

Supporting Opportunity Youth in New York City: Evidence from the Young Adult Literacy Program

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NYC Opportunity Response to Westat Evaluation of the Young Adult Literacy Program

When evaluating programs, lessons can come from both the final findings of the research as well as the process of evaluation itself. This has been especially true of this research project – an evaluation of NYC Opportunity's Young Adult Literacy program conducted by the research firm Westat – which has generated useful lessons for implementors of educational services as well as those who seek to evaluate them or other programs.

Young Adult Literacy (YAL) was launched in 2008 by the Mayor's Office for Economic Opportunity (NYC Opportunity) in partnership with the Department of Youth and Community Development (DYCD) to specifically address the educational needs of young adults, ages 16-24, who read at the pre-High School Equivalency level and were neither working nor in school. By improving academic skills, the program aimed to help young adults advance in education, prepare for work, and reduce their risk for long-term poverty.

As is common in NYC Opportunity's approach, evaluation played a central role in our program management. Multiple evaluations with distinct designs informed key decisions over time to change the program model and expand the program through funding from the NYC Young Men's Initiative.ⁱ But implementation challenges remained, importantly including struggles promoting attendance and retention. With our partners, we continued to work on these by drawing on best practices identified through evaluation, including emphasizing early and ongoing goal-setting with youth, strong team coordination, and linkages to HSE programs.ⁱⁱ

At the same time that we were engaged in this work, the larger policy discourse in the city was shifting significantly to what would come to be called *Career Pathways* – a wider strategy to transform our workforce development system that recommended investment in the creation of bridge programs, or models that pair educational instruction and workforce development services to connect low literacy individuals to clearly defined education and/or employment outcomes.ⁱⁱⁱ A growing body of evidence supported this and pointed to the emerging promise of bridge programs to support classroom engagement and produce meaningful outcomes for participants.^{iv}

Inspired by the overall potential of this approach and the possibility for the strategy to address the particular challenges we were continuing to face within YAL, NYC Opportunity set out on a new effort to integrate bridge program elements within YAL and rigorously evaluate the effectiveness of this approach for youth who are lower level readers. We planned to use findings to add to the evidence on the effectiveness of bridge programs in different settings, generate implementation lessons for integrating bridge strategies within existing literacy services, and ultimately inform the next steps for YAL.

We recognized from the outset that this would be a big undertaking for us and our partners. We worked from early on with DYCD and the 9 YAL service providers to lay groundwork for the effort and partnered with the research firm Westat on a site-level random assignment evaluation. YAL sites that were randomly assigned to the control group continued implementing the existing program model, consisting of literacy and numeracy instruction, case management, and paid work experience components. YAL Bridge sites received additional funding, technical assistance, and a shared curriculum to help transition over the course of about 6 months to a bridge approach which enhanced the YAL model with three new components: contextualized instruction (teaching academic skills within a sector-specific context); strong programmatic "bridges" between the YAL program and destination programs; and, individualized supports for participant transitions.

We intentionally structured our evaluation plan into two phases. The first focused on examining implementation of the enhanced YAL Bridge model compared to our standard model. Our goals were to identify lessons for implementing bridge programming and provide a foundation for the planned impact analysis in the second phase. The research team conducted site visits which included interviews with program

staff, focus groups with participants, and observations of classroom instruction. The resulting reports document key lessons for those implementing or interested in implementing bridge programming, including:

- Building a shared understanding of “contextualization” and “bridge” is critical and requires clear and continual reinforcement;
- Flexibility and adaptability are important qualities to build into a bridge model for youth, but can also affect adherence to a sector-based contextualized approach;
- Instructors hired after the launch of the bridge pilot adapted to the contextualized curriculum better than those who had been in place prior, suggesting needs for distinct support strategies;
- Adequate, dedicated program staffing is key for developing strong partnerships to support “bridges” to next steps and integrating college and career counseling supports.

This phase of work also showed that there was not a large enough difference in implemented approaches between the enhanced bridge and standard YAL sites to test for impact as originally planned. In practice, the two models turned out to be too similar – reflecting some challenges fully implementing new strategies on an ambitious timeline, but also reflecting that standard YAL control sites had independently adopted some of the same strong programming strategies that the bridge sites used.

These were useful findings that also sent us back to the drawing board on our evaluation plan. With program contracts approaching an end, we were eager for impact findings to help inform our next steps. We worked rapidly with partners to identify a brand-new potential comparison group for YAL as a whole and develop a new impact analysis plan. We were successful in quickly pivoting, completing a matched comparison group impact analysis looking at outcomes for all participants in YAL against those of similar participants in other literacy programming offered by DYCD and public libraries, and using emerging findings in real-time.

Ultimately, the analysis did not find impacts and we were limited in our ability to fully unpack why. From anecdotal conversations between NYC Opportunity, DYCD, and some public library program implementers, we suspected that the program and comparison groups may actually be different – as participants would at least sometimes be directed to either YAL or other literacy programs to achieve the best fit, for example based on their work commitments outside the classroom. We also knew that the study data was limited, not including some key student characteristics related to socio-economic status and prior classroom performance (though we were able to control for highest grade level completed). Unfortunately, our theory that the comparison group was different from our YAL program group could not be substantiated given these data limitations and the limited qualitative implementation analysis included in our revised scope of work.

While it might not appear so, in many ways this evaluation was a success. We used the findings as they emerged – in combination with lessons from other research^v – to inform our decision to end YAL in 2019 and design a new program through extensive stakeholder engagement. DYCD and NYC Opportunity engaged with service providers, youth, researchers, and other partners to create a pathway of services from pre-HSE through advanced training. This new model, Advance & Earn (A&E), was launched in early 2020 and, as was the case with YAL, we plan for evaluation to play a central role in our program management.^{vi}

The challenges we faced in this evaluation illustrate some common realities of advancing evidence-based policymaking: ideal research timelines may not align with needs for program decisions, evaluation plans may need to be modified along the way, and findings may ultimately be inconclusive on their own. These challenges reinforce our commitments to develop adaptive evaluation plans, complement evaluation with other strategies like stakeholder engagement, and keep contributing to a strong collective knowledge base to help inform decisions. We will continue to learn from our evaluations how to improve both programs and our research efforts themselves to more effectively advance equity and opportunity for New Yorkers.

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ⁱ All of these evaluations can be found on our website (www.nyc.gov/opportunity). Projects that informed the key decisions noted above include Westat’s 2011 & 2013 evaluations of YAL here: https://www1.nyc.gov/assets/opportunity/pdf/yalp_report_2011.pdf and https://www1.nyc.gov/assets/opportunity/pdf/YAL_Final_Report.pdf.

ⁱⁱ For more information on these particular best practices, see MDRC’s 2015 evaluation of YAL here: https://www1.nyc.gov/assets/opportunity/pdf/yalp-ceo_2015_report.pdf.

ⁱⁱⁱ For more information on Career Pathways, see <http://www1.nyc.gov/assets/careerpathways/downloads/pdf/career-pathways-full-report.pdf>.

^{iv} See, for example, MDRC (2013) “Enhancing GED Instruction to Prepare Students for College and Careers” here: http://www.mdrc.org/sites/default/files/Enhancing_GED_Instruction_brief.pdf.

^v Our other research included: results from a concurrent evaluation conducted by MDRC of a related NYC Opportunity program, the Young Adult Internship Program (YAIP); analysis by NYC Opportunity’s Poverty Research Unit on the characteristics of out-of-school and out-of-work youth in NYC using the American Community Survey Public Use Microdata Sample; and, a comprehensive scan of secondary research available at the time.

^{vi} For more information on Advance & Earn (A&E), see <https://www1.nyc.gov/site/dycd/services/jobs-internships/advance-and-earn.page>.

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1. Introduction

Young people between the ages of 16 and 24 who are disconnected from both education and work are at risk of a variety of negative outcomes in life, including low educational attainment, chronic unemployment, and poor health (Lewis & Gluskin, 2018). Analysis of 2018 American Community Survey data by the New York City Mayor’s Office for Economic Opportunity (NYC Opportunity) showed 116,998 youth in the city who fit these criteria, representing 13.2 percent of the 16–24 age group. Reconnecting these young people with education and work represents a significant opportunity for both youth and local economies, leading some to refer to this group as “opportunity youth.”

Lack of a high school degree can be especially challenging for opportunity youth in both the short and long term—with some studies showing the lifetime earnings of high school graduates as being up to 38 percent higher than that of non-graduates (Brown, Fang, & Gomes, 2012). Attaining a high school equivalency (HSE) credential is therefore a critical milestone on the path to successful employment and other positive life outcomes for youth. However, HSE attainment may be out of reach for opportunity youth with low levels of academic achievement.

This report presents findings from two independent evaluations of the Young Adult Literacy (YAL) Program in New York City that took place between 2016 and 2019. The YAL program was launched in 2007 to provide opportunity youth who read between a 4th- and 8th-grade level with academic instruction, workforce readiness experiences, and a variety of social-emotional supports. In offering these services, the program aimed to provide youth with the skills they need to transition to, and successfully complete, an HSE program.

In early 2020, the YAL program ended when the city launched a new program, Advance & Earn, which combines YAL’s approach and lessons with those of another city initiative, Intern & Earn. The new Advance & Earn program will aim to create a continuum of supports for opportunity youth spanning pre-HSE, HSE, and workforce entry. The YAL program operated with support from NYC Opportunity and the Young Men’s Initiative (YMI), and it was administered by the Department of Youth and Community Development (DYCD). These agencies are continuing to support the new Advance & Earn program, which launched with six program providers in January 2020.

About the Young Adult Literacy Program

The YAL program provided opportunity youth with tailored literacy and math instruction, case management, transition support services, and a paid work experience component that leveraged partnerships with local employers and nonprofits. In 2019 the program enrolled 595 youth. The program was implemented across all five of the city’s boroughs through a network of community-based organizations and public libraries.

Individual YAL programs were required to offer at least 15 hours of academic instruction per week, including 10 hours of reading and five hours of mathematics. A specific curriculum was not required, but providers generally used balanced literacy and conceptual mathematics approaches aligned with the Common Core State Standards. A key feature of YAL was that providers sought to offer instruction that is specifically tailored to the needs and interests of opportunity youth—including through thematic or contextualized instructional approaches that ground academics in topics or issues that are relevant to students’ lives. Instruction and program activities were offered during four program sessions (or “cycles”) per year, each of which lasting approximately 2½ to 3 months. Students were encouraged to (and often would) enroll in multiple cycles as they worked to improve their reading skills to the point where they could qualify to enter an HSE program.

In addition to academics, YAL offered a variety of support services and experiences, including social-emotional counseling, field trips, group projects, and work readiness activities such as internships or other paid work experiences for students who met minimum attendance requirements. The program aimed to help youth transition to an HSE program and ultimately pass the Test Assessing Secondary Completion (TASC) exam. To this end, supports for transitioning into and out of the program were provided (e.g., welcome and orientation sessions; discussions about “next steps” upon program exit).

Prior Evaluations and Program Refinements

NYC Opportunity and its partners continually worked to use evidence from independent evaluation to refine the YAL program. For example, in the early years of the program’s operation, NYC Opportunity introduced a paid internship experience to encourage participants to stay enrolled during the summer months. A 2009 site-level randomized controlled trial found a positive impact of the internship component on attendance and retention (Westat & Metis Associates, 2011). Evidence from this study led to a decision to expand the internship component to all sites in 2011. Following findings from a 2013 study that showed greater gains in literacy and numeracy for participants entering YAL with lower reading scores, NYC Opportunity and its partners further tailored the program to those reading between the 4th- and 6th-grade levels (Westat, 2013). Additionally, results from a 2015 qualitative study of implementation and best practices highlighted promising program components and revealed areas for improvement, many of which were incorporated into subsequent technical assistance plans (Hossain & Terwelp, 2015).

In 2015, NYC Opportunity and DYCD introduced a new “Bridge” enhancement of the YAL program, which combined sector-specific contextualized instruction with intentional “bridges” to additional education or employment. Known as YAL Bridge, this variant of the YAL program also offered support services (e.g., career counseling) for participants as they transitioned to the next step of their career pathway.

Focus and Organization of This Report

This report presents findings from two Westat evaluations of the YAL program carried out with support from NYC Opportunity. The first is a 2016-2017 evaluation of YAL Bridge that was designed to better understand the early implementation of YAL Bridge and determine whether the Bridge program could be subject to a rigorous impact evaluation (in comparison to the traditional YAL model). Findings from the implementation evaluation of YAL Bridge are summarized in the next chapter of this report. A separate report, released in conjunction with this one, offers a more in-depth discussion of the Bridge evaluation and its findings (Westat, Metis Associates, & Branch Associates, 2020).

The second evaluation was a follow-up to the Bridge implementation study that took place between 2018 and 2019. The second evaluation looked at the impact of YAL on student academic achievement compared to other city programs that offer pre-HSE supports. Chapter 3 presents findings from the impact study of YAL.

The report concludes with a discussion of the findings from both evaluations and implications for the new Advance & Earn program.

2. Evaluation of YAL Bridge

Like the traditional YAL program, YAL Bridge was designed to improve the literacy skills, mathematics skills, and job readiness of opportunity youth in New York City who are not academically prepared to enroll in an HSE program. YAL Bridge drew on the principles of the New York City Career Pathways initiative,¹ which aims to foster skills that employers seek, improve job quality, and increase coordination among public and private workforce development and service programs operating in the city. One strategy encouraged through the initiative is “bridge programs,” which are defined as follows:

Bridge programs prepare individuals with low educational attainment and limited skills for entry into a higher education level, occupational skills training, or career-track jobs, building the competencies necessary for work and education alongside career and supportive services. Bridge programs contextualize programming to a specific industry sector and have established relationships with partners (occupational training, education, and/or specific sector employment) who inform program design and serve as the primary destination for program participants.²

The YAL Bridge program included three main components that were designed to align with the Career Pathways definition of bridge programs:

1. An academic curriculum developed by the Workforce Professionals Training Institute (WPTI) specifically for YAL Bridge that incorporated **sector-specific contextualized academic instruction**. The curriculum placed learning of academic skills within the context of the world of work; specifically, the sectors of information technology (IT) and healthcare. For example, in the healthcare sequence, the curriculum included information about healthcare job areas and placed some academic activities within the context of tasks that might be expected of those working in the field (e.g., mathematics problems that ask participants to calculate medication dosage).
2. Bridge program providers were expected to develop **pathways (or “bridges”) to HSE preparation programs and employment and training opportunities**. Bridge providers may develop partnerships with outside organizations and employers to establish these pathways. The Bridge program also offered wage-paying internships to participants who meet minimum attendance requirements.
3. The Bridge program offered a **variety of social, employment, and academic supports**, including career counseling services, that were intended to help participants make the transition to further education or job attainment.

¹ Read more about the Career Pathways initiative at: <https://www1.nyc.gov/site/careerpathways/index.page>

² NYC Bridge Bank. (n.d.). Retrieved December, 2019, from <http://www1.nyc.gov/site/careerpathways/strategy/nyc-bridge-bank.page>

A recent review of evidence on career pathways programs, including those that use bridge strategies, noted that while limited in number, impact studies have generally found educational benefits to students enrolled in such programs (Schwartz, Strawn, and Sama, 2018). For example, in New York City, a bridge program offered by LaGuardia Community College had positive impacts on HSE course completion and HSE test pass rates (Martin and Broadus, 2013). An evaluation of nine career pathways programs found a majority of programs had positive impacts on student outcomes, including educational outcomes such as credits earned and credential attainment (Gardiner and Juras, 2019). Such evidence suggests the promise of bridge strategies for helping people with low levels of educational attainment.

YAL Bridge Evaluation Design

In fall 2015, NYC Opportunity contracted with Westat, Metis Associates, and Branch Associates to conduct an independent evaluation of YAL Bridge. The evaluation was set up as a site-level randomized control trial design to test the impact of YAL Bridge on participants' academic achievement in comparison to participants enrolled in the traditional YAL program. Although the impact assessment was a key objective of the evaluation, NYC Opportunity and the evaluation team recognized that differences in achievement might not be observed if the Bridge program was similar to traditional YAL in practice. For this reason, the evaluation also included an implementation study designed to provide an in-depth picture of how the Bridge program works "on the ground" and how Bridge compares, in practice, to traditional YAL. The evaluation was therefore structured in two phases: (1) an implementation study and (2) an impact study. It was expected that findings from the first phase would inform the second, including helping the team determine if the planned impact study would be worthwhile to pursue.

At the beginning of the evaluation, eight sites offering the YAL program were randomly selected to implement Bridge (treatment group), while eight other YAL sites were selected to continue with the traditional YAL model (control group). All 16 sites were asked to participate in the evaluation. Following random assignment, one site assigned to the treatment group ended its contract with the city to offer YAL and was removed from the evaluation, leaving 15 sites: seven in the treatment group and eight in the control group.

In fall 2016, the evaluation team carried out site visits to the 15 sites participating in the evaluation. These visits included the following activities:

- **Document review** of key program documentation (e.g., curriculum materials) and individual site project descriptions prior to site visits to gain background knowledge and context.
- **Interviews** with program directors and other key program staff, including academic instructors and support service providers (e.g., counselors). The interviews addressed topics such as the components of Bridge or traditional YAL that had been implemented to date, the extent to which program staff viewed Bridge as different than traditional YAL, what technical assistance support had been received, and successes and challenges encountered.

- **Focus groups** with program participants. These focus groups explored participant views of the program, types of activities and services engaged in, goals for participating in the program, and future plans with respect to further education and careers.
- **Observations** of mathematics or literacy classroom instruction. The observations focused on identifying examples of sector-specific contextualized instruction, as well as capturing descriptive details such as types of instructional approaches used and participant engagement.

Following the site visits, the evaluation team used a rubric to rate the level of implementation of the three Bridge program components in each of the treatment and control group sites. This enabled a comparison of how similar or different the Bridge program was to traditional YAL in practice. The evaluation team also looked across the site visit interviews and focus groups to identify key implementation challenges and potential best practices in both Bridge and traditional YAL sites.

YAL Bridge Implementation Study Findings

The implementation study found that Bridge program sites had made progress putting specific components into place. However, they remained in a developmental stage of implementation, particularly for the first Bridge program component (sector-specific contextualized academic instruction). With regard to implementation of the three core Bridge program components, the evaluation team found the following for sites implementing Bridge:

- **Sector-specific contextualized instruction.** Most Bridge sites demonstrated a low level of implementation of sector-specific contextualized instruction, based on observations of classroom time and interviews with site staff. The evaluation identified limited use of the new curriculum and understanding of contextualized instruction as factors that hindered implementation. For example, in a few sites, staff reported that the curriculum was used only partially or that implementation of contextualized instruction had been challenging. Additionally, several providers took a broader approach to contextualized learning that went beyond the program’s focus on specific job sectors (healthcare and IT), suggesting that there was not a common understanding of contextualized instruction across sites. For example, one site reported that contextualized instruction can include more general conversations about life goals or topics that students find relevant, such as civil rights and freedom of expression.
- **Bridges to HSE and other destinations.** All Bridge sites showed evidence of establishing pathways or “bridges” to HSE or other programs. Bridges to HSE programs were most common, and in some cases Bridge program providers offer an HSE program to which participants can transfer. Bridge sites had also made progress in establishing partnerships with employers to offer internships or other work readiness opportunities, although some indicated a need for additional support in building such partnerships.

- **Social, employment and transition support.** Individual and group counseling, case management, and other kinds of social or emotional support were common in Bridge sites. Similarly, most offer education support, including support for transitioning to additional education opportunities. Several sites offered career-focused support, including formal career counseling.

As noted above, a goal of the implementation study was to compare how similar or different YAL Bridge was, in practice, to the traditional YAL model. The purpose of this comparison was to assess the plausibility that an impact study could identify differences in student outcomes between the two versions of the program. For example, if YAL Bridge and traditional YAL looked very similar “on the ground,” it might not be reasonable to expect differences in student outcomes. The discussion below briefly highlights what the evaluation found regarding how YAL Bridge was similar or different to traditional YAL in terms of implementation. It is important to note that the purpose of this comparison was not to say whether the YAL Bridge model “works” better or worse than traditional YAL.

In comparison to Bridge sites, the sites implementing traditional YAL exhibited little to no use of sector-specific contextualized instruction. Traditional YAL sites did report use of thematic instruction, the broader concept from which contextualized instruction stems. However, thematic instruction generally appeared to have a less formal role in traditional YAL sites, and only a few examples of integrating of work skills or topics into academic instruction were provided. For example, one program director in a traditional YAL site said that work-related topics might be addressed during instruction if they come up “organically,” but there was not an effort to integrate such topics into the regular lesson plan.

Traditional YAL sites exhibited more similarity to Bridge sites with respect to the two other Bridge program components—establishing pathways to HSE programs or other destinations and providing a variety of participant supports. This was not necessarily unexpected, because the models of Bridge and traditional YAL were somewhat aligned in these areas. For example, both Bridge and traditional YAL sites had relationships with HSE programs and worked to help students

Promising Implementation Practices in Bridge and Traditional YAL Sites

One goal of the implementation evaluation was to identify potentially promising practices in both Bridge and traditional YAL program sites. Several such practices included:

- **Use of multiple strategies to recruit participants.** Strategies could include community engagement, working with other agencies that serve similar populations, and asking participants to help recruit friends who may be interested in the program.
- **Tailoring services to participants’ unique needs and situations.** For example, asking participants to provide input on the focus of upcoming activities, offering flexible scheduling, and offering one-on-one assessment of social-emotional needs
- **Intentional management of expectations.** Walking through the program’s focus, structure, and intended outcomes with participants at the time of enrollment helped set clear expectations and encouraged retention.

transition to these programs when they are ready to do so. It is worth noting, however, that Bridge sites were distinguished in their use of paid internships and more formalized pathways to work readiness opportunities. Similarly, both Bridge and traditional YAL sites offered counseling and other types of social-emotional supports, but Bridge sites were found to have a stronger focus on career-readiness supports including career counseling.

Implications of the Implementation Study Findings

The Bridge implementation study findings raised implications for both the program and the evaluation itself. For the program, the implementation study suggested that additional technical assistance support may be needed to build a common understanding of sector-specific contextualized instruction across program providers. The evaluation team noted that the contextualized instruction component of Bridge might also be strengthened by expanding its scope. For example, some program providers and participants discussed the program's focus on just two job sectors—healthcare and IT—as a limitation, indicating that expanding to cover additional sectors could be beneficial. This was seen as particularly important for keeping the program fresh for participants who enroll in multiple cycles.

The implementation study's findings also suggested that while progress had been made in putting the Bridge program into place, the key contextualized instruction program component remained in a developmental stage of implementation. For example, this was demonstrated by program providers reporting that the contextualized curriculum was used only partially, or that contextualized instruction could include broader themes beyond the sector-specific focus of the YAL Bridge program. The study also showed that the Bridge program had both similarities and differences to traditional YAL in practice. Taken together, these findings raised the possibility that the planned impact study could be hampered by the program's still-developing status and areas of overlap between Bridge and traditional YAL. As a result, the evaluation team recommended against pursuing an impact study of Bridge. This led NYC Opportunity and Westat to decide on a revised approach for assessing program impact. The design and findings of this revised approach are described next.

3. Impact Study of YAL

As a substitute for the planned Bridge impact study, NYC Opportunity and Westat decided to carry out an assessment of the YAL program's impact on student achievement in comparison to young adults enrolled in two other New York City programs that offer pre-HSE supports. The first comparison program, Adult Literacy, is also administered by DYCD and provides pre-HSE academic support for students ages 16 and older. Pre-HSE courses offered by the Brooklyn and Queens public libraries were the second comparison program. The impact study was aimed at addressing three evaluation questions:

1. Do YAL program participants have better reading performance compared to similar participants enrolled in the Adult Literacy program or library pre-HSE programs?
2. Do YAL program participants have better mathematics performance compared to similar participants enrolled in the Adult Literacy program or library pre-HSE programs?
3. Does the impact of the YAL program on reading or mathematics performance vary for participants with different demographic characteristics?

The study used a quasi-experimental design to address the three evaluation questions.³ Westat conducted the study using pre-existing data provided by DYCD and the public libraries, including reading and mathematics scores on the Test of Adult Basic Education (TABE) assessment, which is used by all three programs to measure student learning. Students were included in the study if they met the YAL program's eligibility criteria:

- Students ages 16 to 24 years old; and
- Reading between a 4th- and 8th-grade level at program entry, as indicated by a TABE reading score between 4.0 and 8.9.

After selecting eligible students, Westat used a statistical matching procedure to select YAL and comparison group students who were similar in terms of their reading and mathematics performance at program entry (based on TABE pretest score). This meant that the study's comparisons were based on students who started with statistically equivalent levels of reading and mathematics performance. After matching, statistical models were used to compare the reading and mathematics performance of YAL and comparison group students from the time they started the program to the time they left, while taking into account factors that might be related to students' performance. These factors included pretest score, number of hours spent in the program, highest K–12 grade level completed, age, gender, and race/ethnicity. Additional details on the study's methodology are described in the appendix.

³ A quasi-experimental design uses statistical techniques to compare groups that were not randomly assigned to treatment or control conditions.

Because the impact study compared YAL to other programs, it is important to note that it does not address the question of YAL's effectiveness in comparison to no programming. Additionally, the evaluation focused on the learning outcomes of YAL students, so it does not address whether the program might have benefits for other types of anticipated outcomes (e.g., transition to HSE, job attainment).

About the Comparison Programs

The Adult Literacy and library pre-HSE programs were identified as potential comparisons to YAL because they offer similar types of educational support and also serve young adults in the 16-24 age group (in addition to older students). This section briefly describes the two programs and how their designs are similar to or different from YAL, based on interviews and document reviews conducted for the evaluation.⁴

Adult Literacy. Although the Adult Literacy program serves some students in the same age range as YAL (i.e., ages 16–24), it does not specifically target young adults who are disconnected from education and the workplace. The program is offered through community-based organizations operating under contract with DYCD. In 2017, the program was offered in 22 sites located throughout the city. The program provides a minimum of six hours of reading and mathematics instruction per week. Adult Literacy does not require using a specific curriculum but providers generally employ balanced literacy and conceptual mathematics approaches, along with theme-based or contextualized instruction. Non-academic supports are not a major part of the Adult Literacy program, but some providers do incorporate service learning-type projects, project-based learning, and other experiences into their programs (e.g., field trips). Like YAL, transition supports are also provided.

Pre-HSE courses at the Brooklyn and Queens public libraries. The libraries' programs are supported through a grant to the State of New York under the U.S. Department of Labor's Workforce Innovation and Opportunity Act (WIOA) program. Similar to the Adult Literacy program, the libraries offer their programs to people ages 16 and over but do not specifically target young adults who are disconnected from education and work. In 2017 the program was offered in 12 individual branch libraries, including five branches of the Brooklyn Public Library and seven Queens Public Library branches. Each individual program offers a minimum of six hours of reading and mathematics instruction per week, although the curriculum and instructional approach may vary from branch to branch. For example, some branches use a published curriculum, while others may develop their own program using instructional and other resources available online. However, like YAL and Adult Literacy, the libraries have a focus on providing theme-based instruction. Non-academic activities and supports do not appear to be a significant part of

⁴ Some providers of the Adult Literacy and library pre-HSE programs also offered the YAL program. The evaluation included these providers but separated students by program (e.g., either YAL or comparison program) in the analysis.

the libraries’ programs, although supports are offered to help students transition into and out of the program (a feature included in the other two programs).

Compared to the Adult Literacy and public library programs, YAL had a relatively more intensive academic program, requiring 15 hours per week of reading and mathematics instruction versus six hours per week in the other programs. YAL also provided a wider range of non-academic supports than the comparison programs, including counseling, work readiness activities, and group activities. All three programs use a theme-based or contextualized approach to learning, and all offer supports to students transitioning into and out of the program. Exhibit 1 summarizes key features of all three programs.

Exhibit 1. Features of YAL, Adult Literacy and Library pre-HSE programs

Program Area	Program Features	YAL	Adult Literacy	Library pre-HSE
Population	Young adults, ages 16–24, whose literacy levels do not meet requirements for an HSE preparation course	•	•	•
	Adults, 25 years and above, whose literacy levels do not meet requirements for an HSE preparation course		•	•
Schedule	Program sessions offered year-round, e.g., 10- to 11 -week quarterly cycles	•		
	Program sessions offered at least 10 months per year		•	•
Academics	At least 15 hours of academic instruction per week	•		
	At least six hours of academic instruction per week		•	•
	Balanced literacy and conceptual math approaches	•	•	
	Theme-based or contextualized instructional approach	•	•	•
Non-academic activities and supports	Paid internships	•		
	Service learning	•		
	Career counseling/job readiness	•		
	Social/emotional counseling	•		
	Transition support	•	•	•
	Other experiences/opportunities (e.g., field trips)	•	•	

Limitations of the Impact Study

The impact study was subject to limitations that should be considered when interpreting its findings. In particular, the study faced challenges with regard to the availability of program data to include in the analysis and the number of students and program sites available to include in the analysis.

- **Data availability.** The study was not able to account for some student characteristics due to limited or inconsistent data. For example, data on disability status (e.g., whether the student had a learning disability) could not be included. Similarly, the evaluation could not include information about employment status, income, or other characteristics related to socio-economic status. If there were differences between programs on these or other student characteristics, including this kind of information might have led to different results. Exhibit A-1

in the appendix includes a summary of the types of data that were and were not available to include in the analysis.

- **Statistical power.** Statistical power, the ability detect a difference between groups when one truly exists, was low due to relatively small numbers of students and program sites available to include in the analysis. This is particularly the case for the comparison between YAL and the library pre-HSE program, so findings for this comparison have less certainty than findings on the comparison with Adult Literacy. Tables A-3 and A-4 in the appendix include details on the size and characteristics of the samples used for the impact analyses.

Impact Study Findings

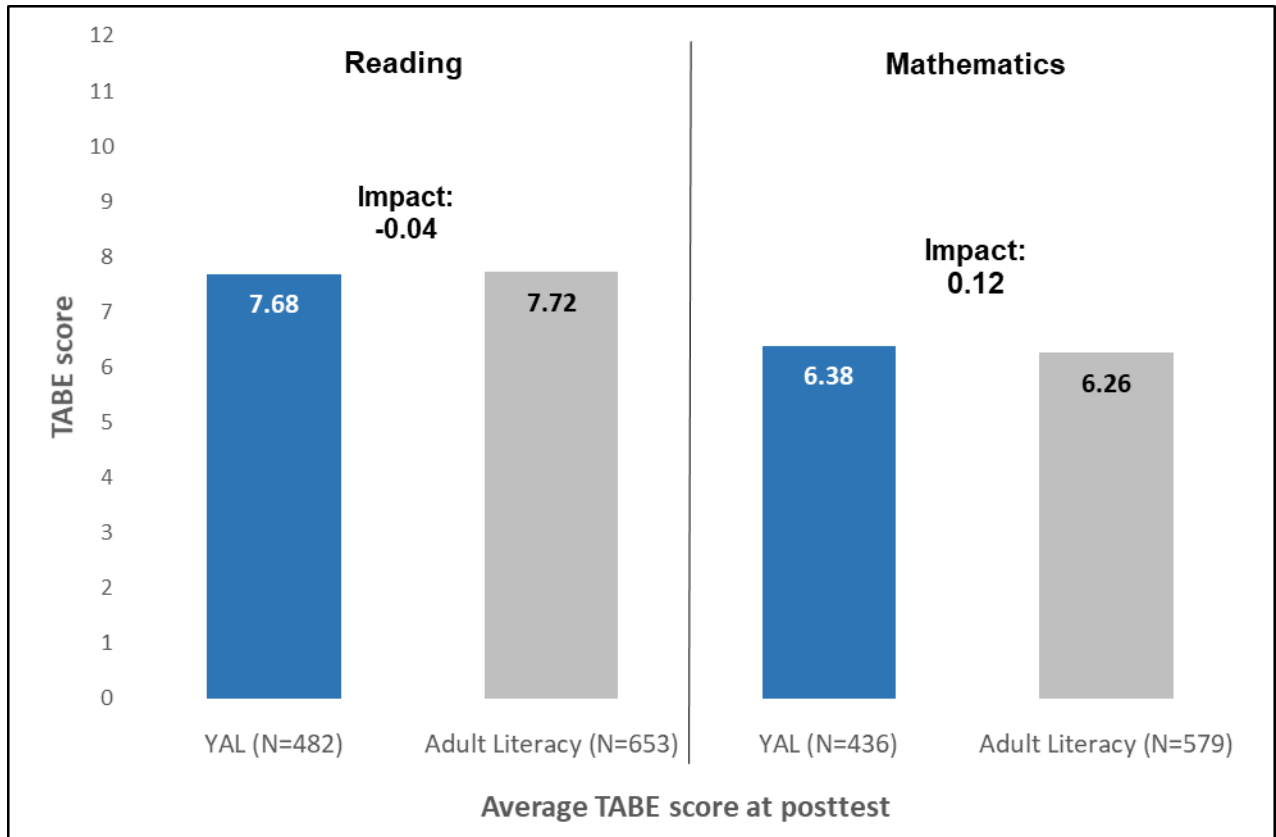
With respect to the first two evaluation questions—addressing the overall impact of YAL on reading and mathematics performance—the study found that while YAL students improved their performance during their time in the program, so did students enrolled in the other two programs who started with statistically equivalent reading and mathematics performance. In other words, the study found no evidence that students enrolled in YAL did better or worse, on average, than students enrolled in the comparison programs. However, when investigating the third evaluation question, the study found that some specific groups of YAL students performed better in mathematics than students in the other two programs, while others did worse. These results are discussed next, organized by the three questions that guided the impact study.

Questions 1 and 2: Do YAL participants have better reading or mathematics performance than participants in the two comparison programs?

In reading, YAL students scored almost the same as Adult Literacy students at posttest⁵ (YAL students' average reading score was estimated to be just 0.04 points lower). YAL students scored slightly above Adult Literacy students in mathematics on average (0.12 points). Neither difference was statistically significant, meaning that the differences could simply have been due to chance rather than an effect of the program (Figure 1).

⁵ Student performance at posttest was used as the dependent variable in the study's statistical models. The impact estimates represent the estimated mean difference between YAL and comparison students at posttest after accounting for where students started (pretest performance) and other factors (e.g., race/ethnicity, gender, age, and hours spent in the program).

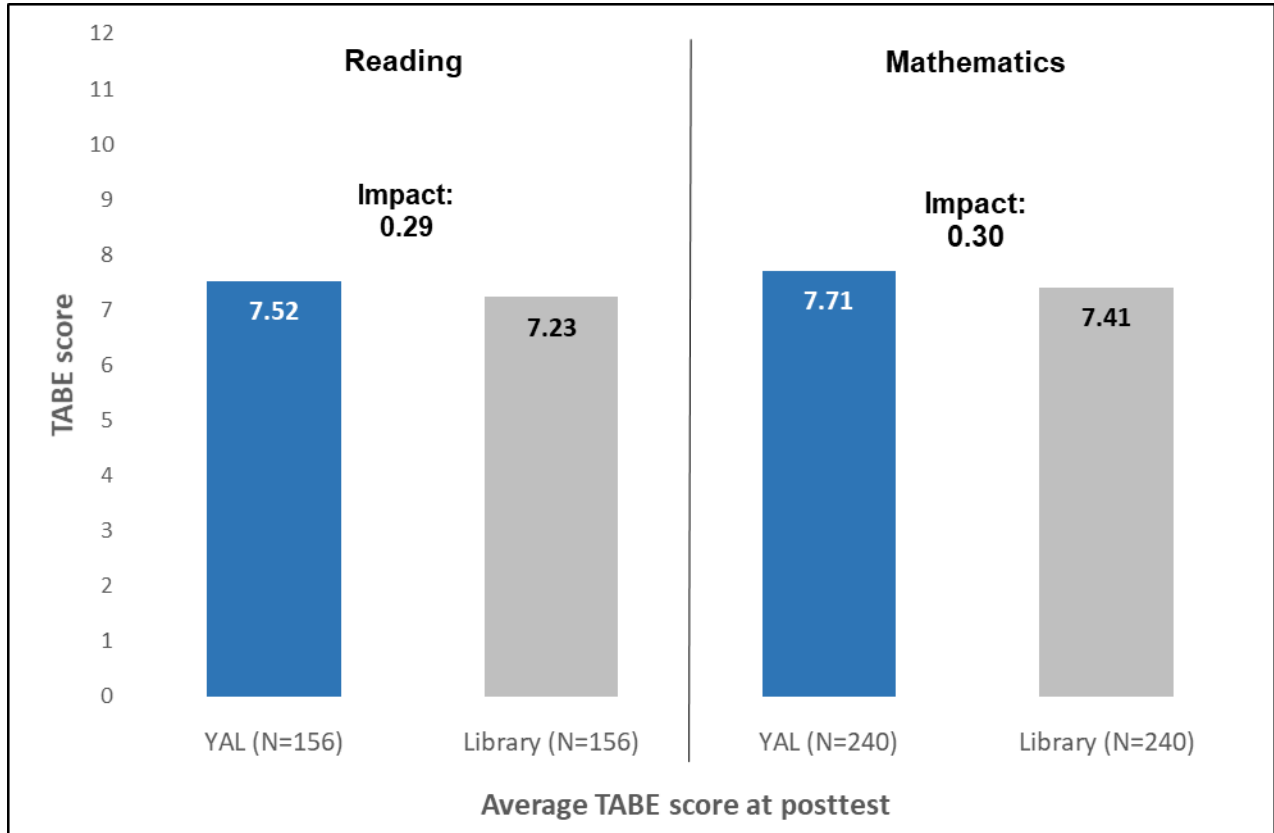
Figure 1. Estimated impact of YAL compared to Adult Literacy in reading and mathematics



NOTE: Estimated impact is the mean difference between groups at posttest after accounting for factors in the study's regression models (mean pretest scores are statistically equivalent). The estimated impacts are not statistically significant ($p > 0.05$). The 95% confidence intervals for the impact estimates are -0.45 to 0.46 points in reading and -0.26 to 0.39 points in mathematics. The estimated effect sizes (in standard deviation units) are -0.02 in reading and 0.06 in mathematics. See Table A-3 in the appendix for sample details.

Compared to library pre-HSE students, YAL students' reading performance was estimated to be 0.29 points higher at posttest, while in mathematics YAL students scored 0.30 points higher on average (Figure 2). Like the comparisons with Adult Literacy, however, these differences could just be due to chance (i.e., they are not statistically significant). However, these findings should be interpreted with some caution because the sample sizes for these comparisons were smaller than those for Adult Literacy, leading to more uncertainty about the estimated impacts.

Figure 2. Estimated impact of YAL compared to library pre-HSE in reading and mathematics



NOTE: Estimated impact is the mean difference between groups at posttest after accounting for factors in the study's regression models (mean pretest scores are statistically equivalent). The estimated impacts are not statistically significant ($p > 0.05$). The 95% confidence intervals for the impact estimates are -0.58 to 0.97 points in reading and -0.61 to 1.12 points in mathematics. The estimated effect sizes (in standard deviation units) are 0.11 in reading and 0.10 in mathematics. See Table A-4 in the appendix for sample details.

Question 3: Does the impact of YAL vary for different student subgroups?

To address the third evaluation question, we examined the impact of the YAL program for African American and Latinx students.⁶ Specifically, this analysis assessed the differential impact of YAL on four different subgroups of students:

1. Students who identify as Latinx alone;
2. Students who identify as African American alone;
3. Students who identify as *both* Latinx and African American;

⁶ We chose these groups because they make up a large proportion of students in all three programs, allowing sufficient numbers of students to perform the analysis. The YAL program also had a focus on serving youth of color, so these are important populations from a programming perspective.

4. Other students who identify as *neither* Latinx nor African American. This includes students who identify as Asian, white, or whose race/ethnicity was classified as “other” with no further information.

YAL students who identify as neither Latinx nor African American improved their mathematics performance by 2.35 points from pre- to posttest, a significantly larger gain than similar Adult Literacy students (Table 1). YAL students who identify as both Latinx and African American improved their mathematics performance by 0.75 points from pre- to posttest, but this gain was significantly smaller than the performance of similar Adult Literacy students. It is important to note that the third subgroup includes a relatively small number of students, so the results should be interpreted with some caution. The subgroup analysis found no differences in the reading performance of YAL students in comparison to Adult Literacy students.

Table 1. Mathematics score gain of YAL compared to Adult Literacy, by student subgroup

Student subgroup	Gain in TABE mathematics score	
	YAL	Adult Literacy
1. Latinx (N=523)	1.57	1.49
2. African American (N=289)	1.53	1.57
3. Both Latinx and African American (N=47)*	0.75	1.55
4. Other students (N=156)*	2.35	1.51

* Difference is statistically significant ($p < 0.05$).

NOTE: Gain in TABE score is the average change from pre- to posttest after taking into account interaction effects and covariates in the regression model. See Table A-5 in the appendix for detailed sample size information.

Two groups of YAL students significantly outperformed library pre-HSE students in mathematics, while a third had weaker performance (Table 2). African American students in YAL improved their mathematics scores by 1.19 points on average, significantly more than African American students in the library pre-HSE program. YAL students who identify as neither Latinx nor African American also outperformed similar library pre-HSE students in mathematics. However, YAL students who identify as both Latinx and African American had a significantly smaller gain than similar library students, and even showed a small decline in their performance. Again, the third subgroup is small, so some caution is needed in interpreting the results. Like the comparison with Adult Literacy, there were no differences in reading performance between YAL and library pre-HSE by student subgroup.

Table 2. Mathematics score gain of YAL compared to library pre-HSE, by student subgroup

Student subgroup	Gain in TABE mathematics score	
	YAL	Library pre-HSE
1. Latinx (N=133)	0.54	0.95
2. African American (N=219)*	1.19	0.93
3. Both Latinx and African American (N=28)*	-0.02	0.83
4. Other students (N=100)*	1.75	1.05

* Difference is statistically significant ($p < 0.05$).

NOTE: Gain in TABE score is the average change from pre- to posttest after taking into account interaction effects and covariates in the regression model. See Table A-6 in the appendix for detailed sample size information.

Discussion and Implications

The impact study results suggest that YAL students do no better or worse in reading or mathematics than students enrolled in other city pre-HSE programs. It is important to note that YAL students demonstrated academic improvement in all comparisons made, which is consistent with the findings of previous evaluations of the program. However, there is no evidence that YAL students' performance is different than that of students enrolled in the two programs used as comparisons for this study.

There are several possible reasons for the finding of no overall differences in student performance between YAL and the two comparison programs. One is that the academic support offered through the programs is too similar to result in differences in student performance. Compared to the other programs, YAL offers a relatively more intense academic program that is tailored to the needs of opportunity youth. However, the two comparison programs appear to use instructional strategies that are similar to YAL, so it could be that the programs are simply not distinct enough in their academic approaches to lead to different outcomes. Another possible reason is that there are differences between YAL students and students in the other two programs that the study could not account for. As previously noted, data on student disability and socio-economic status were not available, so if there were systematic differences between the programs on these or other unobserved characteristics, the results might have been different. Lastly, the study might have been able to identify statistically significant differences if more students and program sites had been available to include in the analysis.

Although the study found no differences in students' academic performance overall, it does provide evidence suggesting that some YAL students have different performance in mathematics compared to students enrolled in the other programs. African American students in YAL had stronger mathematics performance than African American students in the library pre-HSE program, while YAL students who identify as *neither* Latinx nor African American had stronger performance than similar students in both comparison programs. However, the study also showed that YAL students who identify as *both* Latinx and African American do less well in mathematics compared to similar students enrolled in the other programs. These findings offer opportunities for future research to confirm and explore them in greater depth. For example, it would be worthwhile for future studies to investigate whether programs like YAL

have similar impacts for African American students in mathematics. It is also worth noting that the group that showed the largest and most consistent mathematics gains (students who are *neither* African American nor Latinx) is composed of several student subgroups, and future studies could both confirm this finding and work to “unpack” this group to provide a more detailed picture of student performance.

Finally, it is also important to remember that the study did not assess how YAL compares to no programming, which would provide the clearest evidence of how the program benefits opportunity youth. Additionally, the study focused on the impact of YAL on student academic performance, and it is possible that the program has benefits for students in other areas, including social-emotional growth and attainment of an HSE credential. Indeed, in this study, non-academic supports such as workforce readiness activities and counseling were key areas where YAL differed from the Adult Literacy and library pre-HSE programs. Taken together with the study’s findings, such issues will be important for future program development and evaluation to consider.

4. Conclusion

Young adults who read below an 8th-grade level and who are not working or in school face a difficult path to completing high school equivalency and job attainment. The YAL program addressed the unique needs of this population with academic instruction relevant to students' lives and with tailored workforce, social-emotional, and other support services. Findings from the evaluations discussed in this report show that YAL had success in offering many of these supports, but also faced challenges in some areas. The Bridge enhancement to the program included an ambitious new curriculum and a strengthened approach to supporting participants' workforce readiness. The Bridge enhancement achieved early implementation success by establishing pathways to HSE and other programs as well as providing a strong range of social and career-readiness supports. However, the academic portion of the program, particularly its contextualized learning component, experienced a slower start. Given this and other factors, NYC Opportunity and its evaluation partners determined that the Bridge enhancement was not ready for a rigorous impact study.

An alternative approach, assessing the impact of YAL against other pre-HSE programs in New York City, showed that while students in YAL improve their reading and mathematics achievement, these improvements are no better or worse than for similar students enrolled in other programs. However, there were indications that some specific groups of students may experience unique benefits from YAL—a finding of a positive impact of the program on African American students' mathematics achievement was especially promising.

In spring 2019, the YAL program ended as NYC Opportunity and its partners prepared to launch the new Advance & Earn program. The new program will offer opportunity youth a continuum of services and supports from pre-HSE through HSE completion and entry into further education and the workforce. Specific services will include literacy and mathematics instruction; basic skills instruction contextualized to specific job sectors (similar to YAL Bridge); HSE test preparation; work readiness training; college and career exploration; paid work experience; advanced occupational training and industry credential attainment; and case management and wrap-around services.

The evaluations highlighted in this report raise several important implications for the new Advance & Earn program. First, it will be important to ensure that core program components, including contextualized instruction, are uniformly understood and implemented across program providers. As with the study of YAL Bridge, an implementation evaluation could help identify aspects of the new program that are being implemented well along with areas where additional support or resources may be needed. Second, comprehensively capturing a range of program and participant data will help to monitor progress and also support an eventual impact evaluation. Such data would likely include a range of participant background characteristics; program enrollment, attendance, and retention; academic and non-academic outcomes; and data on participant transitions between different parts of the program continuum and to destinations such as employment and higher education. Lastly, the evaluations discussed in this report suggest the importance of planning ahead for a rigorous impact

study that can investigate a full range of participant outcomes versus an appropriate comparison group. In particular, NYC Opportunity and its partners should consider planning for a no-program comparison study to ensure the strongest possible evidence of the program’s effectiveness. Such steps can help the city—and others who work to support the needs of opportunity youth—to provide high-quality services to struggling young people and advance the city’s efforts to promote equity and opportunity for all New Yorkers.

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Appendix. YAL Impact Study Methodology

Impact Study Data

Westat used pre-existing data provided by DYCD and the public libraries to conduct the study, including reading and mathematics scores on the Test of Adult Basic Education (TABE) assessment, which is used by all three programs to measure student learning. The TABE uses a scoring system that is based on K–12 education grade levels, so a student who scores 5.0 on the reading assessment reads at approximately a 5th-grade level.

Westat requested two years of participant data from each program, covering the 2016 and 2017 New York City fiscal years. Due to limited or inconsistent data, not all requested data elements could be included in the study (Exhibit A-1). For example, there was some data available on employment status for YAL and library pre-HSE students, but the YAL data were insufficient to include in the analysis. Employment status was not provided by the Adult Literacy program. Similarly, YAL provided some disability data, but neither the library nor the Adult Literacy program provided data related to disability status.

Exhibit A-1. Requested data elements included in the impact study

Requested data elements	Included	Not included
Assessment information		
TABE reading scores	✓	
TABE mathematics scores	✓	
Enrollment information		
Date of program entry	✓	
Date of program exit	✓	
Participation hours	✓	
Participant characteristics		
Age	✓	
Disability status		✓
Eligibility for assistance programs (e.g., Temporary Assistance for Needy Families)		✓
Employment status		✓
English learner status		✓
Gender	✓	
Highest K–12 grade level completed*	✓	
Race/ethnicity	✓	

* Highest grade level was included only for the comparison between YAL and Adult Literacy.

We included students in the study if they met the YAL program’s eligibility criteria. Specifically, students were included if they were 16 to 24 years old and entered a program reading between a 4th- and 8th-grade level (as indicated by a TABE reading score between 4.0 and 8.9). Additionally, we excluded the following groups of students:

- Students who had participated in a program for fewer than 12 hours, since these students did not have a meaningful level of program exposure.
- Students who were missing test score data.

Missing test score data primarily affected posttests. For example, this could have been because a student left a program without taking a posttest. Rates of missing posttest score data were high—ranging from 30 to 40 percent across programs and subject areas. If students who were missing posttest data had different levels of academic performance than students who were tested, excluding them could have biased the study’s results. To assess this potential bias, we conducted an analysis comparing the pretest scores of students who were posttested to students who were not. The results of this analysis showed that there were no statistically significant differences in average pretest scores between these groups, suggesting that students with missing posttest scores had similar levels of baseline reading and mathematics performance as students with posttest scores.

Matching and Final Analytic Samples

We used propensity score matching to ensure that the study’s comparisons were based on students with similar levels of reading or mathematics performance when they entered the program. The matching procedure was based on students’ TABE reading or mathematics pretest scores.⁷ Matching was done separately for reading and mathematics and for each comparison (e.g., YAL vs. Adult Literacy in reading, YAL vs. library pre-HSE in mathematics). A nearest neighbor matching algorithm was used to find the closest match for a YAL participant from the comparison group, with the requirement that matches have pretest scores within 0.10 standard deviations of one another. Equivalence tests showed no statistically significant differences in reading or mathematics scores between the matched groups at baseline (Tables A-1 and A-2).

⁷ We chose to match on pretest only to maximize the sample sizes. However, we explored alternative matching approaches, including adding student race/ethnicity to the propensity score models. These alternatives resulted in similar impact estimates and effect sizes as those described in Chapter 3 of this report.

Table A-1. Baseline equivalence of samples for comparisons of YAL and Adult Literacy

	YAL	Adult Literacy	Equivalence test results	
			p-value	Effect size
Reading comparison				
Sample size	482	653	0.51	0.04
Mean pretest score	6.39	6.34		
Mathematics comparison				
Sample size	436	579	0.52	0.07
Mean pretest score	5.24	5.39		

Table A-2. Baseline equivalence of samples for comparisons of YAL and library pre-HSE

	YAL	Library pre-HSE	Equivalence test results	
			p-value	Effect size
Reading comparison				
Sample size	156	156	0.82	0.02
Mean pretest score	6.28	6.32		
Mathematics comparison				
Sample size	240	240	0.35	0.07
Mean pretest score	6.37	6.31		

Characteristics of the analysis samples are shown in Tables A-3 and A-4. In addition to the assessment of baseline equivalence on pretest, we conducted tests to assess the equivalence of the groups in terms of demographics and other characteristics. Statistically significant differences between groups are noted with asterisks in the tables.

Table A-3. Characteristics of analysis samples for comparison of YAL and Adult Literacy

	YAL	Adult Literacy
Reading comparison		
Number of students	482	653
Number of program sites	15	20
Mean age	20	20
Mean participation hours*	326	147
Percent female	50%	51%
Percent African American*	47%	26%
Percent Asian	5%	4%
Percent white*	5%	12%
Percent other race*	22%	43%
Percent race missing*	21%	15%
Percent Latinx*	45%	62%
Mathematics comparison		
Number of students	436	579
Number of program sites	11	17
Mean age	20	20
Mean participation hours*	275	153
Percent female	52%	51%
Percent African American*	48%	22%
Percent Asian	6%	5%
Percent white*	4%	10%
Percent other race*	24%	46%
Percent race missing	19%	18%
Percent Latinx*	44%	66%

* Difference between groups is statistically significant ($p < 0.05$)

Table A-4. Characteristics of analysis samples for comparison of YAL and library pre-HSE

	YAL	Library pre-HSE
Reading comparison		
Number of students	156	156
Number of program sites	13	12
Mean age	20	22
Mean participation hours*	289	73
Percent female	51%	52%
Percent African American	48%	51%
Percent Asian*	4%	19%
Percent white	8%	8%
Percent other race	26%	22%
Percent race missing*	14%	0%
Percent Latinx*	40%	19%
Mathematics comparison		
Number of students	240	240
Number of program sites	15	12
Mean age	20	21
Mean participation hours*	317	71
Percent female	49%	47%
Percent African American	49%	54%
Percent Asian*	7%	14%
Percent white	6%	8%
Percent other race	25%	25%
Percent race missing*	13%	0%
Percent Latinx*	42%	25%

* Difference between groups is statistically significant ($p < 0.05$)

Impact Analysis

We used hierarchical linear models (HLM) with students nested in program sites to examine the impact of YAL program on students' reading and mathematics performance. For this study, it was important to use HLM because the programs were offered at multiple individual sites, meaning that the reading and mathematics assessment scores from students within program sites are not independent observations. To confirm that HLM was needed, we calculated the intraclass correlation coefficient (ICC) for each sample. In samples that include some kind of clustering (e.g., students clustered within program sites), the ICC can be used as an indicator of what proportion of the total variance is due to such clustering. The ICC values for this study ranged from 0.10 (YAL vs. Adult Literacy in mathematics) to 0.15 (YAL vs. library pre-HSE in mathematics). ICC values of this level indicate a need to account for clustering in analysis, as methods that do not take clustering into account can result in underestimated standard errors and biased tests of statistical significance (Hox, 2002).

For the first two evaluation questions (assessing the overall mean impact of YAL), the HLM regression models included posttest score as the dependent variable, and an indicator of treatment status (YAL or comparison group), pretest scores, race/ethnicity, age, gender, and hours of program exposure as independent variables. For the comparisons between YAL and Adult Literacy, highest grade level completed was also included as a covariate.

For the third evaluation question (assessing whether the impact of YAL varies depending on students' demographics), we added interaction terms⁸ to the HLM regression models in addition to the covariates listed above. The interactions were designed to explore the impact of the YAL program for students who identify as African American or Latinx. We chose these groups for the analysis because they make up a large proportion of students in all three programs.⁹ This analysis assessed the differential impact of YAL on four different subgroups of students:

1. Students who identify as Latinx alone;
2. Students who identify as African American alone;
3. Students who identify as *both* Latinx and African American;
4. Other students who identify as *neither* Latinx nor African American. This includes students who identify as Asian, white, or whose race/ethnicity was classified as "other" with no further information.

Tables A-5 and A-6 show the sample sizes for the subgroup analyses.

Table A-5. Sample sizes for subgroup analysis of YAL and Adult Literacy

Student subgroup	Sample size	
	YAL	Adult Literacy
1. Latinx	169	354
2. African American	187	102
3. Both Latinx and African American	21	26
4. Other students	59	97

⁸Interaction terms are specified by multiplying different variables. In this case, we created the interaction terms by multiplying treatment status by the variables for African American and Latinx.

⁹We conducted a similar analysis exploring the impact of the program for male and female students, but found no statistically significant differences.

Table A-6. Sample sizes for subgroup analysis of YAL and library pre-HSE

Student subgroup	Sample size	
	YAL	Library pre-HSE
1. Latinx	81	52
2. African American	99	120
3. Both Latinx and African American	19	9
4. Other students	41	59