CLEAR CONNECTIONS

Lessons Learned from a Formative Evaluation of Remote Learning at Per Scholas, 2020-2021
Per Scholas gratefully acknowledges the Bill & Melinda Gates Foundation, Comcast NBCUniversal, JPMorgan Chase, and the Wilson Sheehan Foundation for the generous support they provided to build, evaluate and improve remote learning, and to train and support thousands of remote learners since 2020. The views expressed in this report are those of the author(s) and should not be attributed to these funders.

We also thank the following individuals from Per Scholas and from Barrow Street Consulting for their contributions to the evaluation and to this report.

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INTRODUCTION

WHEN COVID-19 FORCED THE NATION TO SHUT DOWN in March 2020, there were 532 Per Scholas learners convening in more than 30 classrooms in cities ranging from Dallas to Boston. In the weeks that followed, several Per Scholas learners and staff members fell ill with COVID-19, and at least one learner died. A large majority of others in the Per Scholas community confronted daunting, if not overwhelming, economic, social, mental and physical health challenges.

And so Per Scholas – a national nonprofit that provides tuition-free technology career training and connections to thriving wage jobs for thousands of adult (18+) learners each year – found itself in the same position as nearly all other educational providers throughout the country: organizing an emergency migration to remote learning models that the organization had never fully tried. At the same time, the organization’s learners and staff members dealt with numerous other upheavals in their lives.

At the outset, Per Scholas had no evidence that its migration to remote learning would be successful. The organization’s intensive, 10-15 week, bootcamp style training experience demanded high levels of attention and participatory engagement, and in many classes, learners practiced hands-on skills in modern computer labs stocked with business-class hardware and software. It was difficult to imagine how the same attention, engagement and experiential learning could be sustained in remote classes, especially given all the distractions many learners faced at home. The fact that many learners lacked personal access to broadband internet service or their own personal computers complicated these challenges even more.

In addition, it quickly emerged that the nation’s broader experience implementing emergency remote learning was deeply problematic, and not only for those enrolled in elementary and primary schools. Post-secondary learners, too, experienced worse learning outcomes over the ensuing months than they had when attending classes in person. Brookings Institution (2021) summarized the findings of relevant research studies as follows):

Online coursework generally yields worse student performance than in-person coursework. The negative effects of online course-taking are particularly pronounced for less academically-prepared students...new evidence from 2020 also suggests that the switch to online course-taking in the pandemic led to declines in course completion.¹
Yet at Per Scholas, two years after its migration to non-classroom instruction, remote learners, including a majority without any prior postsecondary attainments, are thriving. Graduation rates have actually increased (albeit not by a very significant measure) relative to 2019, along with rates of professional certification attainment in applicable courses. Per Scholas helps learners prepare to earn professional certifications offered by CompTIA, AWS and Google.

In addition, even though rates of job attainment by graduates were modestly depressed during 2020 and early 2021, they grew again throughout the fall of 2021 and early months of 2022. Among 2020-enrolled graduates, as of August 2022, 80% have found jobs that pay an average of $21.43/hour: 2.5 times their average pre-training earned income.

Finally, repeated satisfaction surveys with thousands of Per Scholas learners and 120+ faculty members show that the majority believe the Per Scholas remote learning model is effective. Net Promoter Scores for Per Scholas by learners have been unusually high, even for a nonprofit organization.

What is it about the Per Scholas remote learning model that has helped make the organization’s training outcomes better than even the organization’s leaders expected? How can other educational providers for post-secondary learners leverage its program experience?

The purpose of this brief paper is to posit some generally applicable responses to these questions that are supported by the findings of a continuous, participant and practitioner-centered evaluation of remote learning at Per Scholas over the past two years. In summary, this report describes how Per Scholas’s sustained attention to four core values – (1) informed innovation; (2) equitable access; (3) instructor excellence; and (4) effective wraparound services for all learners – facilitated its switch to remote learning and sustained the organization’s strong outcomes.

“We had no idea how learners might fare in a 100% remote framework, only that we had no other options. But we also knew that we had been presented with an unusual opportunity to explore the capabilities and limits of remote learning in ways we had scarcely imagined would ever be possible.”

– Plinio Ayala, President and CEO, Per Scholas

Prior to COVID-19, Per Scholas had accumulated high-quality research evidence demonstrating the long-term efficacy of its in-person programming. Per Scholas is one of very few workforce development organizations in the U.S. that has hosted not just one, but two randomized and controlled trial (RCT) impact evaluations. These comprehensive, multiyear studies generated robust proof that the organization’s pre-COVID-19 career preparation model raised income; reduced use of TANF, SNAP and unemployment insurance benefits; and increased overall life satisfaction.2

But in mid-March 2020, Per Scholas needed an alternative training model that it could implement in fewer than two weeks. There would be no time to evaluate its efficacy beforehand. Instead, the organization would have to learn as it went along, and remain flexible enough to change anything that wasn’t working.

In this respect, Per Scholas was not different from thousands of other education and training providers. But what may have set Per Scholas apart at this early stage is that its leadership and organizational structures had evolved over several years to embrace formative evaluation as a part of every new venture.

Formative evaluation has been defined as “evaluation designed, done, and intended to support the process of improvement, and normally commissioned or done by, and delivered to, someone who can make improvement.”3 In many instances, one of its characteristic elements is the feedback loop: learnings from the evaluation are leveraged in real time to build program model strengths and address challenges.

But formative evaluation is hardly trivial to implement. Especially for a national provider like Per Scholas, it requires considerable knowledge, organization, planning, people, resources, and systems. In the context of a public health emergency forcing an immediate migration to remote learning, it was mainly due to this more general commitment and preparation that Per Scholas was able to evaluate its experience at all.

From the first week of the migration, training staff adapted and administered multiple surveys to generate organized feedback from remote learners and faculty members, and began mining this feedback to introduce major changes into the organization’s remote learning implementation. Just eight weeks into the new experience, Per Scholas had already:

• Switched to a different video communications platform
• Begun to vary the organization and pace of each remote learning day, in ways very different from the classroom
• Started providing assistance for learners who lacked adequate technology for remote access
• Developed organized supports for faculty members who initially struggled to adjust to remote training delivery

These early changes fostered immediate improvements in learner engagement and outcomes. But they also highlighted the need for Per Scholas to continue learning from its experience. In May 2020, Per Scholas secured funding from the Bill & Melinda Gates Foundation

INFORMED INNOVATION
to support a longer-term remote learning evaluation. Per Scholas subsequently partnered with Barrow Street Consulting, LLC (BSC) to lead this sustained new evaluation effort.

BSC’s approach is to capture learning as it happens and tie research activities to decision-making timelines. This flexibility proved vital to the evaluation, since Per Scholas’s training model changed repeatedly and the organization was eager to obtain feedback about each new change or enhancement. BSC had two overarching questions, one focused on implementation and the other on outcomes:

1. **How were learners and staff experiencing the sudden transition to remote learning and subsequent rapid program changes?**

2. **How were remote learning outcomes changing over time?**

To answer these questions, BSC first helped Per Scholas improve the quality of the internal survey feedback it had so far obtained from learners and faculty members. To this end, BSC developed and administered mid- and end-point course surveys for learners and an annual survey for staff members that were capable of yielding richer quantitative and qualitative data than the ones Per Scholas had created on its own.

Second, BSC convened a series of professionally facilitated focus groups to generate rich qualitative data with high quality, actionable outcomes in mind. BSC also began tracking the outcomes of remote learners on key performance indicators (KPIs) – graduation, certification and job attainment – and began exploring ways to predict their success.

In the fall of 2020, BSC prepared an initial report of findings from the summer. At that time, remote learning at Per Scholas was achieving graduation and certification outcomes that closely approached the organization’s pre-COVID-19 norms, but had not yet equalled them. Per Scholas subsequently used BSC’s report, which included several recommendations directly supported by its research, to design and experiment with additional innovations.

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**Figure. Outcomes for remote Per Scholas learners over time.** Cohort 1 (n=1,647 learners across 87 courses, including some who transitioned from in-person classes when the COVID-19 pandemic began) started instruction between February 1, 2020 and December 31, 2020. Cohort 2 (n=1,002 learners across 45 courses) started instruction between January 1, 2021 and May 31, 2021.
The most significant of these interim changes was the organization of a **centralized, national Remote Training Team** to oversee the further development, implementation and improvement of remote learning at Per Scholas. Previously, each Per Scholas campus had implemented remote learning locally. The new team was designed to foster a more standard, higher quality remote learning experience across locations, while still engaging local Per Scholas staff for services like recruiting, admissions and employment support.

One year later, BSC repeated its collection and analysis of implementation data and began studying outcomes for the remote learners Per Scholas had enrolled to date. It found **significant improvements in graduation, certification and job attainment between 2020 and early 2021**, even when controlling for demographic differences (race, age, gender, income and education) and key programmatic differences.

BSC also found that faculty members believed that Per Scholas had improved its remote learning practice over the previous year. 2021 cohort learners, too, expressed greater satisfaction with Per Scholas and its programming than learners in the earlier cohort.

This is not to suggest that Per Scholas overcame every challenge it confronted in the switch to remote learning. The new national Remote Training Team, for example, solved one set of challenges, but introduced some others, such as ensuring robust connections between learners enrolled in national remote cohorts and the career developers working at local Per Scholas sites. The organization continues to test a wide range of innovations to improve its remote learning processes and outcomes.

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2. These findings are among those in MDRC’s WorkAdvance research project. See https://www.mdrc.org/project/workadvance#overview


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### INFORMED INNOVATION SUMMARY

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<td>The shift to remote learning at the outset of COVID-19 occasioned the largest broad-based educational experiment in decades. But without insights into the relative efficacy of processes associated with implementing remote learning frameworks, it is nearly impossible to understand the etiology of their outcomes, or ways in which they could be improved.</td>
<td>Incorporate continuous formative assessment into every remote learning program implementation. Iteratively leverage participant-centered feedback about program processes to reduce pain points, increase engagement, and foster the best possible learning outcomes.</td>
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<td>Remote learning can be borderless, but most education/training programs are place-based. For organizations with multiple locations, duplicating remote learning infrastructure and staffing at each location is inefficient and creates the risk that program model fidelity may be compromised.</td>
<td>Centralize remote learning administration, staffing and infrastructure in a national “virtual campus,” with linkages to local program resources as needed. However, the quality of these local linkages is key, and Per Scholas is still exploring ways to strengthen them.</td>
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90% of Per Scholas learners come from households with incomes lower than the medians for their regions. Like many other educational organizations shifting to remote learning in 2020, Per Scholas quickly learned that a significant share of learners who had attended in-person training lacked the minimum technology prerequisites (laptop or desktop, webcam, headset and broadband internet access) to sustain remote participation.

These disconnected learners were hardly alone. A 2021 survey by Pew Research found that:

Roughly a quarter of adults with household incomes below $30,000 a year (24%) say they don’t own a smartphone. About four-in-ten adults with lower incomes do not have home broadband services (43%) or a desktop or laptop computer (41%). And a majority of Americans with lower incomes are not tablet owners. By comparison, each of these technologies is nearly ubiquitous among adults in households earning $100,000 or more a year.

Per Scholas responded in ways that underline its history as an organization dedicated to breaking down the digital divide, the purpose for which it was originally founded in 1995. First, its leaders never considered resuming instruction while any learners were shut out from effective access. Second, the organization decided that none of its learners should settle for a “second class” configuration: all should have access to business-class equipment. Finally, upon confronting the severe technology supply chain constraints that characterized the earliest phases of the pandemic, Per Scholas cannibalized its own in-person computer labs to provide learners with the equipment they needed, and set up regional distribution centers (at the height of the first pandemic shutdowns) to transfer this technology into learners’ hands.

As a result, all Per Scholas learners who wanted to continue their training were able to do so, in remote classes that launched less than two weeks after the organization’s in-person classrooms closed. In addition, when entirely new classes convened a month later, Per Scholas continued to assist learners whose personal technology access was not sufficient to enable robust participation.

Even after Per Scholas had addressed learners’ primary technology-related challenges, another arose. In many of the organization’s courses, learners needed devices on which they could practice hands-on skills while simultaneously attending to their online instruction. Per Scholas initially tried to address this need by virtualizing hands-on exercises in online simulations. One of the organization’s main takeaways from BSC’s first evaluation over the summer of 2020 was that while these simulations were better than nothing, they were likely not as effective as true hands-on exercises in helping learners master essential job skills.

As a result, in 2021, Per Scholas experimented with providing separate “tech kits” for learners to use in their courses. These kits included inexpensive Raspberry Pi computers, a mini-display screen, keyboard/mouse and cabling, which learners could set up alongside their main devices and use to complete various synchronous and asynchronous class exercises.

After the rollout, Per Scholas wanted to hear what learners thought about these learning aids. Accordingly, BSC collected data about the kits through surveys and focus groups with learners and instructors. Eighty-five percent (85.1%) of respondents reported that the tech kits made their course material easier to understand.

Many also noted that assembling the kits together online was an engaging activity that built remote class cohesion. For example, one learner reported “Everyone was building [their tech kits] while the instructor was instructing us what parts fit into the ports. There were times where a student was completely lost and other students chipped in and turned their cameras to show them what exactly was going on. This was some sort of collective collaborative effort to help each other. That was
This was some sort of collective collaborative effort to help each other. That was really engaging and I really liked that.”
— Per Scholas Learner

really engaging and I really liked that.” However, instructors reported that it wasn’t always clear how the kits could best fit into their own course material. Some observed that fully integrating the kits would require more thoroughgoing changes to course curricula.

More recently, Per Scholas has begun experimenting with more robust virtualization technology using true cloud computing, rather than mere simulations of computing infrastructure or even proxy physical devices like the Raspberry Pi. Learners will be able to complete skills-building exercises on cloud-based devices and networks, which Per Scholas can configure in any way it needs, including ways it would be impossible to implement in one of its physical classrooms.

As a result, Per Scholas does not plan to continue providing tech kits to remote learners (and largely discontinued their distribution in 2022). Instead, in courses that require very significant hands-on skills development with physical IT infrastructure, the organization has either resumed in-person training or adopted a hybrid (partly in-person, partly remote) model.

But for the 14-month period in which all Per Scholas classes were remote, the kits provided an imaginative and effective stopgap solution for many learners. Many Per Scholas instructors feel that some learners became better engaged because they found the kits fun to learn about and use.


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### EQUI table ACCESS SUMMARY

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<td>The digital divide is real and disproportionately affects the ability of learners in lower income households to participate in remote training.</td>
<td>Ensure that all learners have sufficient technology for remote learning prior to its implementation, and don’t settle for any “second class” configurations.</td>
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<td>Some Per Scholas courses require learners to master skills using equipment and software they cannot easily duplicate at home.</td>
<td>Provide creative alternatives that leverage simulation and inexpensive devices to stand in for computer lab-based experience. Ultimately leverage the growing capabilities of cloud computing to close the gap even more.</td>
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Per Scholas has always been committed to building the highest quality faculty to train learners. Broadly speaking, the organization employs two kinds of faculty members. Technical instructors help learners acquire purely technical skills, while career developers lead training in general professional skills, such as communication, presentation, collaboration, and longer-term career planning. In addition, Per Scholas frequently employs Instructional Associates (IAs), who are very often recent graduates of the same course, to provide additional assistance for learners.

When the pandemic began, faculty in all three categories were learning how to teach remotely for the first time, and several struggled with the format. “I have put a lot of time, thought, and money into the digital presence that I provide for my students,” observed one faculty member, who recommended that Per Scholas pay closer attention to helping instructors enhance their remote teaching environments. But over time, as Per Scholas began providing specific new professional development and other supports for faculty members, their comfort levels and efficacy improved. “We started giving [instructors] standing desks, proper chairs, lights, lumbar support. It built up morale for staff which led to better engagement,” said one instructional leader.

When BSC repeated its 2020 evaluation in 2021, 100% of the responding instructors and career coaches reported that they had improved their remote instruction, the majority (56%) “to a great extent.” They attributed these improvements to working on their skills by themselves, collaborating with colleagues, and accessing the new professional development opportunities and other assistance provided by Per Scholas.

Per Scholas also recognized that successful remote instruction requires thoughtful adaptation of in-person content and delivery. Early on, feedback from both learners and instructors revealed that remote classes cannot simply attempt to duplicate the timing and rhythms of in-person instruction.

“We started giving [instructors] standing desks, proper chairs, lights, lumbar support. It built up morale for staff which led to better engagement.”

— Per Scholas instructional leader

Several staff members, for example, suggested that remote learning required much greater attention to setting priorities and streamlining course material, because screen fatigue and distractions otherwise limited learning progress. “There are going to be some labs [i.e., learner exercises] that we can condense into one, and make it really worthwhile to do,” said one respondent.

Other instructors stressed the difficulty of attending to the needs of individual learners in a video conference, and the importance of IAs in this regard. One critical role IAs have played has been helping learners who raise questions using Zoom’s chat function, which is very difficult for instructors to monitor while simultaneously teaching. IAs also made a point of being available to learners before and after training sessions. One learner wrote that “I was pleased that our IA would, at least 4 days out of the week, keep the session for an hour to an hour and a half after class if anything came up. So as far as them supporting our cohort, building us as a team, they did an excellent job.”
The final commitment that may have helped Per Scholas generate better remote learning outcomes than other education and training organizations was a keenly felt commitment to learner support.

The communities that Per Scholas serves confronted numerous economic mobility and other challenges prior to COVID-19. During the pandemic, not only have they experienced a greater burden of illness, they also had the least sufficient resources to weather the sudden, dramatic economic disruptions that were an immediate consequence of the shutdowns.

Per Scholas knew that for remote learning to succeed, it had to respond to learners’ broader life challenges and needs during the pandemic. This meant that the organization needed very quickly to stand up robust remote learner support services, including individualized learner counseling, referrals, benefits advocacy and financial coaching, and make them available to any learner who needed them.

To provide these services at its largest location in New York City, Per Scholas had long employed dedicated learner support managers and financial coaches. These professionals helped learners begin to address challenges ranging from feelings of anxiety and depression to legal issues and financial problems like poor credit/high debt, collections, and food/housing insecurity. But at its other locations, the organization relied on external partners – local service organizations that very often also referred candidates for training – to provide comparable interventions for learners.

When COVID-19 began, these community-based partners were in no condition to sustain services for Per Scholas learners. They were already overwhelmed by the needs suddenly arising in their communities and struggling to virtualize their own services. Accordingly, Per Scholas needed to find feasible ways to extend the in-house services it had developed in New York City to all its learners coast to coast.

The organization accomplished this goal in just six weeks, by bolstering its in-house learner support team and extending its services remotely to any Per Scholas learner, regardless of location. The new national team subsequently proceeded to integrate regular learner support and financial

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**INSTRUCTIONAL EXCELLENCE SUMMARY**

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<td>It takes significantly longer to cover material remotely than it does in-person.</td>
<td>Reimagine remote course curricula and lesson plans to be more cognizant of limiting factors like screen fatigue and learner distractions. Provide frequent breaks and implement both synchronous and asynchronous learning activities.</td>
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<td>It is more difficult for instructors to connect with learners and provide one-on-one support in a remote setting.</td>
<td>Staff virtual classrooms with entry level IAs to assist instructors as well as learners, also helping maintain low (15:1) learner/faculty ratios in each course.</td>
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<td>Instructors’ own technology needs and home environments may hamper their efficacy.</td>
<td>Assess and respond to the technology and related needs experienced by remote instructors, not only learners. Provide additional resources to help faculty members feel confident in their roles and perform at their best.</td>
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“Financial advisors come and speak – those were really fun and engaging parts of the program. Knowing what kind of opportunities were afforded for us, what type of help we would be able to get financially...it was really informative and really good. They definitely helped me. I was able to get some financial help that I really needed.”

– Per Scholas learner

capability touchpoints into the organization’s broader virtual learning model.

For example, the team began presenting weekly “Wellness and Wealth Building” workshops that were attended by substantial numbers of learners (100 or more at a time). It also leveraged BSC’s mid- and end-course surveys to uncover more issues affecting Per Scholas learners, and to deliver interventions that were directly responsive.

Learners responded very positively to the expanded support services. One wrote that “Financial advisors come and speak – those were really fun and engaging parts of the program. Knowing what kind of opportunities were afforded for us, what type of help we would be able to get financially...it was really informative and really good. They definitely helped me. I was able to get some financial help that I really needed.”

Since March 2020, learner support managers and financial coaches have logged meaningful encounters with hundreds of Per Scholas learners. There are many documented instances in which this support made it possible for learners who would otherwise have discontinued training to persist in their courses.

The team has also continued to grow along with the organization’s remote enrollment, and has built new systems to track the provision of all its services. Today, the team’s national reach and enhanced capabilities are permitting Per Scholas to consider implementing even more comprehensive learner supports in the future.

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<td><strong>COVID-19</strong> greatly increased the number of learners confronting psychosocial, health and economic challenges, as well as the gravity of those challenges.</td>
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This brief paper has highlighted several ways in which Per Scholas navigated an emergency migration to remote learning that grew to be highly successful. However, more than any specific practice, the organization’s pre-existing commitments to quality improvement, equitable learner access, instructional excellence and strong learner support services fostered the conditions that ultimately helped it achieve good outcomes. Accordingly, education and training providers working to improve their own remote learning models may find it beneficial to assess the extent to which they reflect comparable commitments of their own.

This is not to suggest that there are many providers who do not share these commitments. But not all of them had the latitude or resources to enliven them in the ways that Per Scholas was able to do. For example, few publicly funded institutions could simply give away their classroom equipment to learners who lacked sufficient technology to participate in remote courses.

In this connection, it is worthwhile noting one highly anticipated consequence of remote learning that has so far not materialized for Per Scholas: on a per learner basis, the organization’s remote learning model is not any less expensive than classroom-based instruction. Most of its training costs are for personnel, and whatever savings Per Scholas might have achieved by relinquishing in-person training infrastructure was matched by new costs to assist learners who lacked adequate personal technology, and to expand learner support services.

Even so, while Per Scholas initially conceived its remote learning model as a temporary response to an extraordinary situation, it has become abundantly clear to the organization that remote learning is not going away. On the contrary, even though Per Scholas re-established some classroom-based training in July 2021, a large majority of the prospective learners applying to Per Scholas today still prefer remote options.

Per Scholas would like to conclude this paper, then, by addressing funders and policymakers who may also have valorized in-person learning, even when remote courses can be carefully constructed to be more accessible, affordable, and appropriate for large numbers of adult participants. Recommendations include:

- **Provide funding and resources for adult education and training providers to continue evolving and improving remote programs.** As COVID-19 recedes as an emergency public health concern, one hazard is that adult education and training funding stakeholders will assume providers can revert fully to pre-COVID education and training models. Again, learner preference at Per Scholas is emerging to be very different, with most applicants seeking remote learning options.

- **Support formative, participant-centered evaluations,** like the kind BSC conducted for Per Scholas, that can quickly uncover remote program strengths, weaknesses and ideas for improvement. If participants (including both remote learners and teaching staff) are not primary sources of intelligence about their experiences in remote learning programs, then it is unlikely that these programs will ever become fully responsive to their needs.

- **Provide additional supports for programs to remove access barriers affecting remote learners.** Per Scholas believes these supports must include personal technology/connectivity for all who need it. The FCC’s Affordable Connectivity Program can be transformational for connecting households to reliable broadband, but potential adult learners need to know about it and may still require better devices to engage in remote learning. Moreover, Per Scholas saw the critical importance not just of sustaining, but expanding its financial coaching, counseling and other support services for learners, at a time
when many other community resources were overwhelmed.

- **Professional development for educators is key.** Many teachers and instructors experienced the shift to remote courses as no less jarring than for learners, but in most instances, these professionals were expected to improvise sufficient responses on their own. Per Scholas found that for its own highly capable training staff, this expectation was unrealistic. Many needed significant help attaining the same measures of proficiency and confidence in remote classrooms that they had evinced while teaching in-person.

For its part, Per Scholas is committed to continuing the evolution of its remote learning model, including variations like hybrid (partially remote and partially in-person) training. Specifically, over the coming years, the organization will seek to learn more about the participant qualities that predict success in remote or in-person learning, and continue iterating on how to achieve the best long-term outcomes for those who learn remotely.

Finally, as Per Scholas continues its remote learning journey, it hopes that it can learn from those grappling with similar challenges. To this end, Per Scholas welcomes inquiries, new information, and ideas and proposals for collaboration to improve remote learning processes and outcomes and to secure the long-term benefits that remote learners expect and need.

Per Scholas is once again deeply grateful to all the funders who supported its remote learners along with the accompanying research, and to Barrow Street Consulting, for joining it on this formative evaluation journey.

One way in which Per Scholas is leveraging its remote learning experience today is with a hybrid “connected classrooms” model, in which in-person learners convene in separate classrooms that are both equipped with telepresence technology, so that they can form one larger class learning together. As a result, Per Scholas will be able to offer more of its courses across many more locations.