REIMAGINING PATHWAYS TO STUDENT SUCCESS: PENCIL'S OBSERVATIONS & RECOMMENDATIONS FROM A THREE-YEAR RETROSPECTIVE

BRIEF #2: FOSTERING A FOUNDATION OF GROWTH MINDSET THROUGH SCHOOL-BASED PROGRAMS

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Over the past two years, youth serving non-profit organizations in the education and workforce development fields have needed to rapidly innovate, create, and adapt in the unstable and uncertain environment of the pandemic. Like our peer organizations, PENCIL shifted to virtual service delivery, developed new models, and refined programs to offer young people what they needed most during this unique and historic moment.

PENCIL also embraced this time to learn from our work and understand the specific program elements that drive desired outcomes in our efforts to "connect students to success." With support from the Carnegie Corporation of New York, PENCIL conducted a three-year retrospective evaluation to understand what is working, what could be better, and what we can share to strengthen the field's efforts overall. The result of that work is captured in a series of three briefs, each exploring a unique, data-driven hypothesis for one of the pillars of PENCIL's Theory of Change. PENCIL's Theory of Change asserts that to be "connected to success" a young person needs Developmental Relationships, Skill Attainment, and Access to Opportunity. Specifically, the briefs will explore the following topics:

- The difference between Career Explorers and all other PENCIL programs in its ability to increase students' access to opportunity and sense of belonging. Notable trends were observed for high school students and first-generation college bound students.
- The difference between virtual and in person service delivery on building mentorship relationships for students especially for different age groups.
- The difference between school-year and summer program models on our measures of skill attainment and the potential for more developmentally scaffolded year-round approaches.

Students participating in PENCIL programs are asked to complete pre and post surveys. These surveys include 18 questions across three indices designed to measure PENCIL's three "Keys to Success." Factor analysis conducted on all asset questions and individual indices found indices to be internally consistent and unique (TLI =0.95, RMSEA =0.047). MANOVA was conducted on Z-scores created from individual indices. Post hoc analysis was conducted on programmatic and demographic variables showing statistically significant (CI > 95%) intergroup differences as well as the interaction effects between two demographic variables. Dependent variables included year, program, virtual/in-person, grade, self-reported race/ethnicity, gender, age, English spoken at home, and parental education. Post hoc tests were not conducted due to data limitations. Preliminary post hoc analysis focused on population subgroups show trends based on available data and do not meet the sample size requirements for statistical significance. Data was collected and reviewed across four program offerings:

The PENCIL School Partnership Program (In Person)
PENCIL creates and supports ongoing relationships between business partners, schools, and students to prepare students for college and career success. PENCIL staff coordinate and guide monthly sessions that are supported by business partner volunteer teams. Programming increases student access to relationships, skills, and opportunities unique to the business sector. Sessions range from workshops on networking and professional communication, to panels with corporate volunteers introducing students to career options within a company. In person program data was collected during the 2018-19 school year (n=277).

The PENCIL School Partnership Program (Virtual)
Virtual School Partnership Programs offered the same content and structure as the above but adapted for online delivery. Virtual program data was collected during the 2019-20 and 2020-21 school years (n=217).

PENCIL Internship Program

Each year, PENCIL places hundreds of students (ages 16-22) in paid six-week summer internships at companies across New York City. Students are required to attend 20 hours of pre-employment training facilitated by PENCIL staff and corporate volunteers to learn essential career-readiness skills including financial literacy, office technology, networking, and personal branding, interview best practices, and workplace etiquette. PENCIL matches students to interviews for available summer positions businesses recruited from a variety of industries. Final hiring decisions are made by employer partners. Internship data was collected from students in virtual and in-person internships during the summers of 2020 and 2021 (n=68).

PENCIL Career Explorers

In response to the impact of COVID-19 on the availability of internships, PENCIL designed and launched Career Explorers. The program offers high school students a paid work-based learning experience designed to promote career awareness, exploration, and preparation. All program components have been delivered virtually. Career Explorers attend the internship program's pre-employment training facilitated by PENCIL staff and corporate volunteers and then engage in 150 hours of paid work-based learning during the summer. They complete an industry-specific project related to their career interest and are paired with a volunteer mentor from that industry who provides guidance and feedback as well as networking and career exposure. PENCIL staff provide daily supervision to ensure participants remain focused and meet all deadlines and deliverables. Career Explorer data was collected from students during the summers of 2020 and 2021 (n=67).

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In the distribution of this series, PENCIL hopes to contribute to and advance the conversations around what it will truly take to harness this moment in time and prepare young people for successful pathways in their academic and career pursuits. New York City is hungry for an economic renaissance as the effects of the pandemic stabilize. Part of that equation must be an understanding that when we connect students to success, we connect the city to success. It is in our collective best interest to learn from the past two years and reemerge with, not the same old programs and opportunities for young people, but better ones that sustain and scale the successful innovations born of this moment.

BRIEF #2: FOSTERING A FOUNDATION OF GROWTH MINDSET THROUGH SCHOOL-BASED PROGRAMS

As the effects of the pandemic on the global labor market become clearer and sustained, more and more employers are experiencing a talent shortage. Over 69% of employers recently report difficulty filling vacancies. [i] Additionally, employers are prioritizing soft skills such as teamwork and flexibility in their hiring.[ii] While soft skills are important, the role that technology played during the pandemic means employers are still looking for strong technical expertise in areas such as operations, IT, and infrastructure. Whether someone has essential or technical skills, the groundwork must be laid for young people to believe in their potential to gain and develop those skills.
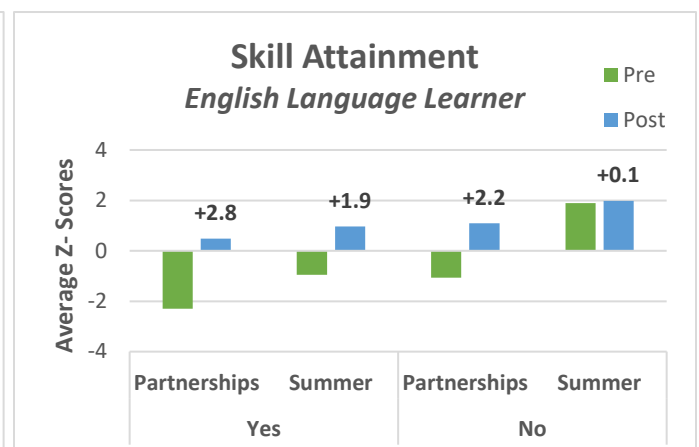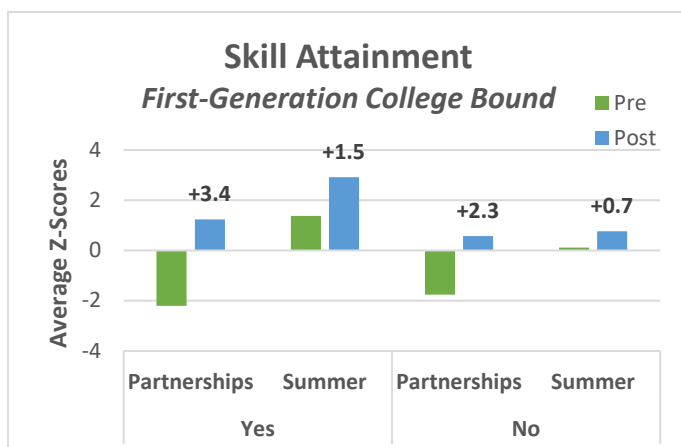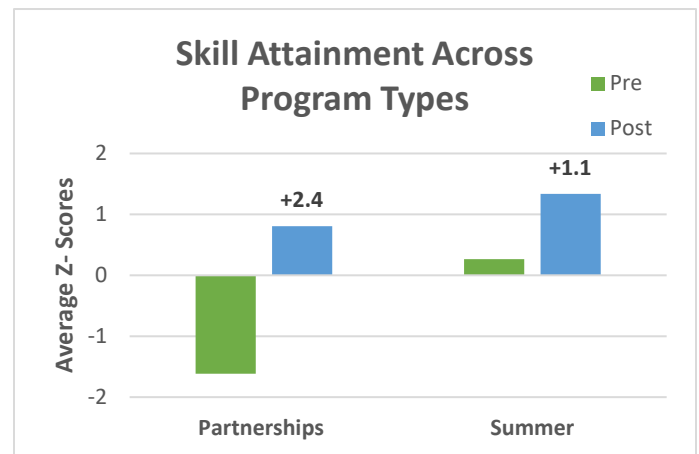
To attain skills, students must first understand their ability to increase intelligence through effort. Carol Dweck coined the term "growth mindset" as this understanding of personal growth through perseverance.[iii] Individuals with a growth mindset are more likely to put extra time and effort into projects and achieve more success. Research suggests developing a purpose and personal brand are powerful tools to improve growth mindset.[iv]

PENCIL works to help students develop a growth mindset by establishing realistic goals for personal development that are supported by staff and volunteers through a strengths-based approach. Volunteers from corporate partners use their expertise and personal experiences to model growth and resilience. Attaining new skills in an environment focused on effort instead of solely achievement helps students acquire essential skills and new learning strategies. This helps students understand that abilities and intelligence are fluid and can be improved.[v] Students with this growth mindset have been shown to put extra time and effort into activities that lead to college and career achievement.[vi]

Growth mindset can vastly improve students desire to explore, pursue, and enhance all other in-demand skills to support future success. Therefore, it is important to understand what programs and pedagogy can create the conditions for this outcome.

Findings

In 2019 and 2021, students in PENCIL's School Partnership Programs reported greater gains in PENCIL's skill attainment index as compared to their summer peers. The skill attainment index works to measure students' growth mindset – the understanding that knowledge can be developed through sustained efforts and perseverance. While students in both summer and school-year programs participated in skill development sessions, participants in School Partnership Programs developed more understanding that they can overcome challenges and increase abilities through effort.

Skill Attainment Across Program Types

Skill Attainment
First-Generation College Bound

Skill Attainment
English Language Learner

The results for first-generation college bound students and English Language Learners currently point to trends in the data, not yet clear statistically significant differences. Nevertheless, given the importance in building strong foundations for success for these populations, we believe these trends merit further exploration. Additionally of note, data on first-generation college bound status was only collected for School Partnership students starting in 2020.

What we can statistically observe related to this index is that some drivers of this enhanced impact seem to be related to the extent to which participants felt they have everything they need to live up to their potential and the extent to which they are receiving meaningful feedback. This data couples with the program implementation reality as related to strengths-based approaches and volunteer support.

Skill Attainment
Select Index Questions
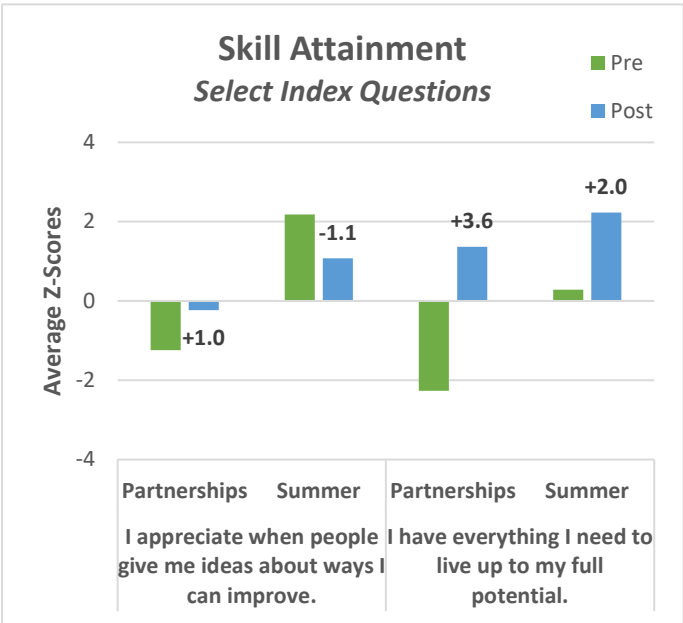
Program Reality

Given the statistical success and promising trends in PENCIL's School Partnership Programs, it is important to understand what elements of the program may be contributing to enhanced growth mindset and ultimately skill attainment. This exploration will inform how program characteristics may be replicated across not only PENCIL's portfolio, but the broader field as well. The structure and content of the School Partnership Program helps students focus conversations on effort, accomplishment, interests, and achievements and reframes them in a forward-thinking career-focused context. Conversations between students and volunteers center around facing and overcoming challenges which help strengthen students' growth mindset and sense of agency.

Strengths-Based Focus - PENCIL Partnership sessions employ a strengths-based focus taking students through a discovery and self-awareness journey to identify what is possible for their futures by acknowledging skills and talents which are innately present. Through a series of workshops with PENCIL staff and volunteers, students learn about essential career readiness skills, such as resume development, interviewing, or networking, through the lens of their personal strengths and interests. In these sessions volunteers validate student interests, promote further career exploration, and help students identify assets and accomplishments they might normally overlook. By approaching these topics from a strengths-based perspective, students internalize their ability to reach their full potential while employing their own power to define a vision of what that potential means. This asset-based agency is critical to embracing growth mindset leading to confidence and willingness to try, even if success is not guaranteed. The strengths-based foundation of PENCIL's School Partnership Program offers students a consistent, safe environment to learn about themselves, take risks, and receive ongoing encouragement and support.

Volunteer Mentors as Critical Friend - Partnership volunteers commit to a full year of programming, enabling them to build authentic and meaningful connections with students. While mentorship can take many forms in youth programs, PENCIL School Partnership Programs position mentors to act as a critical friend offering feedback and guidance especially as it relates to academic and career pursuits. Partnership sessions typically include small group activities where volunteers not only provide students with important feedback as they build their college and career skills, but share their own career journey, including their mistakes and unexpected changes. Through these interactions, students are able to see the importance of feedback and growth, not just for their current work, but as part of their ongoing process to achieve their goals. Volunteers also model and reinforce the importance of essential skills for students to build to achieve education and career success. The opportunity for volunteers to share their own stories of both triumph and challenge offer a "living proof" case of how anyone can

develop both technical and essential skills as well as how they are applied. In creating this human connection, volunteers gain trust and credibility with students which creates space to grapple with big questions related to long term goals and aspirations.

Program Accessibility –School Partnership Programs have had meaningful impacts on students who are first-generation college bound as well as those for whom English is not their first language. For these students, PENCIL sessions and volunteers may provide access to mentors and knowledge about post-secondary pathways that are not available through students' family or community networks. The fact that programming and connection to diverse mentors is available at school, during the school day, makes it easy for students to participate as they do not need to navigate finding programming on their own. Additionally, PENCIL encourages volunteers to share their own stories as public school alumni, first-generation college students, first- or second-generation immigrants, etc. In connecting with students and sharing their lived experiences, volunteers provide students with knowledge and reference points that can help them more confidently navigate their own post-secondary journey. Access to mentors who can model diverse pathways to success is critical for students to develop their own growth mindset by seeing many examples of personal growth and development. Many workforce development programs that exist during the summer or afterschool hours that might offer similar connections often have considerable barriers to entry requiring students to provide a significant amount of personal and family documentation at enrollment, including proof of citizenship. Accessing this documentation is burdensome for many families and exclusionary to undocumented students. By providing programming in the school context, PENCIL is able to avoid these obstacles and deliver programming that is foundational to future success for all students.

Recommendations

PENCIL has been managing School Partnership Programs for well over a decade. These programs have always been seen as an asset to schools that often need additional capacity managing external partnerships with the business community that support workforce development for their students. What has become increasingly clear about the unique role such programs play is that they are critical to build a strong foundation for students as they explore pathways to success that fulfill *personal passions* and lead to long-term *economic stability*. Students need safe spaces and encouragement to articulate their aspirations and connect their assets and talents to long-term achievable goals. The results of PENCIL's evaluation demonstrate that school-based models can enhance growth mindset which will ultimately lead to more curiosity, comfort in risk-taking, and belief in one's ability to define and reach their potential. During a moment when many students have had to face so much uncertainty just to imagine tomorrow, it is imperative we provide them with tools and supports to believe in and shape thousands of tomorrows. Instilling growth mindset through strengths-based programs, mentors as critical friends, and accessible opportunity are imperative to driving equitable access to success. To that end, following are several recommendations for the field as well as PENCIL's own program enhancement.

Scaffold school-based models designed to enhance growth mindset with summer employment programs that support technical skill practice and development. In this evaluative comparison of programs, PENCIL was eager to understand which of its models were leading most effectively to the outcomes that support student success. In doing so, it is clear that a school-based model that supports self-discovery through skill building, mentorship, and a strengths-based approach both enhances growth mindset as well as the development of essential skills. Different from the summer employment programs it was compared to, School Partnership Programs offer students more consistency and structure with volunteer mentors where conversations about setbacks are encouraged as much as conversations about success. The value of such a foundation cannot be overlooked and it is worth exploring how students in such programs would do if their participation directly preceded a summer employment experience. When considered alongside the outcomes presented in the first brief in this series, with a strong growth mindset and ability to attain new skills, young people would be able to leverage opportunities to enhance technical skills during summer employment even more. New York City should explore the potential to scale such models in middle school and the first years of high school to ensure every student experiences such programs before they become eligible for summer employment.

Celebrate effort and growth as much as finite achievements, especially in work-based learning and summer employment settings. Research demonstrates that when students develop a growth mindset and understand that their learning and development is ever evolving, they are more likely to put in extra effort in their academic and career pursuits. Much of the PENCIL Partnership Program is about discovery, not a final accomplishment, which allows for more creativity from the student and ongoing encouragement from staff and volunteers. While this design may not be practical in all settings, we can consider ways to support students' discovery and effort more in experiences like summer employment, where success often does require product and performance. In many summer employment models there can also be abrupt handoffs between school, program provider, and employer leaving students with an inconsistent set of supports to help them reflect on their effort and growth. Whereas, in a School Partnership Program, the educator, volunteer, and PENCIL staff are all in the sessions together supporting students through a shared awareness. As a field we should explore more collaborative and consistent tools, communication structures, and systems for young people in career readiness programs to have a community of people recognizing their growth and effort. A holistic and coherent support system could bolster students' confidence and make them more receptive to feedback for projects that do require objective measures of success. We may also consider ways to give students more structured opportunities to reflect on their own growth and share that reflection with all the trusted mentors, educators, and program staff who regularly work with them.

Increase accessibility and cultural responsiveness of work-based learning programs to resonate with English Language Learners and first-generation college bound students. Ensuring equitable access to success for all students means we must make those programs and models that build foundational competencies, such as growth mindset, available to all students. While PENCIL's School Partnership Program gives us some inclination as to how we might do that, it is still a singular program model that only serves a few thousand students a year. It is imperative to find ways to entrench elements of this model such as self-discovery, career-based mentorship from corporate volunteers, and strengths-based frameworks into required curriculum for every 9th or 10th grade student in the city. Embedding it in the school experience eliminates barriers some students face such as program applications, navigating a complex ecosystem of programs on their own, or limited social capital. Scaling a program to reach 150,000 to 300,000 students a year will require capacity building inside schools, an honest assessment on how to effectively run programs with staff trained in youth development, and better coordination with corporate partners to engage diverse volunteer mentors who can share personal stories that resonate with students. Universally offering programs in schools that help develop growth mindset will also help all students approach and leverage summer employment programs more intentionally to support their long-term aspirations and sustained economic success.

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During the summer of 2022 PENCIL will evaluate the outcomes for students who were enrolled both in our School Partnership Programs as well as our Career Explorers program. This layer of evaluation will further explore the opportunity to implement some of the recommendations above. Additionally, as NYC considers new models during the 2022-23 academic year, PENCIL looks forward to working with and learning from the many partners in the city to understand the opportunities to build and encourage a growth mindset with the city's youth. We encourage the sharing of data, observations, and models to achieve that end and are happy to widely collaborate.

To discuss opportunities for partnership, please contact Jessica Bynoe, PENCIL's VP & Chief Strategy Officer. For information on PENCIL's evaluation methodology and research, please contact Keith A. Howey, PENCIL's Director of Impact & Operations. For details on our program implementation, please contact Devaughn D. Fowlkes, PENCIL's Associate Director of Programs or Katje Lilah King, PENCIL's Senior Program Officer.

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[i] ManpowerGroup (2021). Employment Outlook Survey Q3.

[ii] Rockwood, Kate (2021). The Hard Facts About Soft Skills. HR Magazine.

[iii] Dweck, Carol (2007). Mindset: the new psychology of success. New York: Ballentine Books.

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[vi] Network For Teaching Entrepreneurship (2018). Measuring Entrepreneurial Mindset in Youth.