Four key findings come from this preliminary analysis for the two most heavily used surveys. A few findings confirm expectations from the Project Outcome team and the Performance Measurement Task Force, while the third finding may be used to improve the data review process and over-arching learnings. The findings fall into two learning areas—data interpretation and data reliability.

- Data interpretation:
    - Ceiling effect for all outcome areas was anticipated and appears in the preliminary results
    - Analysis of results by outcome supports the expectation that national-level reporting on outcomes is possible
    - Developing a taxonomy to further sort programs may be valuable for some survey areas
- Data Reliability:
    - Survey response rates begin low and require ongoing commitment to build a body of results for greater understanding of impact (data reliability)

A concern acknowledged by the Performance Measurement Task Force throughout the survey design and piloting period was the ceiling effect, whereby results skew to a positive response range (data interpretation). This was borne out by the preliminary data analysis. Figures 2 and 8 present the overall results for the ELL and ECL responses. More than 89% of ELL and 90% of ECL respondents strongly agree or agree with the four program outcomes of the Project Outcome immediate surveys. The high level of positive response may be mitigated by careful review of the narrative responses and using them in combination to understand overall outcomes for a program or service.

A second area the task force had identified was recommending a less rigorous approach to selecting survey respondents over a more complex sampling approach (data reliability). Encouraging libraries to gather responses over time to understand impact was deemed less burdensome. Further, such an approach maintains the scalability of the tools for any size public library.

Figure 3 presents ELL total responses, attendance and response rate analysis by program subcategories. Survey response rates were lower in a few subcategories: general programming and workforce development/job skills—compared with gardening or technology. Gathering input over a longer period of time may yield more meaningful results. Figure 4 includes the number of ELL program respondents surveyed by category for the outcome "learning." Preliminary results support the premise that strategic surveying of iterative programs and increased participant responses increase a library's ability to gather meaningful data to understand ongoing impact of specific programs and services on the community. Additional investigation is required to determine if patterns of increased responses and higher or lower agreement emerge with the outcomes learning, confidence, use/learn, and awareness. Further, limited analysis of narrative responses is underway at this time. Linking narrative response analysis with agreement scales for each outcome is a next step in Project Outcome's assessment plan.

A third area of learning was the value in developing a taxonomy to sort ELL program titles into broad topical subcategories. This allowed for both aggregated analysis by outcome and more granular analysis by topical subcategory and outcome. Having both levels of analysis provides additional detail for national-level reporting on outcomes. Figures 3 through 6 present the ELL survey response overall and agreement results by outcome: learning, confidence, use/learn, and awareness. Drilling into ELL by program title subcategories also allows Project Outcome staff and task force members to improve methods and tools developed for the program overall.

This leads into the fourth area of learning, blending program areas. More defined program title subcategories by the four outcomes—learning, confidence, use/learn, and awareness—increases opportunities to speak more specifically to the impact of public library programs and services. It also supports engaging a wider audience through utilizing individual libraries' reporting on outcomes as part of state grant or other funder reports. Further, this result aligns with the PLA strategic plan core ideology—"strengthening public libraries and their contributions to the communities they serve," as well as specific goals around advocacy and awareness, and leadership and transformation.[1]

Finally, analysis of the aggregated results for each of the seven survey areas is also supported by data visualization tools built into the Project Outcome toolkit. Figures 9 and 10 present templates for presentation of aggregated results by outcome. Figure 9 presents the average score matrix for all categories and outcome area, and Figure 10 displays a chord display of aggregated results by outcome. State libraries have expressed interest in having similar displays for all public libraries in their respective states using Project Outcome surveys, and Project Outcome staff have created views specific to those requests.

Using Results for Change

Libraries across the United States and Canada have used Project Outcome results to make programming changes, identify partnership opportunities, apply for grant funding, and use their results for many different types of advocacy purposes. As an example, Plano Public Library System in Plano, Texas, used the Early Childhood Literacy (ECL) survey to measure the impact of STEAM kits they make available to patrons. In January and February of 2016, staff began inserting the surveys into the 30 kits that circulate at the Maribelle M. Davis Library. The kits were circulating approximately three times per month. The staff wanted to gather patron feedback on how the patrons were using the kits and to see if they might have suggestions for improving the STEAM kit program. The library had a 17% return rate for the surveys and as they expected, the patrons loved the hands-on experience of working with the items in the kits. They commented that this helped their children to learn and understand the topic better. They also liked that it was an opportunity to learn with their child. And they of course wanted more kits. The library staff were surprised, however, by some patron feedback suggesting the Plano Public Library System should do children's programs based on the topics of the STEAM kits. Some of the patrons were unaware of the numerous programs already being presented. During 2015, the Plano Public Library System had presented 436 Tween and Children's STEAM programs (excluding story time, teen, and adult programs). This feedback led to library staff to begin including a copy of the Plano Public Library System programming brochure, Engage, into each STEAM kit before it is checked out. Approximately 90% of the brochures do not come back with the kits. Based on the feedback from patrons and the popularity of the STEAM kits, the Maribelle M. Davis Library has doubled the number of STEAM kits available to 60.

Conclusion

The Project Outcome team anticipated many of the findings and the application of survey results to implement local improvements. They, along with task force members, will use these findings to improve the data collection and analysis process for participating libraries. Overall, the organic nature of the project supports iterative improvements. To that end, data analysis will be ongoing, and findings will be made available through the project website, www .projectoutcome.org.

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Endnote

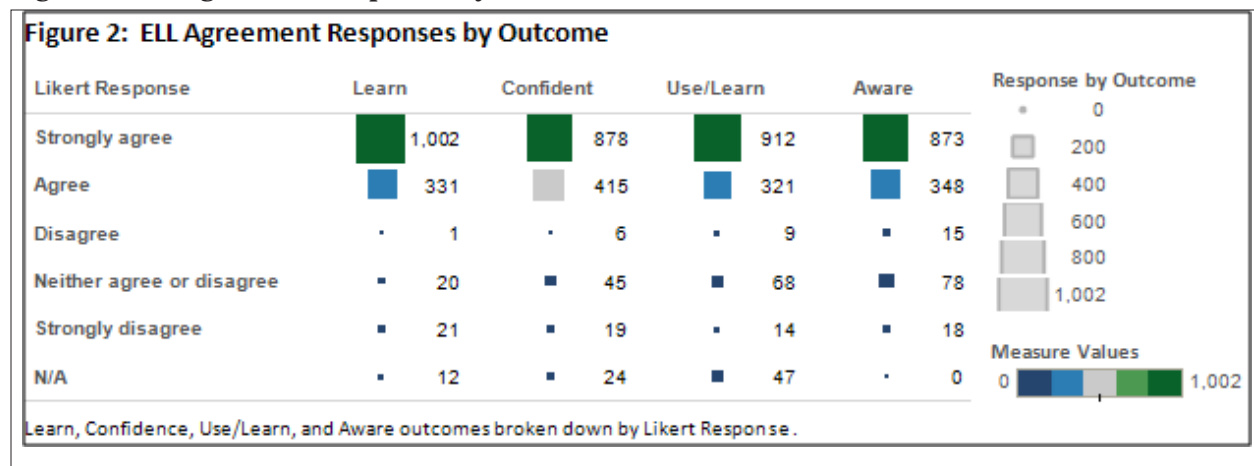1. "PLA Strategic Plan," Public Library Association, a Division of the American Library Association, accessed September 7, 2016, http://www.ala.org /pla/about/strategicplan.

FIGURES

Figure 1: Responses by Survey and Population Served Range		
PLDS Population Served Range	**Surveys in ELL Dataset**	**Surveys in ECL Dataset**
1,000,000 or over	597	851
500,000 to 999,999	119	626
250,000 to 499,999	292	92
100,000 to 249,999	195	554
50,000 to 99,999	22	0
25,000 to 49,999	54	96
10,000 to 24,999	108	0
5,000 to 9,999	0	26
under 5,000	0	7

Figure 2: ELL Agreement Responses by Outcome

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Likert Response	Learn	Confident	Use/Learn	Aware
Strongly agree	1,002	878	912	873
Agree	331	415	321	348
Disagree	1	6	9	15
Neither agree or disagree	20	45	68	78
Strongly disagree	21	19	14	18
N/A	12	24	47	0

Learn, Confidence, Use/Learn, and Aware outcomes broken down by Likert Response.

Figure 3: ELL Survey Responses, Attendance and Response Rate by Program Category

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NOTE: For details on ESOL response rate over 100%, see Caveats.
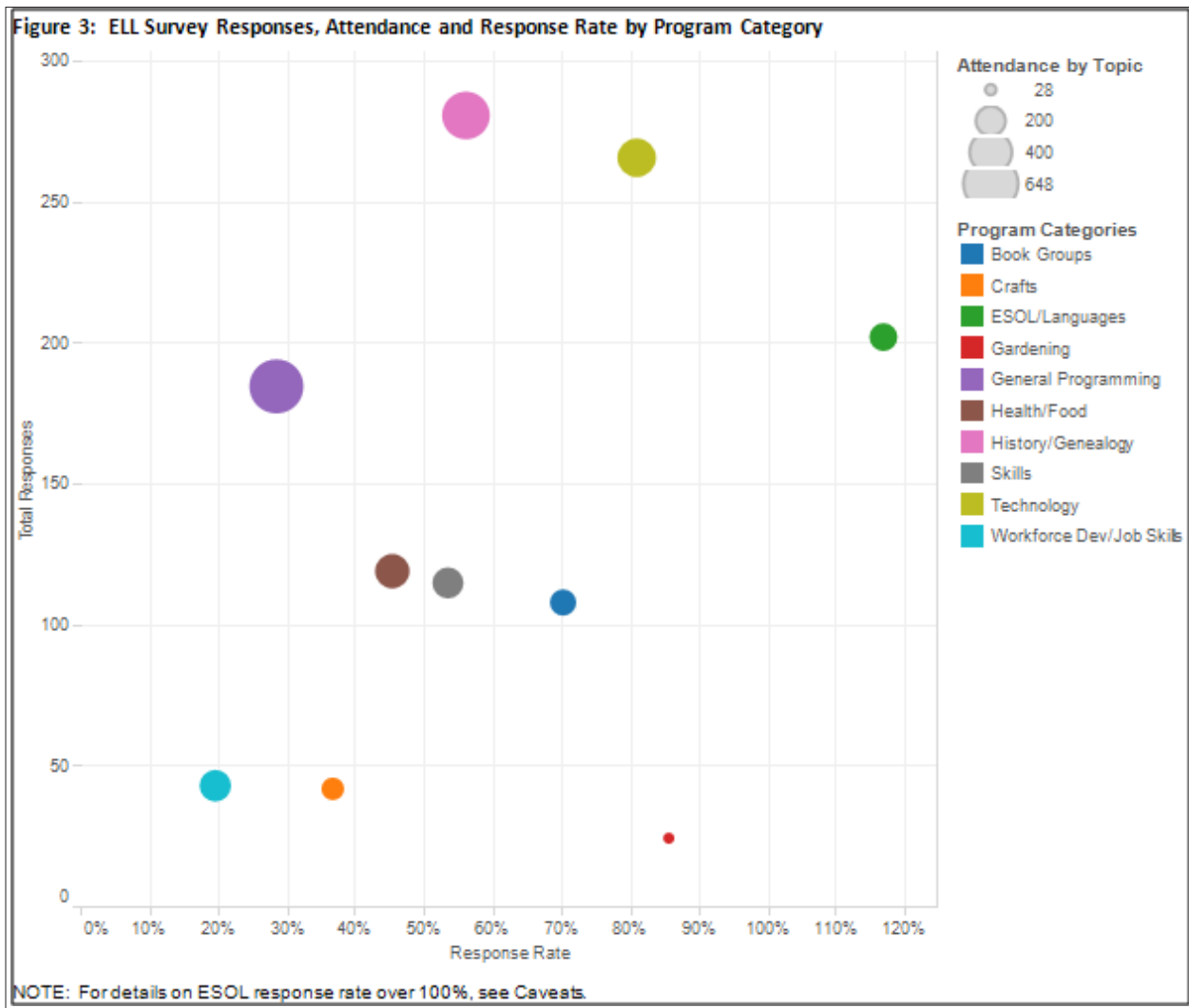
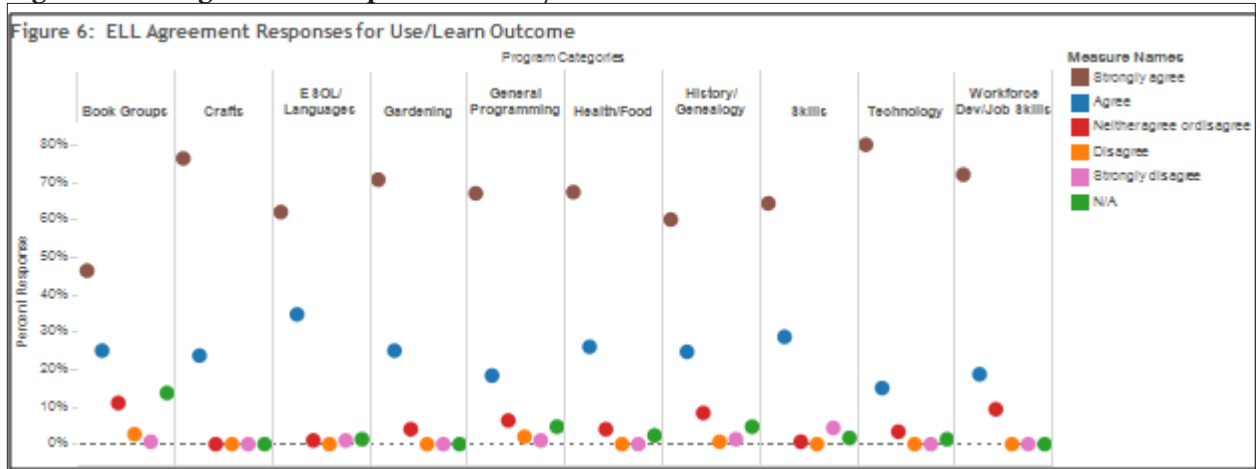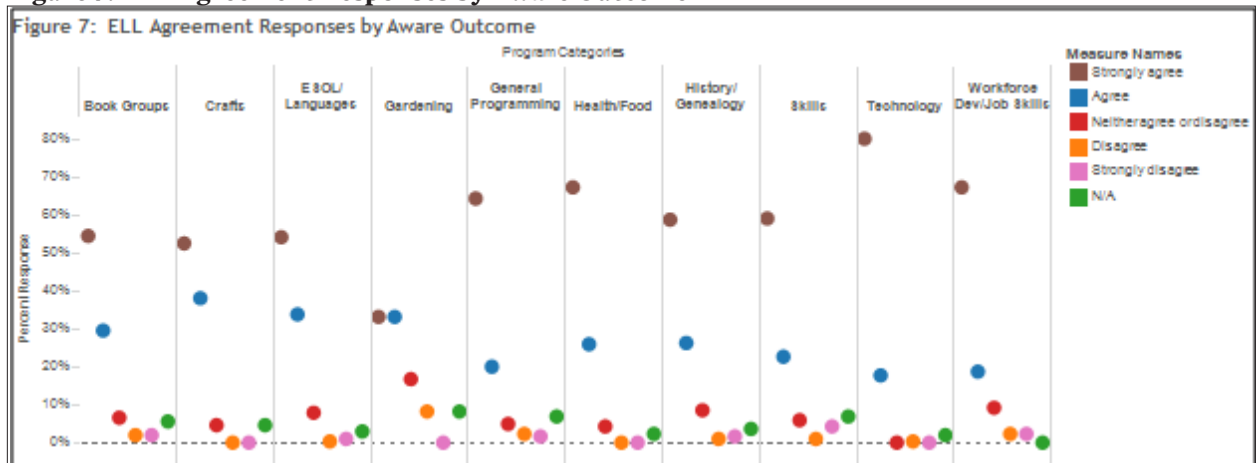**Figure 4: ELL Agreement Responses for Learning Outcomes**

Figure 4: ELL Agreement Responses for Learning Outcome
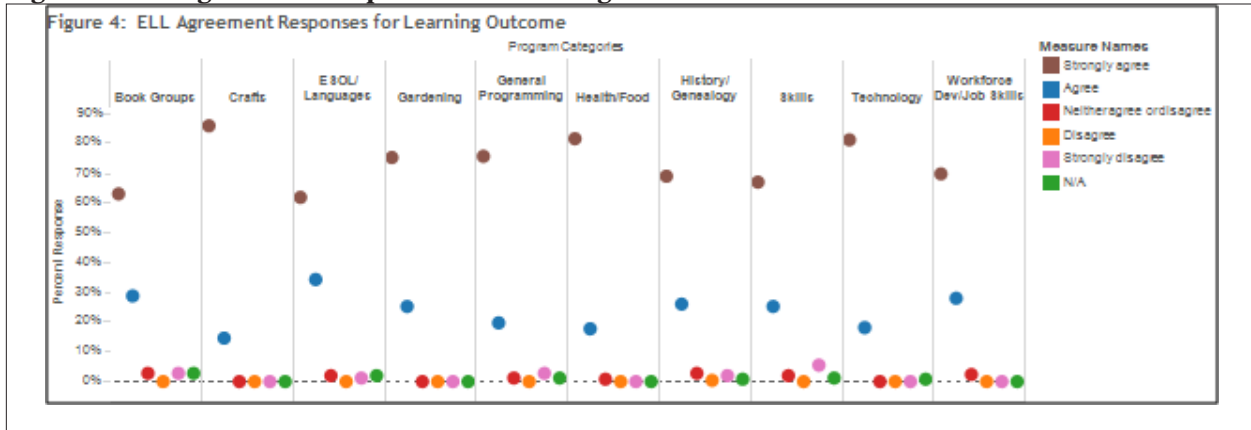
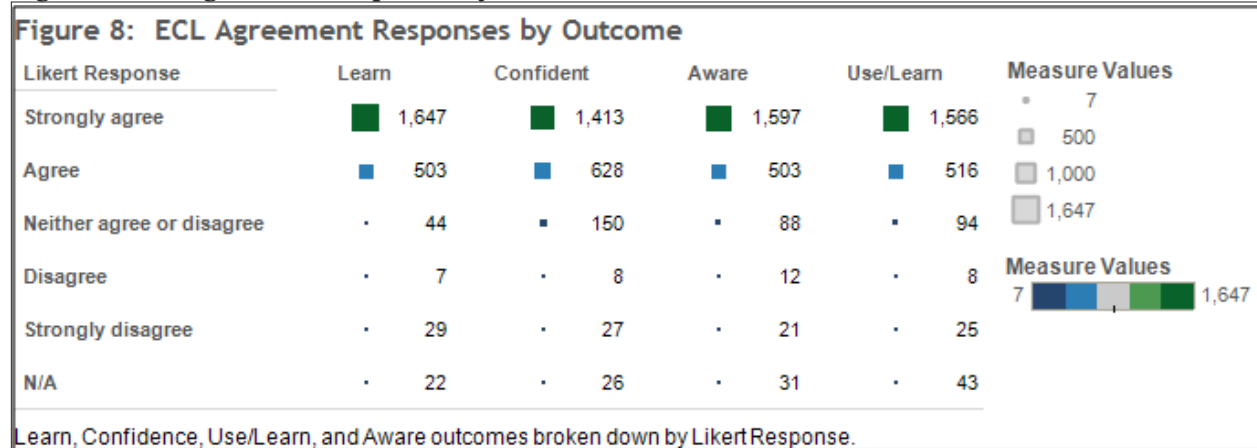**Figure 5: ELL Agreement Responses for Confidence Outcome**
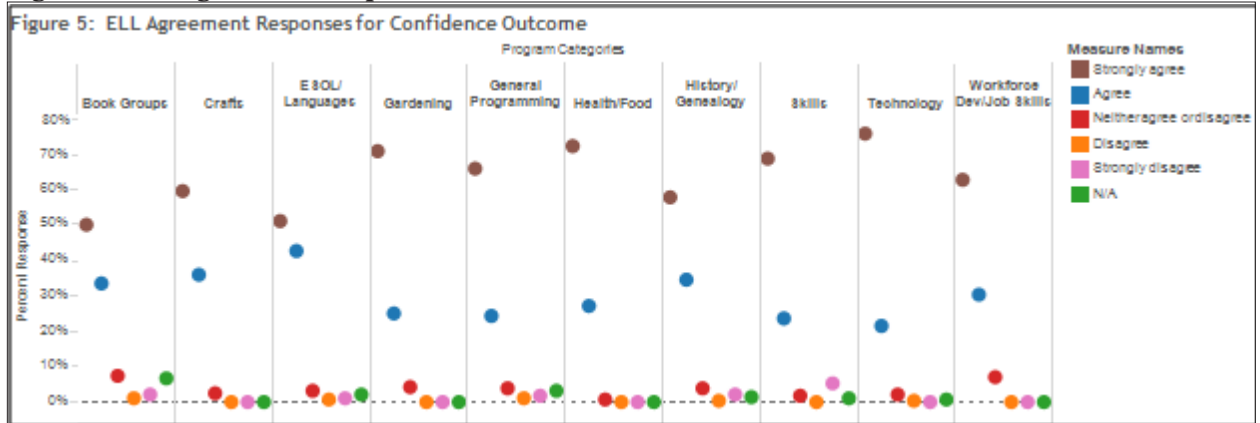
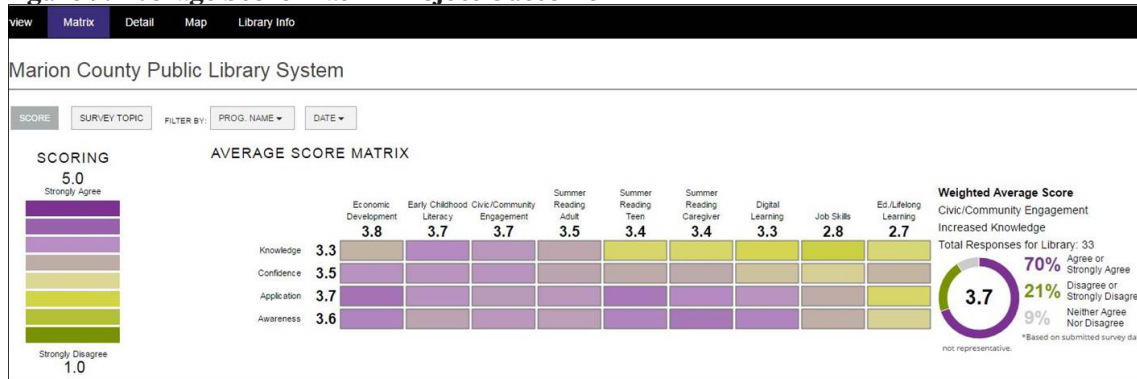**Figure 6: ELL Agreement Responses for Use/Learn Outcome**

Figure 7: ELL Agreement Responses by Aware Outcome

Figure 8: ECL Agreement Responses by Outcome

Figure 9: Average Score Matrix Project Outcome

Figure 10: Chord Diagram Project Outcome