PEER CONNECTIONS REIMAGINED:

Innovations nurturing student networks to unlock opportunity

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EXECUTIVE SUMMARY

This year, K–12 schools, colleges, and universities have doubled down on their endeavors to support students through a global health crisis, economic uncertainty, severe weather, and political turmoil. Despite these efforts, research shows that support services still fall short of meeting many students' needs.

In the face of that shortage, some students have turned to an unexpected source of support: each other. Houston's Rice University student-run mutual aid group, for example, distributed over \$3,000 of emergency aid to students during the winter storms that devastated Texas in February 2021.

But financial resources aren't the only assets powering mutual aid networks. Most students learned about the availability of emergency aid through their social networks, showing how a seemingly humble asset—the social capital of students' peer networks—can contain extraordinary resources, even to the point of ensuring survival.

As schools develop strategies for supporting students to both survive and thrive, the power of peer social capital is a lesson worth remembering. Across the entire high school to career pipeline, peer networks are an immense, but still latent, resource in the student success equation.

Fortunately, a host of tools and programs are helping schools start to leverage peer-to-peer connections as part of a robust, and far more networked, strategy to support learners toward successful futures that they define for themselves. These models feature peers serving as:

- social support to foster belonging, identity formation, and social and emotional skills;
- academic support to drive learning outcomes and keep each other on track;
- guidance support to expand options and ease transitions;
- and mental health support to promote wellbeing and reduce loneliness.

With a range of emerging approaches to adopt and adapt, K-12 and postsecondary leaders have a tremendous opportunity to activate the

latent social capital in peer networks to improve students' experiences and outcomes. Whether they succeed depends on where and how schools activate peer networks, and for what purposes. This paper details five considerations leaders will need to keep in mind:

- Although scaling effective student support services remains a complex challenge, schools should explore how peer-to-peer models can dramatically improve these services on measures like access, convenience, and simplicity.
- When hallway encounters are unpredictable or out of reach, schools should harness online connections as an innovation opportunity rather than a downgrade from face-to-face meetings.
- To deliver social capital gains for students, schools should design and evaluate peer-to-peer models with relationships—not just connections—as an explicit outcome.
- Because peer relationships will only gain value over time, schools should set those relationships up to last as students gain experience, grow their social networks, and build careers.
- To foster hard-to-teach skills like leadership and empathy, schools should nurture peer networks as fertile ground for students to develop these skills alongside the web of relationships they need to thrive.

The innovative tools and programs in this report reflect the fact that it's networks—not just diplomas and degrees—that lead to opportunities and fulfilling lives. Peer connections are a critical resource as K–12 schools and postsecondary programs look to support students' wellbeing and growth, enrich their learning experiences, and expand career options.

INTRODUCTION

"We are all risking our lives to get an education in the middle of a pandemic, words which I feel have lost all meaning, and we are suffering," wrote one student. Another wrote, "We need help, y'all. We really need help. We need adults to love us enough to reach out to us and be gentle with us."

These sentiments were only a few of those shared by college students in surveys conducted in 2020 by the Hope Center for College, Community, and Justice at Temple University.² According to those surveys, approximately three in five college students experience basic needs insecurity, with even higher rates among Black (70%) and Indigenous (75%) students. Most institutions reported that students on their campuses were struggling with basic needs, and nine out of 10 said they needed help to address those needs.³

These challenges didn't arrive with the pandemic: the Hope Center has found persistently high rates of insecurity since it began its surveys in 2015.⁴ The data has sparked an encouraging influx of basic needs investments from a variety of public and private sources.⁵ But in scrambling to cope with the unknowns of the pandemic, students started turning to an unexpected source of support: each other. Student-run mutual aid collectives emerged on social media to gather, organize, and distribute resources—often in the form of cash—to students who needed help to buy food, pay rent, or get necessary medications.⁶

Rice University's mutual aid fund, formed by students in the fall of 2020, distributes both financial and nonmonetary assistance, like transportation, emergency housing, and academic resources like textbooks, with no questions asked to students requesting support.⁷ As of mid-March 2021, the group had distributed \$8,077 to the community—including over \$3,000 categorized as "storm relief" during devastating winter storms in Texas that resulted in massive power outages across the state.⁸ According to Rice student Neha Tallapragada, one of the group's founders, most exchanges of monetary and nonmonetary aid occur between students, and some alumni and community members also contribute financial support and temporary housing.⁹

But tangible resources aren't the only assets powering student mutual aid networks. "The main way we were able to grow a lot is via interpersonal social media connections," said Tallapragada. "Word of mouth, specifically, is something we encourage people to do." For instance, social media followers are urged to tag five friends to tell them about Rice Mutual Aid. As a result, many students receiving \$100 for car repairs or \$50 for medical bills discovered that financial support through another resource: their social network.

Meeting students' needs requires formal institutional structures that provide basic needs security, along with an array of academic and social supports. But mutual aid groups are notable in demonstrating how a seemingly humble asset—the social capital of students' peer networks—can contain extraordinary resources, even to the point of ensuring survival.

What is social capital?

Social capital describes access to, and ability to mobilize, relationships that help further an individual's potential and goals. Just like skills and knowledge, relationships offer resources that drive access to opportunity.

Activating peers to address persistent challenges

As K–12 schools, colleges, and universities consider how to best support students on the heels of a pandemic and a recession, the power of peer social capital is a lesson worth remembering.

The benefits and influence of peer networks are well documented in education research. Positive peer dynamics support learning and prosocial behavior, while negative peer dynamics inhibit it.¹⁰ Friendships and positive peer networks impact social-emotional wellbeing, academic progress, and career success.¹¹ Peers exert a significant influence on students' academic and career decisions, sometimes even more than formal career services.¹² According to Keith Frome, cofounder of PeerForward, an organization that leverages peer influence to build college-going culture in low-income high schools, peer networks are often faster and more effective channels for spreading information and resources in schools. "The ancillary spaces in schools—hallways, gyms, locker rooms, cafeterias—are like synapses in the brain where information crackles," Frome said.

These benefits could prove crucial in the coming years. A year into a global pandemic, mental health issues ranked as the most common self-reported obstacle to learning for K–12 students, with Black, Latinx, Native American, and multiracial students reporting the greatest number of obstacles overall.¹³ Many students are balancing work, family, and school, and economic insecurity has forced some to prioritize earning over learning, at least for now.¹⁴ For those just entering the job market, prospects are bleak with unemployment rates persistently high.¹⁵ As for academics, schools are scrambling to play catch-up as they determine what interventions are needed to assess and accelerate learning after a tumultuous year.¹⁶ Given how peers are a proven driver of student success and wellbeing, more schools should embrace peer networks as both the foundation for helping students rebound from the pandemic, as well as the fuel behind more student-centered support systems in the long run.

An array of innovative strategies will be needed to address these challenges and sustain student-centered systems of support. But when it comes to ensuring that students feel equipped to thrive in school, work, and civic life, all schools can help students access one resource hiding in plain sight: each other.

Doing so will require a more deliberate strategy than most schools have in place, according to experts in K–12, postsecondary, and workforce education. According to Tom Vander Ark, founder of the K–12 media outlet and consultancy Getting Smart, robust peer-to-peer designs are uncommon in high schools. Farouk Dey, vice provost for Integrative Learning and Life Design at Johns Hopkins University, noted that the same is true in postsecondary institutions. Dey said that while student-tostudent models are common in pockets of campuses like Residential Life offices, it's exceedingly rare to encounter "a culture of higher ed in which peers are used throughout the university experience no matter where you go." Laura Maher, grantmaking and research program manager at the Siegel Family Endowment, has observed that few workforce programs see peers as resources in and of themselves. "When programs encourage learners to rely on their peer networks, it seems mostly in service of the possibility that someone you know might know another expert," she said.

In other words, across the entire high school to career pipeline, peer networks are an immense, but still latent, resource in the student success equation.

With the right tools and models, however, schools could start to leverage peer-to-peer connections as part of a robust, and far more networked, strategy to support learners toward successful futures that they define for themselves. In this paper, we highlight emerging innovations that could make this reality more feasible at scale. We then describe distinct innovation opportunities and constraints for schools as leaders rethink how they nurture and leverage peer connections.

All schools can help students access one resource hiding in plain sight: each other.



THE MARKET AT A GLANCE: EMERGING INNOVATIONS HARNESSING PEER-TO-PEER CONNECTIONS

Yutaka Tamura believes schools don't need to go far to find a rich source of social connections that can support students and set them up to thrive. Tamura, who is the founder of nXu, a nonprofit that partners with K–12 schools to equip youth to explore, articulate, and pursue their purpose in the context of a supportive peer cohort, noted, "There is untapped social capital in a school community that, if given the opportunity to be uncovered, is powerful."¹⁷

Fortunately, a host of innovative tools and program models are emerging to help K–12 schools and postsecondary institutions nurture and expand peer social capital.

Some of these tools and programs involve not only peers, but "near peers" who are one or two steps removed from students in terms of age and experience, while still able to easily relate to students' lived realities, such as high school seniors coaching freshmen or college students coaching high schoolers.

The market map below outlines tools and programs identified through in-depth interviews and our research. Its four categories represent key functions that schools and programs are enlisting peers to perform for one another, as well as indicate where a more widespread embrace of peer-to-peer models could lead to more scalable and student-centered systems of support.

Figure 1. Four valuable roles peers can play



As social support to foster belonging, identity formation, and social-emotional skills

Peers:

- Get to know each other (and themselves) deeply
- Build understanding across lines of difference
- Appreciate and encourage one another

Example tools and programs:





As academic support to drive learning outcomes and keep each other on track

Peers:

- Teach key concepts and skills
- Exchange expertise and insight
- Set goals and hold each other accountable

Example tools and programs:





As guidance support to expand options and ease transitions

Peers:

- Share advice and model behaviors, mindsets, and skills
- Help each other navigate complex systems
- Coordinate supports and opportunities for each other

Example tools and programs:





As mental health support to promote wellbeing and reduce loneliness

Peers:

- Destigmatize mental health issues
- Share experiences with mental health challenges
- Counsel and support each other

Example tools and programs:





Note: The tools and programs represented here are only a subset of those we feature in the sections below. Many of these tools and programs leverage peers across multiple roles, despite being highlighted in only one category.

Peers as social support to foster belonging, identity formation, and social-emotional skills

Some tools and programs are harnessing peers as sources of social support through human connection and community-building. As a result of offering social support, peers can foster each other's sense of belonging, identity formation, and development of important social-emotional skills.¹⁸ Examples of organizations in this space include GiveThx, Live Oak Wilderness Camp, Native American Community Academy (NACA), Nearpeer, nXu, Peer Group Connection from the Center for Supportive Schools, and Soliya. These endeavors show that peer social support can take many forms, including models to spark and strengthen one-to-one friendship, models for nurturing affinity-based cohorts, models for nurturing cohorts across lines of difference, and tools for scaling rituals that contribute to community building.

Peer friendships are a natural source of social support for students. Meeting new friends is the top priority among incoming college students, but brokering those friendships may not always be of equal priority among institutions themselves.¹⁹ "Helping students organically build peer relationships with other students has not always been viewed as central to students' success, although this is changing," said Dustin Manocha, founder and CEO of Nearpeer, an online student engagement platform that helps incoming and current college students identify potential friends with similar interests, majors, locations, and experiences.

Manocha has found that the pandemic has heightened schools' awareness of the connection between students' peer relationships, sense of social fit, and college persistence. "The two biggest junctures we focus on are incoming students, and the first year experience," said Manocha. "Pelleligible students are at greatest risk not to show up in the fall, despite committing to do so. That's why it is so important for students to build roots through social connections early on, as a form of peer support that improves resiliency as students face challenges." Nearpeer has demonstrated an ability to help colleges boost the rates at which students commit to attending, show up at the beginning of the year, and persist after their first year in college, with the biggest gains among first-generation, low-income, students of color, and those far from campus, such as out-of-state and rural students.²⁰

While sparking friendships between pairs of students is one road to social support, another approach entails building peer communities that are bonded together as a cohort. Some cohort models are designed as affinity spaces to bolster support for students, especially those who are likely to experience common barriers due to their identity or background, by drawing upon their strengths and knowledge.²¹ One such space is Native American Community Academy, a K-12 charter school in Albuquerque, NM, which is designed for Indigenous families. According to the

Affinity spaces can bolster support for students, especially those who are likely to experience common barriers due to their identity or background. school's founder, Kara Bobroff (Navajo/Lakota), NACA is a place where strong relational culture across the school community is far greater than the sum of students' individual friendships. "Students all know they are part of a community at NACA and feel that commonality, which is part of a larger community of Indigenous people locally and globally," said Bobroff. "And when you understand how your identity is shared with others, that's where relationships are built."

In Bobroff's Navajo culture and language, *K'é* refers to kinship among clans in her tribe, and part of being Navajo is understanding the relationship to others and family, and the strong feeling of connection and compassion evoked by K'é. "When I introduce myself, I say my name, and recognize our clan name, on my mother's and father's sides. In a more sophisticated introduction, I would talk about my grandparents, where my family is from, where I reside, and what I do, to acknowledge and respect my relatives," said Bobroff. While such an introduction would be out of place in most mainstream Americanized schools, at NACA it's commonplace. As a result, Bobroff said the school feels far more like a family than an institution.

With the right context and support, even students without common heritage or lived experience can develop a shared identity and become stewards of a culture of belonging. For example, Live Oak Wilderness Camp, a camp in New Orleans, LA, brings together young people ages nine to eighteen from 75 schools across New Orleans—a city that reflects deep structural and socioeconomic inequities.²² Lucy Scholz and Jack Carey founded the camp with a vision to nurture a locally-rooted, diverse set of leaders who shared formative experiences together as youth. What binds these young people together, across diverse backgrounds, is a common set of experiences and rituals at camp, ranging from bonfire songs to gratitude circles. The effect is that relationships become deeply rooted in a shared identity: "For the kids who stay with us [over time], 'I am a Live Oak camper' becomes a first-order part of their identity," said Scholz. As Carey reflected, "Camp is our central strategy, but we are so much more than a camp. Camp is the mechanism used to connect young people who would never connect otherwise."

Peer cohorts that cross lines of difference can be a ripe context for building social-emotional skills like empathy. For example, Soliya, a virtual exchange

program, has honed an ability to host online dialogues where participants mostly university students—co-create spaces to discuss often divisive issues with the support of a trained facilitator (many of whom are program alums). Soliya's flagship Connect program brings together students from around the globe, and a newer program, First-Year Connect (1YC), offers virtual dialogues for students with divergent perspectives from the same university campus. Waidehi Gokhale, Soliya's CEO, said, "Engaging peers across lines of difference activates their sense of empathy and community, and their sense of civic responsibility. There's a very tangible process of humanization that happens, because you're creating context where there was none." As a result, students in Soliya's 1YC program walk onto campus already knowing a diverse group of peers that they may never have sought out otherwise.²³

Peer cohorts that cross lines of difference can be a ripe context for building social-emotional skills like empathy.

Trusted peer relationships are critical as a medium through which young people build a sense of their own individual identity.²⁴ Recognizing this, nXu, for example, has created a purpose-development curriculum and teacher training specifically designed to nurture identity formation among cohorts of young people. Using its "Compass" methodology, nXu guides students to develop an inner compass, or sense of purpose. The approach includes intentional community-building and deep reflective work to support students in sharing things with one another that they normally don't in school. Through sharing, students discover their own assets and strengths.



nXu's original design featured diverse cohorts of students from schools across New York City who participated in out-of-school programming. Over time, the organization began facilitating both out-of-school and in-school programs that convene groups of peers from the same school communities in cities across the country. Even students who appear to know each other well can benefit from experiences like these. "In one nXu session, two self-proclaimed best friends were talking about their individual long-term aspirations as part of our program," Tamura said. "They turned to each other and said, 'I had no idea that this was what you wanted to do!' Initially, we were surprised that they didn't know this about their respective best friend, but we've found over time that students... often do not have structured opportunities to connect more deeply and to learn about each other more holistically." Anecdotes like these demonstrate how nXu's programming generates meaningful peer connections that, while technically in reach at school, may never have sparked without nXu's intervention.

Programs that focus on community-building among peers tend to share one common ingredient: ritual. Shared rituals are woven throughout programs like NACA, Live Oak Wilderness Camp, nXu, and Soliya to strengthen students' sense of kinship towards one another. Given the power of ritual, some entrepreneurs are trying to build tools that help educators scale rituals in their own contexts. GiveThx, a tool developed by former teacher Mike Fauteux in partnership with his students, stands out for how it packages one ritual–gratitude practice—in a scalable way for schools to adopt and implement.²⁵ "Saying thank you to someone demonstrates that you value that person," said Fauteux.

Fauteux firmly believes that the practice of gratitude can be supported in key ways by technology. "Imagine asking any random group of people to shout out appreciation for each other, and you'll see that it's the same people who speak up every time," he said. Research shows that students who experience identity threat in their learning environments, and especially young men, can feel unsafe or uncomfortable expressing gratitude.²⁶ GiveThx creates safe opportunities to give thanks, supported both by the tool's design (a text-based app that shares gratitude notes directly with the receiver rather than as a public shout-out), and the training that teachers receive to introduce it to their classrooms.²⁷

Peers as academic support to drive learning outcomes and keep each other on track

Other tools and programs leverage peers as an academic intervention strategy. By positioning peers as teachers and tutors or co-learners, these models aim to improve learning outcomes and help students stay on track in school. Examples of organizations innovating in this space include CircleIn, Knack, P2PU, PeerKonnect, Schoolhouse, The Forest School, Tutorfly, Vygo, and Yellowdig. These endeavors show the varied ways that peers can act as academic support for each other, such as

through tools for peer tutoring, tools for study groups and class discussions, models for participatory learning, and models for mutual accountability.

Peer tutors, while intentionally not subject matter experts, are students who have demonstrated some degree of mastery over the topics in which they tutor. The primary function that peer tutors play is to help fellow students make academic progress. Although peer tutoring is not a new phenomenon, platforms to scale these approaches represent a growing pocket of the edtech market. For example, Knack, an online peer tutoring platform that licenses its platform to colleges and offers optional full-suite services like peer tutor recruitment, hiring, and training, matches students needing help in a particular course with virtual or in-person peer tutors from their school who have aced that exact course. Through its partnership with colleges, Knack has demonstrated that peer tutoring can lead to academic gains, as well as scale access to academic support in a cost-effective way.²⁸

Besides helping students master course material, peer tutoring programs can result in a variety of other benefits. "We want to be known as a peer tutoring program with incredible side effects," Knack founder Samyr Qureshi said. One of those side effects is stronger peer relationships that take on an advisory quality. Tutors, who have taken the same classes as their students, can speak not only to the course material but to their own experience navigating the class. Additionally, tutors, in whom the company invests through training and support, report tutoring as valuable professional experience as well as an important source of income. Moez Limayem, dean of the University of South Florida's Muma College of Business, a Knack campus partner, has called Knack a "win-win-win" for the benefits it offers to students, tutors, and schools.²⁹

Ray Liu, founder of high school tutoring platform PeerKonnect, has witnessed a similar upside, or what he called the "mutual benefits" of peer tutoring. In one survey, PeerKonnect found that 80% of users reported feeling a stronger sense of community and collaboration at their schools after using the platform.³⁰ PeerKonnect is one peer tutoring venture among a handful on our radar, including Tutorfly and Schoolhouse, which target high schools in particular.

While "tutoring" calls to mind a formal relationship in which tutors teach students, other models are creating communities of learners who exchange help, resources, and academic advice more informally.³¹ For example, Yellowdig and CircleIn are online social learning platforms designed to complement college courses by enabling students to ask questions about course material or homework, exchange class notes, and form study groups. Both platforms create gamified social media-style environments that aim to encourage connections in ways far friendlier to interaction and exchange than traditional online discussion boards. Yellowdig founder Shaunak Roy noted, "The biggest problem in peer learning today is that it's all about sharing, but too often we are not measuring how much students are listening." To solve for that gap, Yellowdig's back-end analytics

While "tutoring" calls to mind a formal relationship in which tutors teach students, other models are creating communities of learners who exchange help, resources, and academic advice more informally. show instructors composite scores for how much students are sharing, listening, and interacting—activities that earn students points that can be used toward their grade.

Other models, however, take study groups to a new level by designing reciprocal peer learning environments where peer relationships aren't just a backdrop to a traditional course-they're the main event. For example, P2PU is an open platform that enables peer-to-peer learning through collaborative, participatory study groups on a wide range of topics. Its "Learning Circles" consist of small groups of learners who most often meet in public libraries to take online courses together. Learning Circles each have a facilitator to manage logistics and nurture discussions, but facilitators are not meant to be instructors or subject matter experts (they are often library staff). Rather, Learning Circles take advantage of "distributed expertise" across participants, where expertise may take the form of prior subject matter exposure, learning habits, or life experience.³² Course materials are designed to be collaborative, with each session following a common four-step format: checking in as a group, reading or watching something together, completing a group activity, and reflecting together. This format enables social learning and resource sharing far more than a conventional online course designed for individual participants.³³

According to executive director Grif Peterson, P2PU is noticing that Learning Circles appear to work best when people come together to learn the same thing for different reasons. "The diversity of participants' motivations for learning seems to energize the groups," said Peterson. Additionally, when participants reflect on their reasons for joining, about a quarter of those reasons are interpersonal, suggesting that Learning Circles are not only about mastering material but about connecting with fellow members of a community. According to its own data, P2PU regularly sees that upwards of 85% of participants achieve their goals through participation—despite not being formally "taught" by an expert. The organization is exploring a partnership with newly-accredited College Unbound to award college credit for students who demonstrate proficiency in the content and skills they gained by participating in Learning Circles.

Students can also support each other academically by acting as accountability partners who help each other make progress toward their learning goals.

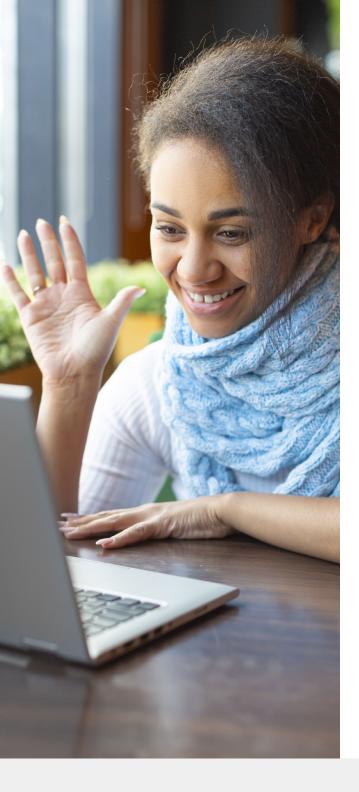
At the Forest School, a K–12, diverse-by-design, private school in Atlanta, GA, pairs of learners called "Running Partners" meet each morning and afternoon to set goals for the day and debrief on progress toward those goals. High schoolers use a "WOOP" protocol—Wish, Outcome, Obstacle, Plan—to set goals and anticipate roadblocks, and record their goals in a "Journey Tracker" online. These pairs change at least seven times per year, allowing each individual to experience a range of peer relationships and learn what accountability strategies work best for them.

Peers as guidance support to expand options and ease transitions

A third category of tools and models activate peers as sources of guidance and navigation to support students' postsecondary and career decision-making, as well as their adjustment to a new school. Examples of organizations innovating in this space include Career Karma, COOP, Matriculate, Mentor Collective, Merit America, Peer Group Connection (PGC), Student Success Agency (SSA), and Vygo. These endeavors harness peers as guidance support in many forms, including models for near-peer role modeling and mentorship, models for peers as wayfinders and sources of information, models that activate peers as influencers and culture-builders, and models that connect peers for mutual encouragement and insight during transitions.

Many models in this category highlight how peers with expertise can act as role models to support students who are younger or less experienced.

Peers with expertise can act as role models to support students who are younger or less experienced.



One example is Peer Group Connection, which is a program of the Center for Supportive Schools, a nonprofit that partners with schools to help them become places where students want to be. In PGC, high school junior and senior peer leaders meet weekly with groups of ninth grade students to help them develop important social skills and academic habits. During PGC meetings, peer leaders facilitate structured activities that help younger students practice key social skills, such as how to seek out a guidance counselor and how to have a conversation with a teacher about a difficult class.

When peer mentors are recent graduates of a program—making them near peers—they may be in a position to not only advise, but also broker connections on behalf of, the students they mentor. For example, COOP is a program that helps Black, Latinx, low-income, and first-generation college graduates develop the technical skills and social capital they need to jumpstart careers in upwardly mobile fields. COOP relies heavily on near peers—alumni, in this case—to staff its programs with current students. Since alumni are working in industry by the time they begin leading peer cohorts of students, they are not only able to coach students, but can also provide referrals and make introductions to prospective employers.

Peer mentors can also illuminate the mystifying inner workings of complex systems that they themselves have navigated. University of California Riverside (UCR) worked with Mentor Collective, a company that helps higher education institutions establish mentorship programs, to launch a new peer mentoring initiative aimed at supporting new freshmen, particularly first-generation students, during COVID. And Matriculate, a program that pairs near-peer college students with high school seniors for college advising, capitalizes on the recent experience that mentors had in their own college-going journey. These programs build on substantial evidence that first-generation college students, in particular, may face hurdles in navigating implicit cultural expectations and unwritten rules at colleges—and tend to seek support from peer networks of the same ethnicity rather than finding it through institutional channels.³⁴

As part of demystifying complex systems, peers offering guidance support can function as trusted wayfinders who direct their mentees to resources and services they need. Based on his experience with PeerForward, cofounder Keith Frome recommended, "To get important information out there, seed it in a peer network rather than putting up a poster or hosting an assembly about it." UCR's administrators are beginning to deliberately help peer mentors develop this muscle as information distribution channels, and have set up a resource hub designed for peer mentors to find the information their mentees need. Vygo, a platform for peer-to-peer support, also sees its institutional partners going this route: Coventry University in London describes one of peer mentors' functions on Vygo as being a "signposter," where mentors direct students to other sources of academic, social, and pastoral support, as well as industry connections.

Peer and near-peer mentors can also have a distinct orientation toward mentees' personal development. Student Success Agency, an online platform that connects high school students with virtual near-peer "agents," was founded on the idea that teenagers could benefit from having agents just like sports and music celebrities. Near-peer agents, typically college students and young adults, nurture connections with mentees through secure text messages and phone calls where they chat about interests, aspirations, academic and social struggles, and more. Cofounder EJ Carrion emphasized that "the majority of their role is as relationship-builders and reflectors, helping kids find answers within themselves and ignite sparks in their lives."

Just as near peers can channel information about institutional resources to students, they can also channel information about students' needs and interests back to schools. For example, as SSA agents build relationships with students, they share their insights about students' interests, aspirations, and anxieties with educators and counselors through the platform, and work together with those adults to coordinate support and opportunities. Similarly, at UCR, administrators have found that peer mentorship has been "an extra tool to uncover what students are going through" during the pandemic.³⁵ When students open up to their mentors, mentors can report back anonymized feedback on students' experiences to administrators and flag specific student cases that administrators should follow up on.

Just as near peers can channel information about institutional resources to students, they can also channel information about students' needs and interests back to schools. One palpable tension among leaders considering the benefits of peers for navigation and guidance is the question of how much knowledge, experience, and training mentors need in order to fulfill their roles effectively.³⁶ For example, Dey, at Johns Hopkins University, noted that in his experience, career services professionals can be hesitant to empower peers as career coaches, fearing that they won't have enough expertise to be effective.

But Dey thinks about the problem differently. Years ago, he ran a campus study that sought to surface who had the greatest influence over students' academic and career decisions. "I remember vividly that peers and friends were the number one influence, followed by family. If that's still true among our current Gen Z students, that means they're probably having some of their most meaningful conversations about life goals and dreams with their peers—and they're getting advice about what to do, whether it's correct or not." (This localized survey tracks with national findings showing that students turned to informal social networks, like friends and family, most frequently when deciding on a college major.³⁷) With this in mind, Dey thinks equipping peers with even minimal skills and knowledge as career coaches and academic advisors can benefit students and schools alike.

In this vein, some tools and models position peers as influencers and cultureshapers rather than formal mentors or guides. For example, PeerForward partners with high schools to create teams of upperclassmen (four juniors and four seniors) to take on the challenge of getting their peers to apply to and enroll in higher education. "In PeerForward, your peer leaders are holding you accountable," Gary Linnen, PeerForward's CEO, said. "They're saying, I'll walk with you. I may not know the answers, but we'll walk it together. And when you get tired, I'll say get up. Or I'll sit with you, if you need me to, to help you get past that moment."³⁸

One of PeerForward's primary strategies is engaging peer leaders to plan and execute schoolwide campaigns that help students hit milestones on the road to college. In some schools, these advocacy and influence activities are peer leaders' primary responsibility. In others—often smaller schools peer leaders also take on case management roles where they regularly check up on 20-30 seniors who are going through the college application process. These peer-to-peer supports have proven critical during the Students can offer each other encouragement and insight during transitional phases without being formal sources of advice and expertise. pandemic. According to Linnen, while FAFSA completion rates dropped by 17% during COVID, they only decreased by 5% in schools using PeerForward.

As with academic support models, not all peer-to-peer models for navigation and guidance are premised on asymmetry of expertise or experience. Students can offer each other encouragement and insight during transitional phases without being formal sources of advice and expertise. For example, Merit America, a jobs program that helps people without bachelor's degrees find skilled jobs, and Career Karma, an online community platform for underrepresented job-seekers wanting to break into tech, both offer group experiences called "squads." For individuals moving into a new industry or job function, especially one where their identities are not well represented, the experience can be demoralizing, noted Career Karma founder Ruben Harris. Squads are peer-to-peer groups of fellow job-seekers who share a certain interest or trait, and who stick together to encourage one another, celebrate successes, and recover from setbacks. (In Career Karma's case, squads were originally inspired by the Japanese concept of *moai*, social support groups whose name literally translates to "meeting for a common purpose.")³⁹ Such peer groups can have an effect on success in the job search, and Merit America, in particular, structures a range of peer- and expert-driven learning opportunities around squad activities.⁴⁰

Peers as mental health support to promote wellbeing

A fourth category of tools and models activate students to support each other's mental health and wellbeing.⁴¹ Examples of organizations innovating in this space include Bring Change to Mind, Nod, Sources of Strength, Togetherall, unmasked, and the University of Michigan Depression Center's Peer-to-Peer program. These endeavors demonstrate how peer-to-peer mental health supports can take several forms, including models for peer counseling and advocacy, tools for peer mental health communities, and tools that help peers practice how to reach out to each other and reduce feelings of isolation.

Peer counselors are a rapidly growing phenomenon in the mental health space. Studies have shown that people who have experienced a condition can play effective nonclinical support roles for patients. "Peers can often form a stronger therapeutic bond with the people they counsel because they have experienced mental health struggles themselves," wrote Dr. Nicola Davies in a summary of the benefits of peer counseling.⁴² In higher education, formal student roles for educating peers about alcohol consumption, sexual health, and mental health have more than a 45-year history.⁴³ In K-12, national programs like Sources of Strength are training peer leaders to work with adults to support students and reduce suicides, and some schools like Garey High School, in Pomona, CA, are starting their own peer counseling centers.⁴⁴ These programs are well-regarded: about three-quarters of

parents in a national survey agreed that students trained to talk with their peers about mental health would better understand the challenges that teens face, and would improve the odds that teens would speak up about mental health concerns.⁴⁵

Peer leaders in mental health roles often act more as advocates than as counselors. The Sources of Strength peer leader program includes training in suicide prevention and awareness campaigns, in addition to preparing students to have conversations with their peers and pull in adults as necessary.⁴⁶ Bring Change to Mind, which advocates to end the stigma and discrimination surrounding mental illness, works with high schools to form student clubs that host conversations about mental health and engage school communities to normalize the topic. Similarly, the University of Michigan's Depression Center operates a program, Peer-to-Peer, which educates students about depression and suicide, then equips them to share this knowledge with peers. Each program has demonstrated effects, such as reductions in stigma and increased recognition of depressive symptoms.⁴⁷

Peers can also offer informal and reciprocal support through communities oriented toward mental health and wellness. Togetherall, an online peer-topeer mental health platform that's moderated by licensed and registered mental health practitioners called Wall Guides, currently partners with 250 higher education institutions globally and reaches about 2 million students. "Togetherall promotes access to everyone to both give and get support," said Matthew McEvoy, general manager for North America. "Since Togetherall is moderated by our Wall Guides, any eligible student can join the community, offer their experience, and provide support to someone else. Similarly, anyone who has access to Togetherall can seek support." The platform is anonymous, meaning that students can't connect off-platform by design. But many users do form bonds on Togetherall, where they can send direct messages and start closed group conversations (which are still moderated by Wall Guides). Although the Togetherall community mixes students from all of its partner campuses, features in the platform help nudge students towards local place-based and institution-specific support and resources if they need it. "A lot of institutions like that mix of empowering students to seek and provide support themselves, but also tying back to campus supports," said McEvoy.

Students providing peer-to-peer support may not always recognize it as mental health support. While in college, Sanat Mohapatra noticed that his peers were posting a lot about personal issues on anonymous social media platforms. But as someone who has struggled with mental health himself, Mohapatra took issue with how the platforms he used oriented themselves toward free expression, but not community support. He founded unmasked as a direct answer to that, branding the app as "a supportive anonymous community" for each campus that uses it. Conversation threads on the app run the gamut from light topics like TV shows to everyday social pressures and academic stress, to more serious issues like eating disorders and selfharm. That variety, according to Mohapatra, is part of what makes the app approachable for students. "We can get people into mental health culture in a more subtle way than a therapy app," said Mohapatra, who hopes that unmasked lowers the barrier of entry for students to seek formal support if they need it. For many students, however, a supportive peer community is what they're looking for more than a therapist. "For a given post, you'll get one response that's sympathetic, one that's empathetic, one that's wiseyou get the full range of feedback," said Mohapatra. "It feels like so many people are listening to you."

One common mental health challenge that students face-and that peers are also best positioned to remedy-is loneliness.⁴⁸ Togetherall, unmasked, and Nearpeer all seek to reduce feelings of isolation and increase students' sense of belonging using online platforms. In contrast, a new app called Nod tackles the same problem in college students' offline lives. "Nod is like a workout app for your social life, encouraging users to get out into the real world and try out new skills," said Dr. Nathaan Demers, vice president and director of clinical programs at Grit Digital Health, which developed the app in partnership with Hopelab.⁴⁹ The app prompts users to take actions that help them cultivate and reflect on their relationships. A recent randomized control trial, which deliberately oversampled student users from historically marginalized groups, showed that use of Nod buffered the most vulnerable students from increased feelings of loneliness and depression after using the app only a handful of times.⁵⁰ According to Dr. Demers, one institution using Nod found that 100% of respondents reported improved social connections and a better sense of belonging.

ANALYSIS: FIVE WAYS INNOVATIONS ACTIVATING PEER CONNECTIONS COULD IMPROVE EDUCATION PATHWAYS

With a range of emerging tools and models to adopt and adapt, K–12 and postsecondary leaders have a tremendous opportunity to activate the latent social capital in peer networks to improve student experiences and outcomes. But will they succeed?

The answer depends on where and how schools activate peer networks, and for what purposes. Here are five considerations leaders will need to keep in mind.

1. Peer-to-peer models are a promising lever for distributed, large-scale student support

Student support services often fall short of what students need. Support services staffed by professionals and those predicated on one-to-one support are expensive—often prohibitively so in an era of shrinking budgets and lack of will to spend money on students who need the most help.⁵¹ That means that students' needs often outstrip what professional staff can meet. Take mental health: When Dr. Demers from Grit Digital Health worked as a counselor on a college campus, he juggled a caseload of at least 60 students with only 20 clinic hours a week. "The math just doesn't work out," he said. And the problem is only growing: the number of students seeking counseling has doubled in the last five years on some campuses.⁵²

By activating their existing peer networks, schools have an immense opportunity to tackle the shortages they face across mental health, social, academic, and guidance supports. Many of the tools and models described in this paper are designed to transcend the barriers that keep support services limited, hidden, or out of reach for many of the students who could benefit from them. They operate with lower costs, or with greater cost efficiencies, than models fully reliant on professional staff and one-to-one support.⁵³ All-in-all, they transform complex services into simpler ones that are easier for students to access anytime, anywhere.⁵⁴

Knack's peer tutoring platform is one example of how these potential benefits converge. In partnership with the University of Florida, Knack helped the university increase its peer tutoring hours from 1,500 to 9,000 hours in a single semester, reaching 15% of the student body. Additionally, 42% of Knack's online tutoring sessions happened outside of traditional work hours. In total, 63% of students using Knack had never before accessed campus tutoring.⁵⁵ As Knack's founder Qureshi said, "We allow institutions to set up more distributed systems so that students can connect directly with each other for support."

Togetherall's peer-to-peer mental health community demonstrates similar benefits. The platform's peer community and clinician moderators are online and available 24 hours, seven days a week, with no need for an appointment. According to Togetherall's own data, half of users report that posting in the community is the first time they have shared about their mental health openly, and over a third report that Togetherall is the only mental health support they are seeking—including from loved ones. Furthermore, 40% of users on the platform identify as people of color and 4.5% as trans/nonbinary, both proportionally higher than campus counseling centers report on average.⁵⁶ Both Togetherall and Knack show how peer-to-peer models can scale affordably and efficiently, and in the process, reach students who could benefit from support but have not sought it out through more formal channels.

It's not a coincidence that many of these student-to-student models are technology tools that make distributed student support services more affordable and feasible at scale. To meet the volume of students' unmet demands, as well as their as-yet-undiscovered needs for support, large schools won't get far without tech-enabled infrastructure. As Vygo CEO Ben Hallett reflected on his own college experience and his struggle to get support, he said, "A lot of it came down to technology. Support services existed at our universities, but they were very analog, and required a high administrative lift. Students could only learn about services on dense websites with broken links. So we set out to change that."

At the same time, peer-to-peer models can also scale human connection in a way that high-volume, automated support services too often lack. As some colleges turn to chatbots and online portals stocked with information when staff-to-student ratios for support services get too high, leaders should keep in mind that such approaches can optimize for conveying information at the expense of nurturing students' networks.⁵⁷ Peer-to-peer models, on the other hand, can achieve scale rapidly *because* of the value of a human relationship and the sheer number of peers (rather than staff) available to help one another. EJ Carrion, from Student Success Agency, said, "We don't try to remove the human element in order to scale; we try to amplify it."

Schools considering peer-to-peer models should recognize that while leveraging peer networks can alleviate the complexity students face in getting the support they need, that doesn't mean peers are always best positioned to tackle complex challenges on one another's behalf. Rather than pursuing a full-on gig economy strategy in which on-demand student workers replace staff roles, leaders should continuously assess where peers have a distinct advantage as either messengers for key information or as providers of direct support. Where that advantage is absent or unknown, and whenever students face particularly complex challenges, peer supports will need to remain supplements, not replacements, to professional staff.⁵⁸

Leaders should also be wary of treating student-to-student support as an easy route to free labor. Some formal peer support roles are best seen as an opportunity for more students to earn while they learn. In the case of Knack's tutoring platform, for example, universities have found that they can scale cost-effective tutoring while also increasing the number of flexible, paid work opportunities for students: University of Florida's partnership with Knack has helped create over 200 on-demand peer tutor jobs.⁵⁹ Other peer support roles may be better suited to nonfinancial compensation such as academic credit. Some programs may also ensure that volunteer roles pay dividends for volunteers themselves by measuring and accounting for the benefits that students in support roles receive, not just those they offer.

"We don't try to remove the human element in order to scale; we try to amplify it."

- EJ Carrion Student Success Agency

2. When hallway encounters are scarce, online connections aren't a downgrade from face-to-face—they're an innovation opportunity

Institutional support services aren't the only scarce resource for students these days: connections to peers, too, can be hard to come by. Even prepandemic, high school and college students commonly reported feeling lonely and isolated.⁶⁰ As COVID vaccines and precautions enable campuses to reopen, millions of students will remain in circumstances that can make relationships harder to access. Students choosing virtual and online learning programs can't count on shared physical space to bump into peers and spark friendships, and students attending commuter colleges may also have reduced opportunities to connect casually with peers outside of class. In high schools retaining hybrid learning options after the pandemic, casual encounters may also be reduced if students rarely meet peers who attend in-person on a different schedule.

Considering all these factors, the proverbial hallways in which students connect turn out to be relative luxuries. But forward-thinking schools can begin democratizing access to peer connections by acknowledging that online connections aren't inherently impoverished, especially when the alternative is isolation.

For schools that struggle to foster students' peer networks due to factors like time, space, distance, and cost, online strategies for nurturing students' relationships have profound potential. As a baseline, schools can offer online connections as a "better than nothing" alternative that's flexible and easy-to-use for busy students. Even better, they can deliberately design online offerings to guarantee a rich web of relationships that improve engagement and persistence, while fostering lasting peer networks.

For example, at Monroe Community College (MCC) in Rochester, NY, almost all of the college's 11,000 students commute to campus.⁶¹ MCC had learned through its own research that a sense of classroom community was positively associated with student course persistence, which encouraged administrators to invest in measurable community-building strategies. "Our Teaching and Creativity Center shares strategies for creating community in

the classroom, but we wanted more," wrote Kimberly Collins, associate vice president for academic services. The college opted to work with CircleIn to nurture students' networks online. "CircleIn appeared to provide a classroom community that all students could access whether they were nontraditional students with competing demands, had prior experience with the material, or were taking online courses." Using a methodology designed to estimate effects on CircleIn app users compared to a similar group of non-users, MCC found promising lifts in persistence among CircleIn users, particularly for Black students, part-time students, and students at risk of dropping out.⁶² Commuter colleges like MCC are potential hotspots for tech-enabled innovations that take the chance out of chance encounters by ensuring that every student has relationships within reach.

Commuter colleges are potential hotspots for tech-enabled innovations that take the chance out of chance encounters.

The same goes for most online degree programs and virtual schools, where in-person chance encounters are nonexistent in the first place—placing additional value on strategic virtual connections that create access to peer relationships where they wouldn't otherwise exist. In online programs where students learn in cohorts at similar paces, technology platforms designed to connect peers can inject a social element into the academic experience, like CircleIn did at MCC, or pair new students with peer mentors virtually, like Mentor Collective did at UCR when the university transitioned to remote learning during COVID. These moves can not only buffer the isolation that some students may feel from learning virtually they can actually create a socially connected experience far more reliably than simultaneous presence in Zoom lectures.



Additionally, some of the fastest-growing higher education institutions in the country–despite a downturn in enrollment nationwide—are competency-based online schools, like Western Governors University and Southern New Hampshire University, whose models are primarily asynchronous.⁶³ In these circumstances, learners can pause and resume their studies at any time in response to competing demands in their lives. When every student moves at an individual pace, strategies for nurturing peer networks in turn must match students' expectations for a flexible and on-demand experience, while also reliably delivering the benefits that can flow from forging a diverse web of peer connections.

Even at brick-and-mortar schools where students enjoy plentiful face-to-face interactions, many students may not reliably forge a diverse peer network. Through its 1YC program, Soliya is experimenting with offering incoming college students a chance to connect for meaningful dialogue before arriving on campus. Although part of the purpose is to help students make new relationships, the program is deliberately geared toward forging those relationships where they might not naturally form. As Soliya CEO Gokhale said, "Tribe formation will happen on campuses, but what if walls between those tribes are a little more permeable because of one contact point?"⁶⁴

Schools should be wary, however, that unlocking access to online peer connections may prove necessary but not sufficient for relationships to form. Technology can lend real efficiencies to putting new networks within reach, but the models that guide interactions within the virtual space will make or break how effectively these tools foster authentic connection. Schools adopting technology for online connections should make sure they're put to work in service of creating a culture of engagement and belonging that improves students' satisfaction and return on investment.

3. In the peer-to-peer space, fostering relationships—not just brokering contacts—is the next frontier

Peer-to-peer models that scale support, expand opportunity, and boost persistence stand to bring a robust network of peers within reach for students. But for authentic relationships to form and stick around as part of students' reservoirs of social capital, tools and models must be designed with connection—rather than mere contact—in mind.

This is still an area of growth for many innovators, particularly in the online space. If not deliberately designed to nurture relationships, technology can easily verge on the transactional. For example, Knack founder Samyr Qureshi thinks that many of the biggest tutoring companies opt for one-time transactions that leave the opportunity to get back in touch up to chance. "When campus demands for tutoring outweigh supply, institutions often end up outsourcing to sites where the connections are purely transactional," he said. "But there's so much missing when you ignore the relationships students could develop."

In contrast, Knack has tried to structure its platform to emphasize students' relationships with their tutors, not sideline them in favor of instrumental academic support. Qureshi believes one specific design choice is critical for seeding these relationships: the platform's matching algorithm is designed to prompt tutors to reach out to potential students, not the other way around. This helps reduce decision fatigue on the part of students who need tutoring help, and it "plants the seeds for a much more human, person-to-person connection," according to Qureshi. The choices Knack makes to seed relationships seem to be paying off: Qureshi said the vast majority of students stick with the same tutor until the end of a course.

Such deliberate design is equally important for face-to-face models where deeper connections may be more likely, but aren't necessarily a given. "Peer tutoring and mentoring have mostly been developed with efficacy as the primary goal," said Dey at Johns Hopkins University. "If it works, and it costs less, it's successful." But Dey thinks most peer-to-peer programs in colleges aren't deliberate about building students' social capital. Similarly, high school peer cohort models like advisories have become more popular in recent years, but Vander Ark of Getting Smart, who has described 14 different functions that advisories can play, noted that not all advisories succeed at building close-knit peer cohorts.⁶⁵ To do so, advisories need to be clear-eyed in what they're trying to accomplish. "It's like a bunch of dimmer switches," he said. "To develop social-emotional skills and community culture first and foremost, you have to know which switch you're dialing up."⁶⁶

As part of designing with relationships in mind, schools can offer students explicit learning experiences that help them make and maintain connections. Programs can include relationship skills and social capital in their curriculum and training, such as how Peer Group Connection's leadership class coaches peer leaders on how to develop strong relationships both with and among their ninth grade mentees. Technology tools can also provide a structure for practicing key social skills, like how Nod's app helps students build the muscles needed to grow and maintain strong social connections in their lives, and how GiveThx helps students practice expressing gratitude as a proven pathway to friendship. Absent this kind of purposeful teaching and practice, schools may find that students don't actually develop relationships as reliably and equitably as they might assume.

Finally, as the adage goes, what gets measured gets done. Education leaders who want to ensure students are developing high-quality peer relationships need to develop metrics to account for them. Good measurement allows programs to capture information to reshape their practices so that all students are supported to develop relationships equitably, based on their social needs and their professional ambitions. By intentionally measuring students' social capital, education systems may begin to understand whether they are tapping into existing relationship assets in students' lives and making headway on otherwise-hidden relationship gaps.⁶⁷

Measurement may start simply: One way nXu measures the degree to which its peer cohorts unlock more diverse friendship networks is through a post-program survey. The survey measures students' responses to the statement: "nXu has allowed me to build friendships and connections that I would not have otherwise made." In its face-to-face programs, nXu also measures whether friendships formed are durable beyond the program itself by asking students: "In the past 3 months, how many nXu students have you spent time with outside of school AND outside of nXu sessions?"

With metrics developed and baseline data in hand, programs can also learn important lessons about how different design decisions impact students' development of relationships. For example, nXu originally developed its curriculum and facilitation model for high-dosage, in-person, out-of-school programming. Over the last year, due to COVID, nXu has learned important lessons about how thoughtful facilitation can translate online to deepen virtual connections. Tamura said, "In testing different dosages, we've found that low dosage, concentrated experiences actually can have some real impact." Thanks to its measurement strategy, nXu has developed strong, data-driven hypotheses about the social capital outcomes that result from 2.5- and 12.5-hour sessions. nXu's adventures in online purpose-building workshops underscore the maxim that results are driven not by technology, but by the model wrapped around that technology.

4. Transforming a moment-in-time peer to a lifelong contact could pay significant dividends

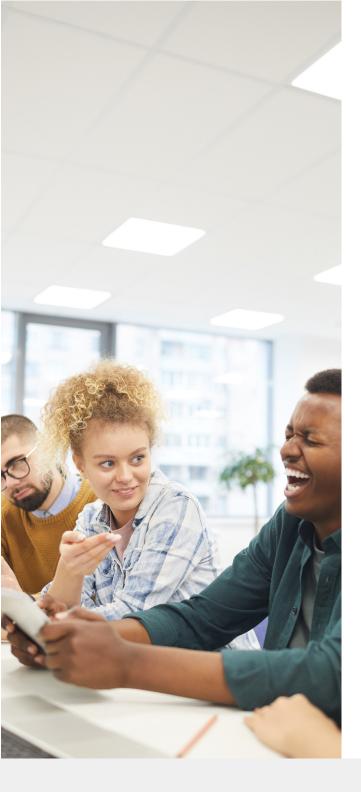
Taking the notion that "relationships matter" a step further, social capital research reveals that trusting relationships are resources that can continue offering value long after students graduate. One potential upside of longer-lasting peer relationships is that, over time, the resources that flow through those peer relationships can change substantially as students gain experience, positional power, and social connections. While a fellow teenager is an unlikely candidate for when a student needs an introduction to a hiring manager, that same peer could later become a plentiful source of job referrals. And while a peer may not be able to offer the wisdom of an elder, peer relationships nurtured over the long term can draw on the insight that comes from knowing someone through many phases of life.⁶⁸

Programs designed as recurring experiences are particularly well-suited to cultivate long-lasting relationships that continuously lend value. Abundant time spent with similarly-aged peers can set those relationships up to last, and programs that create multi-age cohorts can reap the benefits that older students provide. Both of these features are part of Live Oak Wilderness Camp's design. The camp's founders often echo the refrain: "What if the future leaders of New Orleans met when they were nine?" Live Oak reports that campers 14 years and older return to camp at a rate of 95%, meaning that peer groups remain largely intact over multiple formative teenage years.⁶⁹ The camp intends for campers' persistent relationships to deliver dividends ranging from job opportunities, to support networks, to productive collaboration between New Orleans institutions—benefits that only emerge over time as fellow campers develop and grow together.

Not every program is designed as a recurring experience year over year. But even shorter-term programs can make deliberate choices that support long-lasting relationships rather than oneand-done connections. One of those choices is to continue involving former program participants once they become alumni.⁷⁰ Soliya, for example, encourages its program participants to enroll in its facilitator training after completing a semester of its signature Connect program. An astonishing third of participants do so—and not only when the experience is "fresh." According to Gokhale, "Some don't come back immediately, but will come back within a few years post-grad." She said that facilitator trainees who go on to complete advanced facilitation training tend to remain in close touch with their facilitator peers in the Soliya network.

Some programs can go a step further toward guaranteeing longer-lasting relationships by incorporating ongoing alumni involvement as an expectation from the get-go. One such model, COOP, assigns four alumni to each cohort of 16 participants to serve as instructors and mentors, all while employed in the day jobs COOP helped them land. As a result, it's COOP alumni who power much of COOP's

Programs designed as recurring experiences are particularly wellsuited to cultivate longlasting relationships that continuously lend value.



training and placement efforts. The strong bond that forms from this ongoing engagement means alumni are far more likely to stay tightly connected than they would otherwise. "The only reason we're combining incredibly high-touch support with lower costs is that alumni do everything for each other," said founder Kalani Leifer.

Another simple, deliberate choice to support longer-lasting relationships is to ensure that participants have ways to connect off-platform, at least once a program ends. Soliya, for example, creates alumni spaces in its custom online platform and also encourages students to ask for each other's consent to create social media groups to remain in touch. Of course, many programs rely on communication remaining in-platform to monitor key metrics and maintain privacy. But programs that neglect to nudge participants towards more permanent modes of connection risk leaving valuable social capital on the table when students move on. Just like skills and knowledge, peer networks are an asset that students will rely on long after they graduate.

5. Peer networks create authentic opportunities to cultivate leadership, agency, and hard-to-teach skills

For decades, the education sector has heard calls for helping students build the skills needed to meet the demands of both a modern democracy and a changing economy.⁷¹ Today, those skills are more critical than ever. In a country exceptional for its political polarization while facing up to the ongoing consequences of racism and inequality, citizens need skills for cultural competence, difficult conversations, and bridging differences.⁷² As employers increasingly prioritize "soft skills," new hires need to demonstrate their abilities to navigate ambiguity, collaborate, lead, and take initiative.⁷³

Unfortunately, education systems have not earned ringing endorsements of their abilities to dependably teach these skills.⁷⁴ Skills like adaptability and empathy are not easily conveyed in lecture halls. Leadership skills explicitly taught in one context may not reliably translate to another more distant context.⁷⁵ Coaching, simulations, and inquiry-based pedagogies all hold promise for improving students' acquisition of so-called soft skills (more often called 21st-century skills in the K-12 sector), but so far have not scaled widely in education.⁷⁶

As a strategy to nurture the skills and mindsets that seem persistently hard to teach in traditional environments, some programs are finding peer networks to be fertile ground. Indeed, from a social capital perspective, peer relationships and elusive skills like leadership and empathy can be mutually reinforcing.

First, peer networks provide promising contexts for students to practice these skills. Research suggests that with the right support, students who take on formal roles to support their peers can build skills related to cognitive complexity, interpersonal competence, and civic engagement.⁷⁷ Tutoring and

mentoring training also may be helping tutors and mentors practice skills with students that, in turn, match what employers demand. As one Knack tutor commented, "I never realized that I was building professional skills by learning how to analyze, learn, repackage, and teach knowledge."⁷⁸ Intense collective experience can also offer a context for activating agency and interpersonal skills in the context of trusting relationships. For example, in Soliya's fall 2020 Connect program, 88% of participants "agreed" or "strongly agreed" that the program motivated them to learn how dialogue skills can help them improve tensions and conflicts in their community.⁷⁹

Additionally, practicing skills as part of a team can, in turn, strengthen the relationships among participating students. According to PeerForward cofounder Frome, "When you make [students] accountable for an outcome, relationships form the way they would on a sports team or in a drama company. I might score 50 points in a basketball game, but my team still loses, so I lose. Relationships built in the absence of a shared goal or challenge are not going to stick. Longitudinal relationships are forged when you're doing something meaningful with someone in an intense way."

Building students' leadership skills in the context of peer networks risks falling flat—or backfiring—if schools shut off channels for student leaders to partner with administrators on issues they care about. Sherry Barr, who oversees implementation and evaluation at the Center for Supportive Schools, described how, after peer leaders in one of the organization's programs used their leadership skills to advocate for changes to their school's sexual health curriculum, that program began formally integrating a service learning component into its structure. "[Students] used the inclusion of more comprehensive information. The process they used was organic and outside the structure of the program itself, which led us to respond by creating structures within our peer leadership programs so that schools could support students to identify a problem and develop a project associated with it."

One win-win strategy for leaders intrigued by innovations that activate the power of peer networks is, simply, to empower students to come up with new solutions to support their peers. In the process, students can develop and practice skills like teamwork and creative problem-solving. Frome reflected, "I have found that the students come up with solutions that are so much more creative and better than the adults. They know the assets and challenges in their communities so much better than adults."80 One team of PeerForward students in Detroit, MI, negotiated with a utility company for families to receive credits on their bills tied to FAFSA completion.⁸¹ Another team in Florida upended the notion that parents who don't attend financial aid information nights are apathetic: by organizing to offer childcare that evening, they drove up attendance and ultimately won an award for FAFSA completions at the school.⁸² These project-based opportunities stand out for both harnessing peer networks to develop new solutions for students, and creating authentic opportunities for students to practice valuable skills for life and work.

As schools face ongoing challenges to support students along educational pathways, Frome recommends moving from a mindset of students-as-problems-to-be-solved, to students-as-problem-solvers. That transition must be undertaken with care, and in partnership with staff, so as not to overburden students. But the potential payoffs, both for institutional efficacy and cultivating student agency and skills, are compelling.

One win-win strategy for leaders is simply to empower students to come up with new solutions to support their peers. Peer connections are a critical resource as K–12 schools and postsecondary programs look to support students' wellbeing and growth, enrich their learning experiences, and expand career options.

CONCLUSION

The innovative tools and models highlighted in this paper reflect the fact that it's networks—not just diplomas and degrees—that lead to opportunities and fulfilling lives.

Peer connections are a critical resource as K–12 schools and postsecondary programs look to support students' wellbeing and growth, enrich their learning experiences, and expand career options.

While there's no turnkey solution to scaling social, academic, guidance, and mental health supports, institutions should take a hard look at how peer-to-peer models can dramatically improve on certain measures like access, convenience, and simplicity.

Furthermore, as long as levels of isolation and loneliness remain high, there's no excuse to dismiss online connections—especially when designed and evaluated with relationships as an explicit outcome. Those relationships will only gain value over time as students gain experience, grow their social networks, and build careers.

With peer networks as fertile ground for developing both social capital and student agency, schools can activate this critical resource to ensure that students move through their educational pathways accumulating both the skills and web of relationships they need to thrive.

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- Grif Peterson, P2PU
- Samyr Qureshi, Knack
- Parsa Rezvani, Tutorfly
- Shaunak Roy, Yellowdig
- Angela Ryan, Merit America
- Neha Tallapragada, Rice University
- Yutaka Tamura, nXu
- Tyler Thigpen, The Forest School
- Mark Van Ryzin, University of Oregon
- Tom Vander Ark, Getting Smart
- Christine Wyatt, Upswing

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NOTES

1. "#RealCollege during the Pandemic: Preview of Fall 2020 Survey Findings," The Hope Center for College, Community, and Justice at Temple University, December 10, 2020, https://hope4college.com/wp-content/uploads/2020/12/RC_Survey_Summary_Report_12.10.2020_Final.pdf.

2. The Hope Center's spring 2020 survey garnered over 38,000 responses from students at 54 colleges. The fall 2020 survey garnered over 195,000 responses from 130 colleges. The rates cited in this paper reflect the fall 2020 survey but do not differ dramatically from the spring survey. In spring 2020, 58% of students experienced basic needs insecurity (food insecurity, housing insecurity, and/or homelessness); for Black students the rate was 71% and for Indigenous students, 74%. For the spring 2020 survey results, see Sara Goldrick-Rab et al., "#RealCollege during the Pandemic: New Evidence on Basic Needs Insecurity and Student Well-Being," The Hope Center for College, Community, and Justice, October 2020, https://hope4college.com/wp-content/uploads/2020/10/Hopecenter RealCollegeDuringthePandemic_Reupload.pdf. For the fall 2020 survey results, see Christy Baker-Smith et al., "#RealCollege 2021: Basic Needs Insecurity during the Ongoing Pandemic," The Hope Center for College, Community, and Justice, March 31, 2021, https://hope4college.com/wpcontent/uploads/2021/03/RCReport2021.pdf.

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4. Kienzl, "#RealCollege during the Pandemic."

5. For an example, see "Basic Needs Initiative" (webpage), ECMC Foundation, accessed April 22, 2021, https://ecmcfoundation.org/what-we-do/college-success/basic-needs-initiative.

6. Ezra Marcus, "How College Students Are Helping Each Other Survive," *New York Times*, November 23, 2020, https://www.nytimes.com/2020/11/23/style/college-mutual-aid-networks.html.

7. Ajay Kumar, "Rice Students Launch Mutual Aid Network amidst Pandemic," *The Rice Thresher*, October 6, 2020, https://www.ricethresher. org/article/2020/10/rice-students-launch-mutual-aid-network-amidst-pandemic.

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9. Unless otherwise noted, all sources quoted in this paper are taken from personal interviews and email exchanges conducted by the author. See the Acknowledgments section for a complete list of sources who discussed this research with the author.

10. David Osher et al., "Drivers of Human Development: How Relationships and Context Shape Learning and Development," *Applied Developmental Science*, January 24, 2018, https://www.tandfonline.com/doi/full/10.1080/10888691.2017.1398650.

11. For the relationship between friendship and academics, see Gail Cornwall, "What the Research Says about the Academic Power of Friendship," KQED, November 18, 2020, https://www.kqed.org/mindshift/56979/whatthe-research-says-about-the-academic-power-of-friendship; and Matias Berthelon et al., "The Structure of Peers: The Impact of Peer Networks on Academic Achievement," *Research in Higher Education* 60 (2019), https://link. springer.com/article/10.1007/s11162-018-09543-7. For the relationship between friendship and wellbeing, see Lydia Denworth, *Friendship*, (New York: W. W. Norton & Company, 2020). For the relationship between friendship and career success, see Britta Ruschoff et al., "Peer Networks in the School-to-Work Transition," *Career Development International* 23, no. 5 (September 21, 2018), https://www.emerald.com/insight/content/ doi/10.1108/CDI-02-2018-0052/full/html. 12. For information on how individuals choose their field of study, specifically focusing on which sources provide advice to students and how helpful students perceive that advice to be, see "Major Influence: Where Students Get Valued Advice on What to Study in College," Strada Education Network and Gallup, September 2017, https://go.stradaeducation.org/major-influence. For more on the relationship between peer networks and college persistence rates, see Eunyoung Kim, "Navigating College Life: The Role of Peer Networks in First-Year College Adaptation Experience of Minority Immigrant Students," *Journal of The First-Year Experience & Students in Transition* 21, no. 2 (January 2009), https://www.ingentaconnect.com/content/fyesit/2009/00000021/0000002/art00001.

13. "Students Weigh In, Part II: Learning & Well-Being during COVID-19," YouthTruth, February 2021, http://youthtruthsurvey.org/wp-content/ uploads/2021/02/YouthTruth-Students-Weigh-In-Part-II-Learning-and-Well-Being-During-COVID-19.pdf.

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16. Emma Dorn et al., "COVID-19 and Learning Loss—Disparities Grow and Students Need Help," McKinsey & Company, December 8, 2020, https:// www.mckinsey.com/industries/public-and-social-sector/our-insights/ covid-19-and-learning-loss-disparities-grow-and-students-need-help.

17. For more context on nXu, see the Christensen Institute's case study: "nXu" (webpage), Christensen Institute, accessed April 22, 2021, https://whoyouknow.org/research/nxu/.

18. For evidence of the connection between peer relationships and belonging, see Annie Gowing, "Peer-Peer Relationships: A Key Factor in Enhancing School Connectedness and Belonging," *Educational & Child Psychology* 26, no. 2 (June 2019), https://eric.ed.gov/?q=peer&ff1=sub Peer+Relationship&id=EJ1246256. For the impact of peer relationships on behavioral engagement, see Elisa Cappella et al., "Classroom Peer Relationships and Behavioral Engagement in Elementary School: The Role of Social Network Equity," *American Journal of Community Psychology* 52 (December 2013), https://link.springer.com/article/10.10 07%2Fs10464-013-9603-5. Sociologist Robert Crosnoe has argued that students' social lives—and social challenges—at school deserve as much attention as the formal academic structures that schools put in place. See Robert Crosnoe, *Fitting In, Standing Out: Navigating the Social Challenges of High School to Get an Education* (Cambridge, UK: Cambridge University Press, 2011).

19. Meeting new friends is a top priority for incoming college freshmen, according to this report: "2020 National Freshman Motivation to Complete College Report," Ruffalo Noel Levitz, 2020, https://www.ruffalonl.com/papers-research-higher-education-fundraising/2020-national-freshman-motivation-to-complete-college-report/. Young people in school report peer relationships as the part of their school experience that they value most, according to Gowing, "Peer-Peer Relationships: A Key Factor in Enhancing School Connectedness and Belonging."

20. Nearpeer impact is measured by a third-party data scientist analyzing Nearpeer engagement data and participating institutions' student census and outcomes data.

21. Research suggests that both affinity-based and non-affinity-based programs can be highly effective depending on their goals and circumstances. For instance, emerging research on autism is one place where scholars are exploring the benefits of affinity between autistic students on the one hand, and the benefits of friendship with nonautistic students on the other. One recent study demonstrates evidence that information transfer between students with autism is as effective as information transfer between students without autism, challenging the notion that autism is characterized by a deficit of social communication skills. See Catherine J. Crompton et al., "Autistic Peer-to-Peer Information Transfer is Highly Effective," Autism 42, no. 7 (2020), https://journals.sagepub.com/doi/ pdf/10.1177/1362361320919286. Another study shows how a program designed to nurture relationships between autistic students and their nonautistic peers can increase autistic students' sense of belonging in a school, especially when much of their learning time is spent with specialist adults rather than with the broader student population. See Maureen Ziegler et al., "From Barriers to Belonging: Promoting Inclusion and Relationships through the Peer to Peer Program," TEACHING Exceptional Children 52, no. 6 (June 2020), https://journals.sagepub.com/doi/abs/10.1177/00400599 20906519?journalCode=tcxa.

22. Robert McClendon, "New Orleans Is 2nd Worst for Income Inequality in the U.S., Roughly on Par with Zambia, Report Says," *Times-Picayune*, August 20, 2014, https://www.nola.com/news/politics/article_812c4d3ba732-571e-9273-55779ddea227.html#:~:text=In%20New%20 Orleans%2C%20the%20bottom,rose%205.39%20percent%20since%20 2008.

23. Research shows that friendships across lines of difference can foster pluralistic perspectives and appreciation for other worldviews. See Alyssa N. Rockenbach et al., "Friendships Matter: The Role of Peer Relationships in Interfaith Learning and Development," Interfaith Youth Core, 2019, https:// ifyc.org/resources/friendships-matter-role-peer-relationships-interfaithlearning-and-development. Friendships across lines of difference can also reduce dehumanization. See Emile Bruneau et al., "Intergroup Contact Reduces Dehumanization and Meta-Dehumanization: Cross-Sectional, Longitudinal, and Quasi-Experimental Evidence From 16 Samples in Five Countries," Personality & Social Psychology Bulletin, August 31, 2020, https://pubmed.ncbi.nlm.nih.gov/32865144/. Research also demonstrates the benefits of nurturing networks of students with similar backgrounds, especially when those students are historically marginalized. See Amanda Datnow and Robert Cooper, "Peer Networks of African American Students in Independent Schools: Affirming Academic Success and Racial Identity," Journal of Negro Education 66, no. 1 (Winter 1997), https://www.jstor.org/ stable/2967251?seg=1.

24. David Osher et al., "Drivers of Human Development: How Relationships and Context Shape Learning and Development," *Applied Developmental Science* 24, no. 2 (January 24, 2018), 14, https://www.tandfonline.com/doi/full/10.1080/10888691.2017.1398650.

25. Michael Fauteux and Giacomo Bono, "How Technology Can Help All Students Become More Grateful," The Greater Good Science Center at the University of California Berkeley, February 25, 2020, https://greatergood. berkeley.edu/article/item/how_technology_can_help_all_students_ become_more_grateful. 26. Dorothy M. Steele and Becki Cohn-Vargas, *Identity Safe Classrooms*, *Grades K–5: Places to Belong and Learn* (Thousand Oaks, CA: Corwin, 2013). For more on men and gratitude, see Summer Allen, "Do Men Have a Gratitude Problem?," The Greater Good Science Center at the University of California Berkeley, August 15, 2018, https://greatergood.berkeley.edu/article/item/do_men_have_a_gratitude_problem.

27. A quasi-experimental study in two urban, racially and socioeconomically diverse high schools showed that students using GiveThx for six weeks experienced improved mental health (including reduced stress and anxiety, as well as reduced depression rates among boys) and improved social wellbeing (belonging) compared to the control group. For more, see Giacomo Bono, "A New Approach to Gratitude Interventions in High Schools that Supports Student Wellbeing," *Journal of Positive Psychology* 15, no. 5 (July 22, 2020), https://www.tandfonline.com/doi/abs/10.1080/17 439760.2020.1789712. During a GiveThx webinar on February 9, 2021, a student who uses GiveThx in school reflected on whom she could ask for help when she feels behind in her schoolwork. She said, "I can ask my teacher, or my friend, or that girl I met last week." The final option this student mentioned, not a friend but a new acquaintance, reflects the kind of open and safe learning environment that GiveThx sets out to help foster.

28. Knack's case study with Florida A&M University showed that students taking advantage of five or more hours of peer tutoring were nine times less likely to repeat the course. Knack also recently released information on the scope of its partnership with the University of Florida, where the University's use of Knack increased peer tutoring bookings by 619%. Knack's case studies can be found at: "Resource Library" (webpage), Knack, accessed April 22, 2021, https://resources.joinknack.com/.

29. Limayem's comments can be found in this video: "USF Muma College of Business - Knack Tutoring Success Story," YouTube, posted November 25, 2020, https://www.youtube.com/watch?v=EXFXvE8W19I. The essence of the "win-win" that Limayem describes can be summarized as follows: For students needing academic support, Knack tutors are plentiful, ondemand, and relatable as fellow students with whom they can make an authentic connection. For tutors, Knack is a resume-builder, a venue for practicing professional skills, and a convenient way to earn money. For institutions, Knack is an affordable way to expand tutoring capacity and accessibility without committing staff hours upfront.

30. One of the reasons why PeerKonnect measures students' sense of community and collaboration stems from the problems faced by its original customers. The company was conceived from Liu's experience in an academically competitive high school, and most of its customers' experiences resemble that context. As a result, Liu has observed that administrators in those environments tend to see the benefits of peer tutoring as reducing toxic competitive culture in schools, as much as for academic intervention. Tutorfly, whose founders were inspired by the importance of peer tutoring for their immigrant parents, is explicitly oriented toward facilitating peer tutoring for the purposes of academic recovery in K-12 schools.

31. Peer study groups, for example, can positively impact student achievement when the study group has certain characteristics—a finding that can help educators more effectively sort students into study groups likely to help them make progress. See Berthelon et al., "The Structure of Peers."

32. Christiane Damasceno described four themes in her observations of Learning Circle participation: participants *expressed care*, *shared learning resources*, *enacted self-motivated learning strategies*, and *took risks by leaving comfort zones*. The findings in this study exemplify how the group of peer learners, their individual experiences and skills, and the relationships between them are essential ingredients to the success of Learning Circles. See Christiane S. Damasceno, "New Pathways: Affective Labor and Distributed Expertise in Peer-Supported Learning Circles," *Communication Education* 67, no. 3 (May 1, 2018), https://www.tandfonline.com/doi/abs/10.1080/03634523.2018.1467026.

33. In the K-12 space, similarly, conventional instructional models and curricular materials are not particularly well-suited to collaborative learning, according to University of Oregon professor Mark Van Ryzin. Van Ryzin's research has shown that peer-learning protocols can boost learning outcomes when facilitated effectively, but he argues that few teachers even experienced ones—feel comfortable facilitating these protocols. His research group has developed software (www.PeerLearning.net) designed to simplify the facilitation of tried-and-tested peer-learning protocols, like a jigsaw lesson where students master concepts to teach to each other. See Mark J. Van Ryzin, "Helping Students Cope with the Mental Health (and Academic) Challenges of COVID-19," Medium, December 6, 2020, https://markvanryzin.medium.com/helping-students-to-cope-with-themental-health-and-academic-challenges-of-covid-19-f54ba7a59d97.

34. See Eric Margolis, *The Hidden Curriculum in Higher Education* (Milton, UK: Routledge, 2001); and Kim, "Navigating College Life."

35. Learning about students' experiences through mentors can be invaluable for administrators who, too often, lack channels to discover this information. In a webinar hosted by Mentor Collective on February 11, 2021 about UCR's peer mentorship program, a poll sent to over 300 webinar participants revealed that 36% of school administrators learned what students are going through via word-of-mouth, and 26% relied on surveys. Thomas Dickson, "The Power of Peers: How Peer Mentorship Helps First Generation Students Navigate the Hidden Curriculum of College" (recorded webinar), Mentor Collective, accessed April 22, 2021, https://www.mentorcollective.org/webinar-peer-mentorship-ucr.

36. Most models feature some form of mentor training, but the range is substantial. On the lighter end, UCR's peer mentors receive a 45-minute Mentor Collective briefing on "legal and logistical" details, and administrators have created an online resource hub to aid mentors in finding help for their mentees without always having to go up the chain to administrators. On the other end of the spectrum, Peer Group Connection peer leaders take a daily credit-bearing leadership class that helps prepare them for weekly meetings with mentees. Most models also rely on mentors who are older than their mentees, but sometimes experience matters more than age, as in the case of UCR peer mentors (who are required to have finished at least one year of college, but are not matched by age).

37. "Major Influence: Where Students Get Valued Advice."

38. The steadfast support that peer leaders exhibit calls to mind the concept of "fictive kin" in a study on peer college counseling by William Tierney and Kristan Venegas: "Peers have the potential to create what we shall define as fictive kin, and in this role, peers play a social support role that helps create a culture of success." Furthermore: "The result of participation in a fictive kin group by this set of individuals is that they all conferred a particular status-a college goer-that is not at all certain prior to their entrance to the group or for similar individuals who are not in the group." The same study cautions that peer college counseling programs appear to have a major effect on college-going for the students who take on counselor roles, but less so for those counseled. This finding underscores PeerForward's choice for students to act more as influencers and accountability partners than as guidance counselors. See William G. Tierney and Kristan M. Venegas, "Fictive Kin and Social Capital: The Role of Peer Groups in Applying and Paying for College," American Behavioral Scientist 49, no. 12 (August 1, 2006), https://journals.sagepub.com/doi/ abs/10.1177/0002764206289145.

39. Aislinn Leonard, "Moai–This Tradition Is Why Okinawan People Live Longer, Better" (webpage), Bluezones, accessed April 22, 2021, https://www.bluezones.com/2018/08/moai-this-tradition-is-why-okinawan-people-live-longer-better/.

40. Britta Ruschoff et al. demonstrate evidence for how peer groups of job-seekers can influence each other's success in finding employment without needing to act as advisors or coaches. The study focuses on self-efficacy (perceived competence with regards to the job search and eventual employment) as a network characteristic across a group. Groups of job-seekers with higher aggregate self-efficacy succeeded in submitting more job applications, which in turn led to more job offers than groups with lower self-efficacy. According to the study, "Although peers might not provide instrumental support, encouraging interactions with (efficacious) peers may nonetheless be beneficial to young job seekers." See Ruschoff et al., "Peer Networks in the School-to-Work Transition."

41. For a review of the literature on the relationship between social connections and wellbeing, see Marlon P. Mundt and Larissa I. Zakletskaia, "That's What Friends Are For: Adolescent Peer Social Status, Health-Related Quality of Life and Healthcare Costs," *Applied Health Economics and Health Policy* 12 (February 15, 2014), https://link.springer.com/article/10.1007/ s40258-014-0084-y.

42. Nicola Davies, "Exploring the Value of Peer Support for Mental Health," Psychiatry Advisor, July 18, 2019, https://www.psychiatryadvisor.com/ home/topics/general-psychiatry/exploring-the-value-of-peer-support-formental-health/.

43. David Arnold, "Celebrating 40 Years of Peer Education," NASPA, July 20, 2015, https://www.naspa.org/blog/celebrating-40-years-of-peer-education.

44. Tim Walker, "Peer Programs Helping Schools Tackle Student Depression, Anxiety," National Education Association, November 14, 2019, https:// www.nea.org/advocating-for-change/new-from-nea/peer-programshelping-schools-tackle-student-depression-anxiety.

45. "Mott Poll Report: Teens Talking with Teens about Mental Health," C.S. Mott Children's Hospital National Poll on Children's Health, January 18, 2021, https://mottpoll.org/reports/teens-talking-teens-about-mental-health.

46. See the campaign resources published by Sources of Strength here: "Resources" (webpage), Source of Strength, accessed April 22, 2021, https://sourcesofstrength.org/peer-leaders/resources/.

47. Stephen Hinshaw, Bennett Leventhal, and Shaikh Ahmad, "BC2M High School Program: Evaluation Findings from a Randomized Trial," Bring Change to Mind, December 2017, https://assets.bringchange2mind. org/wp-content/uploads/20180109011406/BC2M-HS-Evaluation-Findings_December2017.pdf. See "Peer-to-Peer" (webpage), Eisenberg Family Depression Center, accessed April 22, 2021, https://www. depressioncenter.org/p2p.

48. In a national survey of 10,000 U.S. adults, Cigna found that younger generations are lonelier: nearly eight in 10 GenZers and seven in 10 millennials are lonely. See "Loneliness and the Workplace," Cigna, 2020, https://www.cigna.com/static/www-cigna-com/docs/about-us/newsroom/studies-and-reports/combatting-loneliness/cigna-2020-loneliness-factsheet.pdf. Experiencing loneliness is a precursor for anxiety and depression, according to Bridget J. Goosby et al., "Adolescent Loneliness and Health in Early Adulthood," *Sociological Inquiry* 83, no. 4 (November 2013), https://onlinelibrary.wiley.com/doi/abs/10.1111/soin.12018.

49. Martha Neary, "Mental Health App Q&A: How Can Nod Help during the Pandemic, and Beyond?" (webpage), One Mind PsyberGuide, accessed April 22, 2021, https://onemindpsyberguide.org/blog/mental-health-app-qa-how-can-nod-help-during-the-pandemic-and-beyond/.

50. Emma Bruehlman-Senecal et al., "Smartphone App to Address Loneliness among College Students: Pilot Randomized Controlled Trial," *JMIR Mental Health* 7, no. 10 (October 2020), https://mental.jmir.org/2020/10/e21496/.

51. Even programs with proven success at boosting graduation rates for low-income students, at a lower cost per degree than without the program, have failed to scale due to lack of funds for community colleges and budgetary red tape. See Jamaal Abdul-alim, "Higher Ed's Most Successful Failure," *Washington Monthly*, September/October 2020, https://washingtonmonthly.com/magazine/september-october-2020/higher-eds-most-successful-failure/.

52. The rising rates at which students are seeking mental health support on campuses is likely due to both increasing rates of depression and anxiety, and decreased stigma associated with seeking help. See Collin Binkley and Larry Fenn, "As Stigma Ebbs, College Students Seek Mental Health Help," Associated Press, November 19, 2021, https://apnews.com/article/08e5c 195bf04471e9c4a127abe831d91.

53. In considering lower-cost options that are designed to supplement the shortage of professional staff, leaders will benefit from carefully considering how sensitive student information is handled. For an example of how privacy concerns are playing out for universities using mental health apps, see Deanna Paul, "Colleges Want Freshmen to use Mental Health Apps. But Are They Risking Student Privacy?" *Washington Post*, January 2, 2020, https://www.washingtonpost.com/technology/2019/12/27/colleges-want-freshmen-use-mental-health-apps-are-they-risking-students-privacy/.

54. Leaders should explore student-to-student models for support services with a few guidelines from innovation theory in mind. The convenience, simplicity, and affordability of these models suggest that they bear the markers of a disruptive innovation, meaning that they should be introduced in circumstances friendly to disruption: areas where access to services is lacking, but where student needs are not overly complex or dire. While peer models are finding their footing and working to improve what they can accomplish, schools should be sure to triage more complex student needs and steer those students toward professional help. For more detail on Disruptive Innovation Theory, see "Disruptive Innovation" (webpage), Christensen Institute, https://www.christenseninstitute.org/disruptive-innovations/.

55. "Knack Tutoring Case Study: How the University of Florida Increased Peer Tutoring Bookings by 619%," Knack, accessed April 22, 2021, https://resources.joinknack.com/knack-tutoring-uf-case-study. According to Qureshi, campus tutoring centers are naturally cautious about overestimating demand and thus overcommitting resources by hiring too many tutors. In contrast, platforms enabling on-demand tutoring services, like Knack, allow schools to respond more flexibly to demand rather than relying on predicting it accurately. See Marissa Bastian, "Demand-Driven Support as an Alternative to Traditional Staffing Practices," Knack, January 10, 2021, https://blog.joinknack.com/demand-driven-support.

56. For data on campus counseling centers, see "Center for Collegiate Mental Health 2020 Annual Report," Penn State, January 2021, 26, https://ccmh.psu.edu/assets/docs/2020%20CCMH%20Annual%20Report.pdf.

57. Lindsay McKenzie, "Colleges Use Technology to Help Students Manage Mental Health," Inside Higher Ed, October 5, 2018, https://www.insidehighered.com/news/2018/10/05/colleges-turn-wellness-app-address-student-mental-health.

58. UCR's mentorship program is working to find a productive balance between peer-to-peer support and direct intervention from professionals. Program administrators encourage peer mentors to help their mentees in whatever ways mentors feel comfortable, but to flag program administrators' attention when mentee needs exceed mentors' capacities to help. In a Mentor Collective webinar on February 11, 2021, UCR administrators highlighted one case in which a student reported that a mentee was considering dropping out of college due to an issue with financial aid. Administrators connected the student to the financial aid office, where staff were able to resolve the issue. One UCR administrator commented. "Stories like these are always a big win with the powers that be upstairs" because they show how the peer mentorship program has a direct impact on retention. To access the webinar, see Thomas Dickson, "The Power of Peers: How Peer Mentorship Helps First Generation Students Navigate the Hidden Curriculum of College" (recorded webinar), Mentor Collective, https://www.mentorcollective.org/webinar-peer-mentorship-ucr.

59. "Knack Tutoring Case Study: University of Florida."

60. According to the National College Health Assessment from the American College Health Association, just over half of college students reported positive scores for loneliness in fall 2019 (pre-COVID). See "Undergraduate Student Reference Group: Executive Summary Fall 2019," American College Health Association-National College Health Assessment III, 2020, 11, https://www.acha.org/documents/ncha/NCHA-III_Fall_2019_Undergraduate_Reference_Group_Executive_Summary.pdf. Additionally, research demonstrated that loneliness increased "significantly" among teenagers between 2010 and 2017. Compared to 2012, 50% more twelfth graders in 2017 agreed or strongly agreed that they often felt lonely. See Jean M. Twenge, Brian H. Spitzberg, and W. Keith Campbell, "Less In-Person

Social Interaction with Peers among U.S. Adolescents in the 21st Century and Links to Loneliness," *Journal of Social and Personal Relationships* 36, no. 6 (March 2019), https://journals.sagepub.com/doi/abs/10.1177/0265407519836170.

61. Monroe Community College has residential quarters for up to 772 students, representing less than 1% of the total enrollment in fall 2020. See "MCC News" (webpage), Monroe Community College, accessed April 22, 2021, https://www.monroecc.edu/etsdbs/pubaff.nsf/MCCFacts/MCC+Facts?OpenDocument.

62. Kimberley Collins, "Impact Metrics: Monroe," Circleln, November 19, 2020, https://blog.circleinapp.com/learn/what-is-online-studying-1-0. Backed by a National Science Foundation grant, Circleln is recruiting two dozen commuter colleges to explore how building community can improve experiences, and ultimately persistence rates, for commuter students. For more, see Gerald Meggett Jr., "Can Commuters and Community Co-exist?" Circleln, March 22, 2021, https://blog.circleinapp.com/learn/cancommuters-and-community-co-exist.

63. Goldie Blumenstyk, "Enrollment May Be Down, But Some Established Online Providers Are Seeing a Surge," *Chronicle of Higher Education*, January 27, 2021, https://www.chronicle.com/newsletter/the-edge/2021-01-27. 64. Soliya's international virtual exchange programs also create access to peer relationships around the globe. When a study abroad semester costs upwards of \$18,000 on average (see Dominic James Fusco, "How Much Does it Cost to Study Abroad?" Go Abroad, July 9, 2019, https://www.goabroad.com/articles/study-abroad/how-much-does-it-cost-to-study-abroad), the nonprofit's semester-long virtual exchange programs can provide cross-cultural exchange and increased global competence skills at \$350 per student.

65. Tom Vander Ark, "Guidance Gap: The Biggest Challenge We Face and How to Close It," Getting Smart, January 4, 2021, https://www. gettingsmart.com/2021/01/guidance-gap-the-biggest-challenge-weface-and-how-to-close-it/. As of April 2021, 65% of K-12 schools in the Canopy project, which captures data on innovative schools through a nomination process, report implementing student advisory models. This data is accessible at: "How are K-12 schools innovating across the country?" Transcend Education, accessed on April 22, 2021, https:// canopyschools.transcendeducation.org/.

66. Vander Ark noted that EL Education's "Crew" model for advisory is exemplary for its clear focus on culture-building and belonging. For more on Crew, see Ron Berger, Anne Vilen, and Libby Woodfin, *We Are Crew: A Teamwork Approach to School Culture* (EL Ed Publications, 2021).

67. Mahnaz Charania and Julia Freeland Fisher, "The Missing Metrics: Emerging Practices for Measuring Students' Relationships and Networks," Christensen Institute, July 16, 2020, https://www.christenseninstitute.org/ publications/measurement-report/.

68. Social support is commonly categorized into four types of behaviors, one of which is "appraisal"—providing information that aids a person's self-evaluation, such as reminding a friend in crisis about the qualities she possesses that will help her to recover successfully from breast cancer. Although this kind of social support could come from many sources, people who have known each other for a long time can draw on a wealth of historical examples to help each other self-evaluate. "Social Support" (webpage), University of Pennsylvania Medicine, accessed April 22, 2021, https://www.med.upenn.edu/hbhe4/part3-ch9-key-constructs-social-support.shtml.

69. Live Oak's data systems capture retention disaggregated by race and tuition band (full tuition, partial tuition, and full scholarship). Overall, the camp shared that retention rates grow year-over-year, with the exception of 2020, when enrollments dropped for campers of color in particular. The camp reported that enrollments are on track to recover across race and tuition band for summer 2021.

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71. "Learning for the 21st Century: A Report and MILE Guide for 21st Century Skills," Partnership for 21st Century Skills, 2002, https://eric.ed.gov/?id=ED480035.

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78. Priya Thomas, "Reframing College Tutoring Jobs to Attract Top Students," Knack, August 5, 2020, https://blog.joinknack.com/power-of-perspective-reframing-tutoring-jobs-to-attract-top-students.

79. Soliya also reported that the proportion of students who reported speaking out or acting in response to an issue related to the relationship between Western and predominantly Muslim societies grew by 23% post-program.

80. Along those lines, it's likely no coincidence that many of the peer-topeer supports profiled in this report were created by founders not far (or not at all) removed from being students themselves. As recent students, they understand what their peers need as well as what they want to offer. Liu, who founded PeerKonnect as a high schooler, reflected, "Most peer-to-peer companies I know are founded by people proximate to the problems." Mohapatra, the student founder of unmasked, recalled his early insight about peer-to-peer support: "I built the app thinking about supply and demand. There are a lot of students who want to help each other, but don't have access to students who need support." Students can also have an intuitive grasp for experiences that feel authentic and dignifying: Tallapragada, of Rice Mutual Aid, noted that institutional aid sources place on students the burden of proving their need for aid, and even then it may not be granted. The mutual aid network, in contrast, "takes away the power asymmetry, and prioritizes trust and interdependence between community members."

81. "Creative Campaigns Improving College Chances" (webpage), PeerForward, accessed April 22, 2021, https://www.peerforward.org/creative-campaigns-improving-college-chances/.

82. The Florida College Access Network awarded Lake Wales Senior High School a "Most Improved" award for driving up FAFSA completion rates from the prior year. "FCAN Announces 2018 Florida FAFSA Challenge Winners" (webpage), Florida College Access Network, April 12, 2018, http://floridacollegeaccess.org/florida-fafsa-challenge/fcan-announces-2018-florida-fafsa-challenge-winners/.

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The Clayton Christensen Institute for Disruptive Innovation is a nonprofit, nonpartisan think tank dedicated to improving the world through Disruptive Innovation. Founded on the theories of Harvard professor Clayton M. Christensen, the Institute offers a unique framework for understanding many of society's most pressing problems. Its mission is ambitious but clear: work to shape and elevate the conversation surrounding these issues through rigorous research and public outreach.

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