



Vermont Early Literacy Initiative -- Science, Technology, Engineering & Mathematics (VELI-STEM) Project

Evaluation Report: Analysis of Data on Participating VELI-STEM Libraries

March 2016

OVERVIEW: The Vermont Department of Libraries (VDOL) and Vermont Center for the Book (VCB) selected 25 libraries to participate in the three-year VELI-STEM project, which is funded through a National Leadership Grant for Libraries from the Institute of Museum and Library Services. The 25 VELI-STEM libraries were selected based on six criteria, which the VDOL and VCB determined were critical indices of a library's potential and willingness to expand its capacity to provide early childhood STEM programming.

FINDINGS: Each of the six VELI-STEM library selection criteria is listed below with corresponding data on the sample of libraries.

SELECTION CRITERIA	DATA ON SAMPLE
Selection Criterion #1 -- Prior or current involvement in the Vermont Early Literacy Initiative	<ul style="list-style-type: none"> ➤ The Vermont Early Literacy Initiative (VELI) was developed in 2010 by the VCB and VDOL to support the development of early literacy skills and school readiness by providing training and resources to public librarians working with young children and their parents and caregivers. Given the common target population of the two programs, the 25 VELI-STEM libraries -- which represent approximately 50% of the over 50 libraries statewide that have participated in VELI -- will have opportunities to leverage certain skills and knowledge acquired through their VELI participation.
Selection Criterion #2 -- Willingness and ability to participate in VELI-STEM	<ul style="list-style-type: none"> ➤ Three-year commitment letters were signed by all 25 libraries, attesting to the full endorsement of each library's director and trustees. ➤ All 25 libraries have above average physical space to accommodate the requirements of library-based STEM programming. As a sample, the 25 VELI-STEM libraries have an average of over 6,920 square feet of space per library, whereas the average square footage per library for all state public libraries as a group is approximately 4,402.¹ ➤ The sample of 25 libraries is each open an average of 35.3 hours per week, whereas the state libraries as a whole are each open an average of 29.5 hours per week, indicating that the sampled libraries more accessible².

¹ Data obtained from the Vermont Libraries Fiscal Year 2014 report.

² Ibid.

<p>Selection Criterion #3: Located in a rural setting</p>	<ul style="list-style-type: none"> ➤ All Vermont public libraries meet the criteria for a rural designation except for Fletcher Free Library in Burlington, which is not participating in the VELI-STEM project. ➤ The average population served by each of the 25 VELI-STEM libraries is 5,643, and the average population served by each of the state libraries as a whole is 3,449³. The especially small rural libraries were not always as well positioned to participate in the project, thus skewing the average population served of the sampled libraries slightly upward from the overall state average.
<p>Selection Criterion #4: Geographic mix of library locations</p>	<ul style="list-style-type: none"> ➤ By design, the 25 VELI-STEM libraries are disbursed geographically across the state to create the most representative sample possible. ➤ The disbursement of sampled libraries (albeit, all within rural settings) led to a considerable level of diversity in the size of each library's population served, ranging from approximately 804 to 18,306 people⁴.
<p>Selection Criterion #5: Variety in library staffing models</p>	<ul style="list-style-type: none"> ➤ For the sample of 25 VELI-STEM libraries, there is an average of 0.6 full time equivalents (FTE) holding an MLS from an ALA-accredited program, with an average of 0.5 FTE holding an MLS from an ALA-accredited program for the state libraries as a whole⁵. ➤ The 25 sampled libraries have an average of 3.1 total FTE per library (with or without an MLS), while the state libraries as a whole each have an average of 2.1 total FTE⁶. ➤ Some of the 25 VELI-STEM libraries are single-librarian libraries, while others have multiple library staff, with a range of 0.4-8.7 FTE⁷. ➤ Each of the 25 sampled libraries have a librarian on site for an average of 78.1 hours/week with weekly hours of other staff averaging 46.7 (total average of 124.8 staff hours/week), whereas the state libraries as a whole each have a librarian on site for an average of 52.1 hours/week with weekly hours of other staff averaging 33.1 hours/week (total average of 85.4 staff hours/week).⁸
<p>Selection Criterion #6: Replicability of VELI-STEM in other libraries in Vermont and across the United States</p>	<ul style="list-style-type: none"> ➤ On average, the sample of 25 VELI-STEM libraries have higher values than all state libraries as a whole on a range of measures, including number of hours open, size of population served, FTE quantity and quality (MLS), size of physical space, and total capital revenue and operating income. ➤ However, the resources of the 25 sampled libraries would still be considered modest, and the margin between the values for the two groups is not significant on a number of the measures. Therefore, the model being used in the VELI-STEM project should be replicable by a majority of similarly or more highly resourced Vermont public libraries, as well as by rural and smaller urban libraries of comparable resources around the country⁹.

³ Data obtained from the Vermont Libraries Fiscal Year 2014 report.

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.