Public libraries play a key role in the educational success of students. However, measuring the impact of library programs and services is challenging. At Columbus Metropolitan Library (CML) in Columbus, Ohio, serving Young Minds – children from birth through the teen years – is the library’s top strategy. CML has two major services for school-age students which are specifically designed to bolster school success: Reading Buddies and Homework Help. Students sign in with a library card allowing CML to capture information on number of visits, subjects worked on each day or current reading level. While informative, these measures are largely outputs. In 2015 CML partnered with Learning Circle Education Services (LCES), providing new opportunities for measuring impact and making data-based decisions. LCES is an organization that assimilates and transforms school district student data into actionable early warning indicators. Presented here are the findings to date from the data matching of 2,172 Reading Buddies and Homework Help students with their Columbus City School (CCS) records in the Learning Circle system. The initial data match revealed much about the students using these two services at the library. More will be learned as longitudinal data is collected and analyzed over time.

BACKGROUND
Serving Young Minds has been CML’s number one strategy since 2010. CML invests heavily to support third grade reading and high school graduation with two services in particular: Reading Buddies and
Homework Help. Offered at all 23 locations, Reading Buddies provides 15 minutes of one-on-one reading practice with a buddy (staff or volunteer) for K-3 students. Students choose a leveled reader, read aloud to their buddy and are asked a comprehension question afterward. The goal is improved reading skills. Homework Help is offered to any K-12 student for three hours daily after school, Monday through Friday. Dedicated homework help space along with staff and trained volunteers assist with both paper and online homework.

LCES is a nonprofit organization located in Columbus, Ohio that assimilates data support to schools for the purpose of improving student outcomes. Learning Circle receives daily academic, attendance and discipline information from the CCS district. This information is made available via a dashboard which organizes the data into four categories: Attendance, Behavior, Core Academics and Overall Risk. Through the dashboard, users can easily see student data which is organized into an easy to understand “stop light” color coding system to indicate level of risk: Alarm=Failing (red), Warn=D (orange), Watch=C (yellow), Good Standing=B (green), Excel=A (blue).

Access to the Learning Circle (LC) dashboard allows CML to look at aggregate student data and do the following:

- Better understand students using Reading Buddies and Homework Help services and adjust CML’s approach accordingly.
- Track outcomes and ask the following question: Is the help CML provides making a difference for students?

**IMPLEMENTATION**

In order to begin the work an MOU was signed between CML, CCS and LCES. This outlined security, confidentiality and limitations regarding the library’s view of student data. CML cannot see data on individual students; the smallest view possible is an aggregate of 10 or more.

Matching CML and CCS data took time. In order to match, CML needed to provide a record for each user that included:

- First and last name
- Date of birth
- Gender

CML already collected name and birthdate on library card applications; gender was a new field the library added. In order for an automatic match to happen in Learning Circle all the data points are required to match exactly. This highlighted the need for a high level of staff accuracy when issuing library cards.

In March 2016, the first upload of student records was made. This resulted in a total match of 2,172 students who had attended one or more Reading Buddies or Homework Help sessions during the 2015-16 school year. Looking at the data on this group of students proved to be eye opening for CML. Several surprises presented right away.
Over the years a number of assumptions had formed among library staff regarding the students who used these services; however, the dashboard proved those to be wrong. The dashboard revealed that:

- The majority of students are not above average or high performing students as previously thought. They are, in fact, in the Watch category indicating they are average or “C” students.
- A significant number of the students struggle with attendance.
- The group as a whole has low numbers of behavioral incidences.

Drilling into these students’ academic performance revealed that:

- Approximately 10% of students matched in the LC dashboard participated in both Reading Buddies and Homework Help.
- Of students who matched in the LC dashboard for Reading Buddies, 20 fell into the highest risk category (Alarm) in Sept. 2015 for English Language Arts (ELA). However, by April 2016, only one of these 20 students remained in Alarm; a majority of the students (14 of 19) moved into Watch and one student had moved up into Good Standing. Similarly, of the 193 Reading Buddies students who were in Watch for ELA in Sept. 2015, by April 2016 over 30% (60 students) had moved into Good Standing.
- We see similar results in our students who matched in the LC dashboard for Homework Help. 122 students were in Alarm for ELA in Sept. 2015, but by April 2016 only 30 students remained in Alarm; the rest moved up at least one level with the majority (46 students) moving into Watch. Additionally, 15 of the Sept. 2015 Alarm students moved into Good Standing. Of the 669 students who fell into Watch for ELA in Sept. 2015, by April 2016 over 35% (247 students) moved into Good Standing and 32 students moved up into Excel.

As longitudinal data is collected over the course of the 2016-17 school year, data will be analyzed and used to guide decisions. For example, is there a correlation between Reading Buddies attendance and ELA gains? What is the “dosage” or frequency of visits that has the strongest correlation? Are we seeing best practices/improved results for programs at specific branches that could be shared and/or replicated?

MOVING FORWARD

Throughout the 2016-17 school year LCES plans to add data from additional schools within Franklin County, including four public districts and two charter schools served by CML. CML will move forward with a data sharing agreement with each district. CML also, for the first time, required a library card to register for Summer Reading Club 2016. These records will be readied and uploaded to LCES in order to look at the reading performance of the students during the upcoming school year.

This is groundbreaking work for libraries and - we believe - a daring stake in the ground for community-based outcomes. CML has a robust plan to share this effort on a national basis, as well as with local civic leaders. While measuring outcomes isn’t easy, this work is critical and will serve as a model for additional programs and services at CML.
RECOMMENDATIONS

FOR PUBLIC LIBRARIES

• Public libraries should look for ways to be part of the “connective tissue” in the community they serve, sharing data and aligning services for maximum student benefit.

• Investments should always be made in evaluation and measurement of outcomes to ensure there is more than perceived benefit; that is, that students’ academic skills are boosted by participation in library programs or services.

FOR COMMUNITY PARTNERS AND LEADERS

• Communities should strive to connect and measure the work of out-of-school time and summer providers, including the public library, with K-12 school data in order to achieve impact on students’ achievement.

• Further, the establishment of specific community level educational indicators can serve as the goal that a diverse set of organizations work together to achieve, rather than each organization approaching the work individually.