



Supporting Learning for Children in Affordable Housing Communities: An Evaluation of Two Technology-based Programs

This evaluation compares two educational software programs as they are piloted in housing communities in San Diego, CA and Austin, TX. The evaluation involves measuring the effectiveness of the programs on a range of criteria that includes: ease of implementation, usability, student reception and student achievement. The goal is to document the experience and effectiveness of the programs, and ultimately judge their worth as supports for children in affordable housing communities.

James Marshall, Ph.D.
James Marshall Consulting, Inc.

Submitted to
Foundation Communities/Community Housing Works
January, 2016

Table of Contents

Introduction	1
The Proposition.....	1
The Participants	1
The Pilot Project.....	2
The Promise.....	2
This Evaluation	2
Evaluation Overview	4
Evaluation Questions	4
Evaluation Process	6
Task 1: Evaluation Design.....	6
Mixed Methods, Repeated Measures Design	6
Sample	7
Task 2: Instrument Design	7
Task 3: Data Collection.....	9
Task 4: Analysis	10
Task 5: Reporting	10
Budget	11
Appendix I: i-Ready Adaptive Diagnostic Information Reported	12

Introduction

It has been observed that the abilities to read, comprehend and communicate are gate-keeping skills. Understandably, processing information of varying levels of complexity is key to understanding and interacting with each and every subject and discipline. Yet students in the United States continue to face steep challenges in acquiring the necessary skills and knowledge to read and communicate.

The *National Assessment of Educational Progress*, termed “The Nation’s Report Card,” indicates the following:

- As of 2015, only 34% of grade 8 students and 36% of grade 4 students, performed at the *Proficient* level (or above) in Reading achievement.
- Of the 2015 percentages reported above, just 9% of grade 4 and 4% of grade 8 students tested *Advanced*. The percentage of students testing *Advanced* has remained the same or varied by one percentage point since 2003 (grade 4) and 1992 (grade 8).
- The number of grade 4 students testing with only *Basic* levels of performance has varied by no more than two percentage points (34-34%) since 2002.
- The number of grade 8 students testing with only *Basic* levels of performance has varied by no more than two percentage points (41-43%) since 1998.

These figures describe the situation faced by young people across the country. Such challenges are often amplified for students who lack access to technology, speak a language other than English, and/or exist with limited financial resources.

The Proposition

The project at hand seeks to address challenges related to becoming literate, and ultimately realizing academic achievement, for young people and their families who live in affordable housing communities. The intent is to support learning during out-of-school hours through the implementation of a technology-based English/language arts learning program (“learning program”), which is made available in each of the targeted housing communities.

The Participants

The project is funded by NeighborWorks Network. Funding has been provided to two affordable housing organizations: Community HousingWorks and Foundation Communities.

- Community HousingWorks is a San Diego-based nonprofit that helps people and communities move up in the world through opportunities to own, rent, and achieve. Through its comprehensive programs offered on-site and to the greater community, Community HousingWorks proudly serves more than

7,000 people each year, supporting home stability, financial security, and school success.

- Foundation Communities is an Austin-based nonprofit that provides affordable, attractive homes and free on-site services for thousands of families with children, as well as veterans, seniors, and individuals with disabilities. It offers an innovative, proven model that empowers residents and neighbors to achieve educational success, financial stability, and healthy lifestyles. The organization operates 18 communities in Austin and North Texas.

Both agencies serve a broad range of populations that include children of varying ages. Demographics suggest significant immigrant populations, as well as children from homes where English is not spoken. Helping all members of their communities succeed is part of the each agency's mission. For children, this includes success in school—which means becoming high-performing students who can read, write and speak with fluency.

The Pilot Project

To support the developing literacy of children in their communities, the agencies will provide students with evidence-based, results-proven learning programs that children of all ages can use outside of school hours to improve their abilities specific to literacy. Based on community size and available space, a determined number of learning stations will be made available in each property's community room.

The program will be piloted in spring of 2016 (January-May).

The Promise

Ultimately, if the piloted learning programs prove successful, they will be considered for implementation across the full range of properties in San Diego and Austin. Additionally, NeighborWorks is interested in making recommendations regarding technology-based learning programs for use in community housing across the United States. This pilot project is intended to inform those recommendations to affiliate organizations.

This Evaluation

This document presents a plan that has been developed to carefully document, and ultimately evaluate, the pilot project. It involves a team of independent researchers evaluating the project—in terms of process and impact—to document the piloted program, and ultimately provide reference for other housing communities that pursue similar efforts.

The research tracks student performance in the critical area of English/language arts, as it investigates an association between the use of technology-delivered learning programs and increased abilities in the English/language arts domain.

Two intents guide this study and the evidence it will collect:

1. To provide credible evidence of program impact—for the participants, funder and analogous organizations who seek to implement similar learning programs.
2. To aid Neighborworks in collecting best practices, such that they inform future efforts in housing communities nationwide, specific to a complement of learning/academic achievement supports for affordable housing community residents.

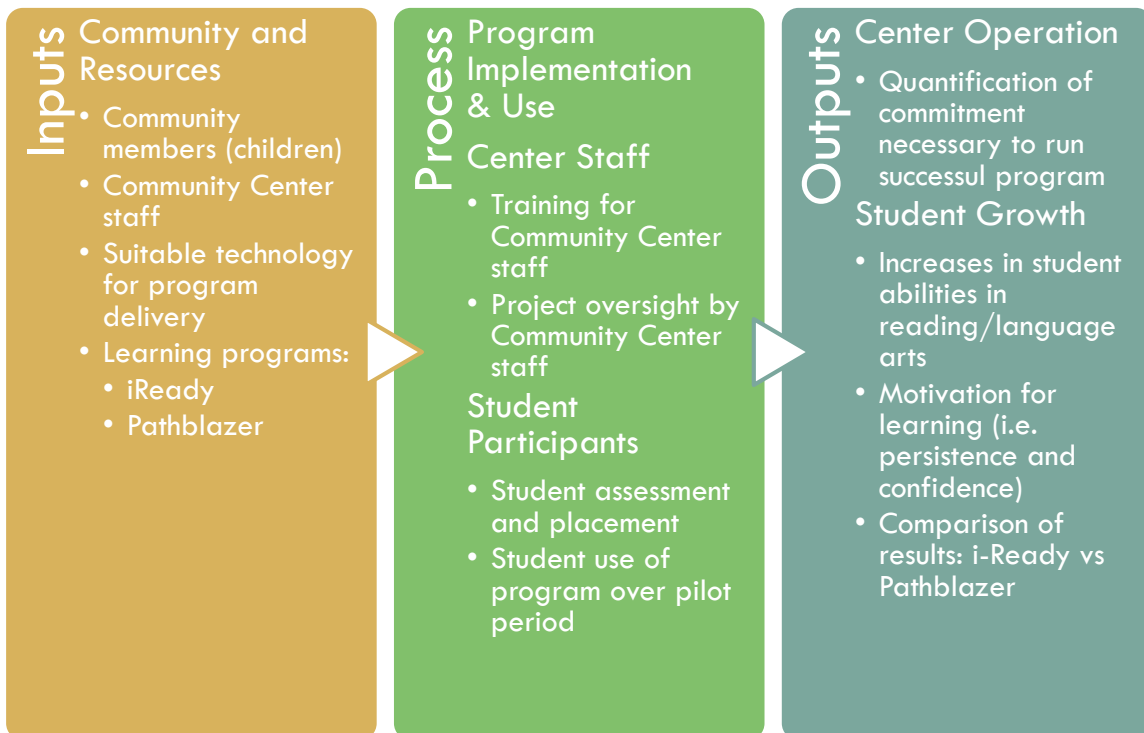
Evaluation Overview

Through a rigorous review process, followed by a limited *in-situ* software trial, the participating communities selected two learning programs for use during this pilot project. These programs are:

1. i-Ready—published by Curriculum Associates
2. Pathblazer—published by Compass Learning

The following figure presents a project logic model, and offers an overview of key process and output variables to be investigated in this evaluation.

Project Logic Model



Evaluation Questions

Based on this logic model and the participating organizations' input, the team has defined the following evaluation questions to guide our inquiry:

1. In what ways, if any, does either technology-based learning program support early childhood literacy for our students, as measured by diagnostic measures internal to each program?

2. How do the two technology-based learning programs differ in terms of their effectiveness for students and ease of support by volunteer/non-teacher staff, in the housing-based after-school settings?

The following pages elaborate our process for pursuing answers to these evaluation questions. We organize this work into the following tasks:

1. Evaluation Design
2. Instrument Design
3. Data Collection
4. Analysis
5. Reporting

Evaluation Process

The evaluation work will be carried out across five phases, or tasks. This section provides a brief description of each task.

Task 1: Evaluation Design

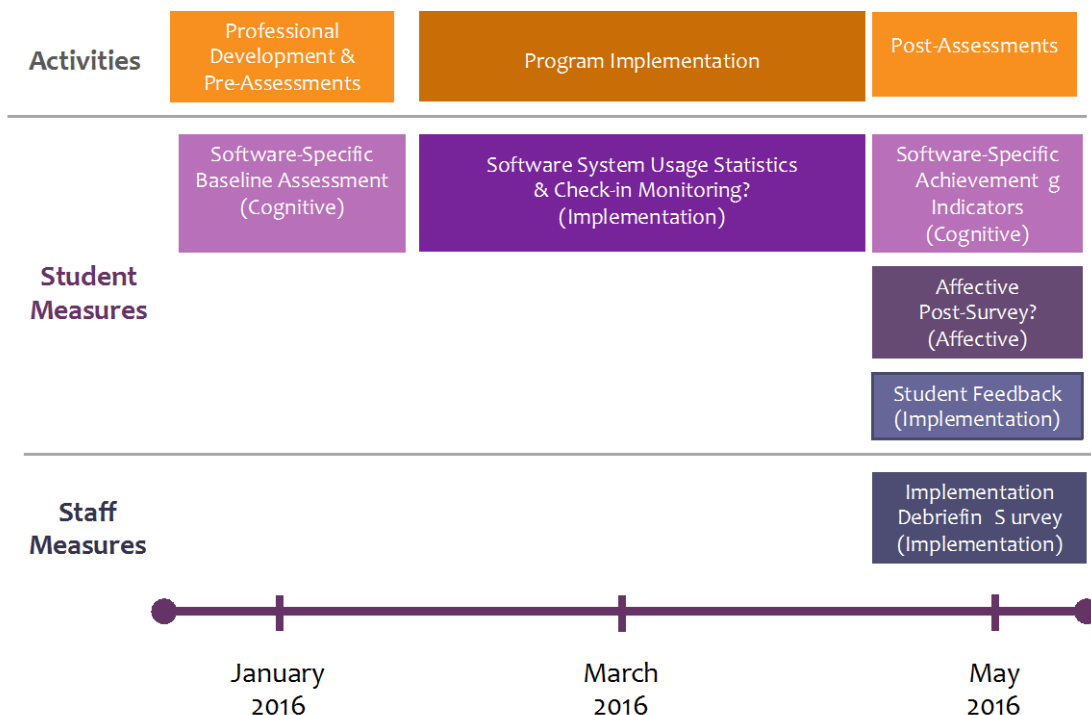
This document is the culmination of Task 1. It outlines the evaluation design and how the study will unfold. It also anticipates the data analysis to be accomplished, and provides a tentative outline for the final evaluation report.

Mixed Methods, Repeated Measures Design

The evaluation will employ mixed methods—survey response, and English/language arts performance assessments—to provide the necessary data. Survey responses will be retrospective, and used to document the experience of community center staff and participating students at the conclusion of the pilot period. Diagnostic assessments, provided by each of the two technology-based learning programs, will be used to establish a baseline measure of English/language arts performance, and to track differences in student performance during the pilot period.

The following figure provides an overview of the pilot period timeline and data collection components.

Project/Evaluation Overview and Timeline



Sample

Each of the two participating communities has agreed to recruit, and involve, a specific number of students. These numbers are as follows:

- a. Foundation Communities: ~120 students
- b. Community Housing Works: ~180 students

This totals to a sample of approximately 300 students. Personnel in each organization who staff the community learning centers will also participate by responding to an implementation survey. Students who leave a community during the study will be replaced, as necessary.

Dosage: At the conclusion of the implementation period, we will use data analysis to determine a minimum “dosage” threshold for a given student to be included in the final data analysis. The “cutoff” number of hours for inclusion will necessarily be minimal in order to produce a wide range of dosage amounts. That said, having an established minimum number of hours for inclusion in the sample is essential, especially so that the amount of growth can be detected by each program’s diagnostic assessment. Using this approach, we can perform an analysis that correlates hours to achievement, and attempt to document a relationship between the two data points for each program, should such a relationship exist.

Task 2: Instrument Design

Once this evaluation plan is reviewed and approved, our attention will turn to instrument design (for instruments 3 and 4 below). We plan to employ the following instruments for data collection with participating students and community center staff.

1. Students—Time in Center

Center staff have agreed to document student time spent in the center. This will be accomplished with a simple sign in/out sheet. We will use these time estimates in tandem with system-generated usage statistics, to confirm student time-on-task, and ensure accurate reporting specific to the amount of time students spent engaging with the program during the pilot period.

2. Students—Reading/Language Arts Performance Assessment:

Each of the two technology-based learning programs includes a diagnostic assessment of student performance in the area of English/language arts. These assessments are used to assign learning activities that are well-matched to a given student’s instructional level.

This evaluation employs these assessments, which are tracked by each program and updated in the learning management system, as the measure(s)

of English/language arts ability. A comparison of each participant's score—from start, to end of the pilot program—will be used to determine growth. In addition, available publisher-provided data that can be used to interpret scores will be included in our final report. Appendix I includes a description of data that may be employed, where possible, in the analysis of student performance for the i-Ready system. At the time of this evaluation plan's development, we are still awaiting analogous information from Compass Learning's Pathblazer.

3. **Students—Program Review Survey:** At the conclusion of the pilot period (or, upon a student indicating s/he will be leaving the community), a program review survey will be completed. This online survey will guide the student in reviewing his or her experience with the learning program. The survey will involve constructs that include:

- Perceived ease/difficulty of program
- Level of enjoyment using the program
- Reason for using, and continuing to use, the program (including exploration of compulsory use vs. free choice)
- Beliefs about learning from the program, and described impact on in-school work/performance
- Estimate of program's alignment with in-school work
- Desire to continue use of the program

4. **Community Center Staff—Process Variable Measurement Survey**
Center staff are responsible for overseeing the ongoing implementation of the program in their respective communities. The importance of this role cannot be understated. The success of the program may depend on the performance of personnel in these roles. An end-of-pilot survey will be used to debrief center staff in each community. The survey will document accomplishments and challenges, as well as recommendations for improving each program's use in community housing centers. The survey will involve constructs that include:

- Relevance, quality and amount of training provided
- Rating of key tasks to indicate preparedness, as well as levels of success
- Greatest challenges, and approach to resolution
- Benefits observed—for students, for community
- Recommendations to optimize program use in community

Task 3: Data Collection

The study will be conducted during spring 2016, in parallel with the pilot program implementation.

- Community Center Staff will be responsible for ensuring students sign-in and out each time they visit and use the learning program.
- Student English/Language Arts performance will be collected by each program's diagnostic tool, and tracked throughout the pilot period. In addition, the system will track usage data (i.e., hours on system, activities completed, etc.).
 - For i-Ready: Center staff will have students complete the diagnostic at the start of the pilot period, and again at the conclusion of the pilot period (or at such time as a student indicates s/he will be moving away from the community:
 - For Pathblazer: To be determined, once access to the Pathblazer LMS is provided.
- Student Program Review Surveys will be collected using an online form at the conclusion of the pilot period. In addition, we will provide a link to the survey to Community Center Staff, and request that any students who leave the community during the pilot period complete the online survey.
- Center Staff Process Surveys will be collected using an online form at the conclusion of the project period. We will rely on project leaders in each organization to email a survey invitation to relevant center staff.

Task 4: Analysis

Once data collection is complete, the project's analysis phase will commence with a cataloging of all collected data.

Dr. Marshall will oversee the data analysis effort that will include (a) descriptive analysis of key variables from community center staff and student surveys; (b) testing of differences in academic performance, based on program-provided data; and (c) testing of differences in achievement- and affective-related results between the two technology-based learning programs.

Task 5: Reporting

Dr. Marshall will draft a final report. This report will provide: (a) a description of the pilot project and involved learning programs; (b) a detailing of the study methodology—including instruments and the procedures under which data was collected from participants; (c) the data analysis approach; (d) analysis findings; and (e) a discussion of results. Tables and figures will be used to relate findings; appendices will present additional detail, including copies of the project-specific surveys.

Budget

The total cost for this project is \$25,500. This figure includes all professional services and necessary supplies described within this proposal.

We will bill professional services according to the following milestones:

Milestone		Percentage
Project Start	November 1, 2015	20%
Delivery of Evaluation Plan	Task 1: by February 1, 2016	20%
Delivery of Instruments	Task 2: by February 28, 2016	20%
Final Report	Task 4: by June 15, 2016	40%

Appendix I: i-Ready Adaptive Diagnostic Information Reported

Upon completion of the adaptive Diagnostic, multiple types of scores are reported by i-Ready to enable a well-rounded view of each student's proficiency levels:

- **Scale Scores** – a common language across grades and schools. Scale scores put everything on a single continuum so that educators can compare across grade levels. They provide a metric, which indicates that a student has mastered skills up to a certain point and still needs to work on skills that come after that point
- **Placement Levels** – the practical day-to-day language that helps teachers determine what grade level of skills to focus on with a particular student. Placement levels indicate where students should be receiving instruction
- **Norm Scores** – identify how students are performing relative to their peers nationwide. Based on a nationally representative sample of students taking the i-Ready Diagnostic, they specify a student's ranking compared to students in the same grade. For example, if a student's percentile rank is 90%, this means the student scored better than or equal to 90% of her national peers from the same grade level
- **Lexile® Measures** – developed by MetaMetrics®, Lexile measures are widely used as measures of text complexity and reading ability, allowing a direct link between the level of reading materials and the student's ability to read those materials
- **Quantile® Measures** – developed by MetaMetrics, the Quantile Framework for Mathematics is a unique resource for accurately estimating a student's ability to think mathematically and matching him/her with appropriate mathematical content

The i-Ready diagnostic tracks the following sub-components of the English/language arts domain:

- Phonological Awareness
- Phonics & Word Recognition
- Vocabulary
- Reading Comprehension: Literature
- Reading Comprehension: Informational Text