American Student Assistance®

Efficacy and Innovation in Middle School Career Exploration

Proven Models for Student Success

2021 | White Paper

Contents

The Problem

Too many students are leaving American high schools burdened by a high level of uncertainty about their future. This is evidenced by the estimated 10 million "opportunity youth" between the ages of 16 and 24 who are neither employed nor in school. Today, that number represents around one in three young people.[1] The pandemic has functioned as an accelerant of future uncertainty and of the factors impacting young peoples' decision-making. (In 2018, there were thought to be 4.8 million opportunity youth[2], demonstrating that a more than two-fold increase in young people neither in school nor the workforce has likely manifested in the years between 2018 and 2021.) With uncertainty, of course, comes stress. Some 80% of educators now agree that high schoolers are "overwhelmed" with education and career decision-making.[3] Even prior to the pandemic, over a third of students were stressed (37%), just under a third (31%) felt fearful, and a full quarter reported feeling entirely overwhelmed about their post high-school options.[4] This stress extends into the workforce, where —in 2019— just 27% of college graduates were working in a field related to their major, and 41% of college graduates were working in a position that didn't even require a college degree.[5] At the crux of the uncertainty crisis are two critical questions that can help alleviate the burdens placed on educators: What more can we do in schools to help prepare young people for the real world? and What really works?

Some 80% of educators now agree that high schoolers are "overwhelmed" with education and career decision-making.

The Opportunity

Gallup research in 2021 shows that nearly half of the parents of American students want "more options" available to their children.[6] Today, given the abundance of information and opportunity at our collective fingertips, there is no need for teens to leave high school with high levels of uncertainty about their abilities and their prospective place in the "real world." The false dichotomy of college or else is, thankfully, facing heavy scrutiny as more people realize that there are many versions of success and countless ways to find it. The postsecondary options (including non-college options) parents and students want and need already exist, but systems have largely struggled —for a host of complex reasons— to help students connect the dots about not only the specific career and educational options, but also about new and emerging fields of work and study.

A relatively simple shift in how self-discovery and career exploration are carried out in schools (and the age at which they begin), we now know for certain, can help to shatter some of the uncertainty facing so many students and build their confidence to better understand their options. No more would-be network engineers, nurses, teachers, musicians, dancers, writers or data scientists need to fall through the cracks simply because of lack of access to information or opportunity. By changing the paradigm of career exploration and self-discovery from something that (maybe) happens once in high school in an isolated manner, to a continuum of networked programming and experiences that starts in middle school, we can take more people out of the category of opportunity youth and into the category of "youth who have real opportunities."

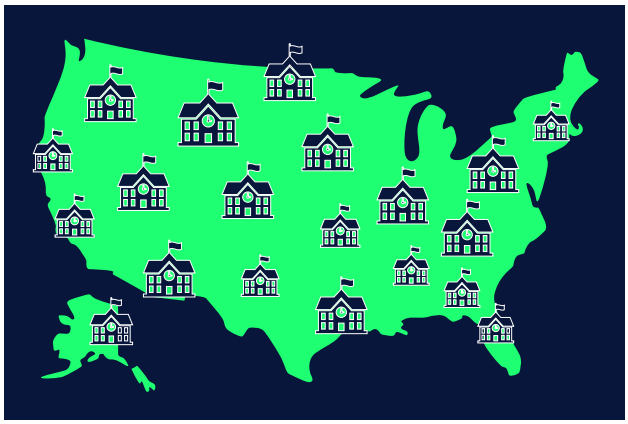
> **Given recent experience with program implementation, we believe that middle school self-discovery and career exploration programs work, remove barriers to opportunity, and can be scaled.**

Spotlight on Middle School Grants

In 2018, American Student Assistance™ (ASA) began the process of partnering with school districts interested in career exploration initiatives. The goal was to test innovative and scalable career exploration methods, while offering funding that would help schools create programs in this area. Specifically, ASA sought to obtain rich, longitudinal outcomes to give better insights into which activities work in a middle school setting, and to help schools support and scale effective models. In total, ASA selected 14 Massachusetts-based district partners from across the applicant pool, representing a total of 22 schools, 900 educators and 11,000 students, and granted $1.3 million (the average grant was $100,000 per district) over three years.[7] The program used best practices in career exploration and showcased the efficacy of a variety of models.

The Districts

Participating districts were diverse, with strong representation from communities that have historically been underserved by education and with a range of 84-350 (out of 351) on the per capita income scale. The 14 districts were home to 29% students of color, 41% low-income students, and 18% high school graduates with non-college plans. As such, grantee districts were representative not just of Massachusetts communities, but of the broader national landscape. Rather than mandating a one-size-fits-all approach, participating districts were encouraged to take different and customized approaches to implementing career exploration activities. These included those districts that focused on counselling and/or supplemental online tools for student-directed learning; those districts that focused on STEM/STEAM initiatives; and those districts adopting a cross-curricular and whole-school approach.



ASA's Role

While ASA's role was primarily that of funder and researcher, implementation counseling and collaboration opportunities were also available to participating schools. We were particularly interested in understanding student outcomes and movement over time, as well as the implications of discovery and exploration activities on the middle school-to-high school transition. We also facilitated cohort collaboration and district support around approaches to community engagement and educator buy-in, in order to learn how best to support culture change and program sustainability at the conclusion of the grant.

The Approaches

Career exploration and self-discovery typically involve a range of activities designed to involve a wide network of participants, as well as to integrate a large number of external resources that students can't access in the classroom alone. There is, it should be said, no right or wrong way to "do" discovery and exploration. As emphasized above, each grantee school took a slightly different approach in designing and implementing their programming. However, all districts within our grant program incorporated either some or all of the tools and strategies below. The five modalities used by our grantee schools are recognized as effective drivers of self-discovery, career awareness, and as tools for getting students excited and motivated about the future and their place in it. They are:

Whole School Model

In this approach, career exploration activities are integrated throughout the school setting. There is shared educator vision across the full school landscape. In this model, activities and exploration are expanded beyond a single class, activity or event. Curriculum is complemented by discovery activities in ways that let students understand that subject matter does not exist in the vacuum of a classroom. While a potential hurdle exists in that this model requires significant cross-school collaboration and buy-in from educators, it nonetheless helps students understand how various subjects are related. It is also proven to drive engagement and build a sense of purpose among students in the school setting. Furthermore, the whole school model cultivates longevity and sustainability of exploration programs, once the groundwork of widespread adoption and implementation has been done.

Example: At Barnstable Intermediate School in Massachusetts, faculty and leadership made the decision to undertake a whole school career exploration redesign that included school-wide events and made use of Career Ambassadors to more deeply embed meaningful career exploration activities into the curriculum. The initial program was highly popular with students, and gave the school the motivation and tools needed to continue this critical work. Of 358 6th-graders who participated, 126 expressed interest in participating in Pathfinder, a new 7th grade initiative designed to provide deeper career exploration. Additionally, through the work with the Career Ambassadors, a majority of 7th grade teachers reported that their students had thoroughly investigated and selected 8th grade courses with the nine career pathways offered by BHS in mind.[8]

Project-Based Learning

Most educators are —to varying degrees— familiar with this modality, in which students are encouraged to solve real-world problems alongside or in addition to their instruction. This model encourages authentic learning experiences, solving for the "Why should I learn this if I'm never going to use it after high school?" effect that is rampant in classrooms. Project-based learning (or problem- and project-based learning) encourages engagement and ownership over work, while deepening understanding of the types of problems solved in the workplace. In this model, each student owns an important aspect of a project, and the work won't be completed without collaboration, problem-solving and teamwork. It also fosters a strong sense of empathy for the roles and capabilities of others.

Example: At KIPP Massachusetts, which encompasses five schools in Boston and Lynn, educators opted to extend their longstanding use of Project Lead the Way curriculum, using the program as a jumping off point to invite programmers, engineers, designers and doctors to provide feedback to students on specific work they completed as part of their project-based workload. KIPP leadership commented that, "We have set the ambitious goal that every year, every single student in our middle schools will present a STEM project to an industry expert. Students have already found these interactions valuable. "I always assumed an engineer is someone who works on cars!" said one eighth grade student after working with a General Electric (GE) engineer on a design project. Our students continue to show enthusiasm for project-based learning that leads to feedback and conversations with industry professionals."[9]

Parent and Community Engagement

Extra-curricular opportunities are often missing from exploration and discovery programming, yet the adults in students' lives —and in their communities— often have the most valuable workplace experiences and information to offer. A model in which parents and community actors are active participants makes use of strategic resources and disseminates tools that enable parents and family to engage children in critical conversations about work. Students can also make connections between what they learn and the workplace through visits to local employers, as well as through live and virtual field trips to various workplaces. This model promotes a high degree of confidence, with participating students more likely, willing, and able to interact with industry professionals. This model requires significant coordination on the part of the school system in order to be effective.

Example: At STEM Middle Academy, a school for grades 6-8 in a low socioeconomic area of Springfield, Massachusetts, school leadership decided to implement a parent- and community-based engagement model to inspire students to take their classroom learning a step further. Students had unique opportunities to learn about the work happening in their community, including a chance to interact with professionals at Marvel Studios, a virtual field trip to meet a lunar scientist at NASA, and conversations with a local city planning department. School leadership wrote that, "Importantly, family and community engagement continues to increase with each new phase of this program. Parents are engaged as they see projects and prototypes being brought home. As they explore, students are especially attracted to professional roles held by students' friends and family members, thereby establishing a sense of community relevance to career opportunities within the city."[10]

Student-Directed Learning

In this model, students are encouraged to use their own resilience and resourcefulness, coupled with strategic tools and materials, to conduct exploration and discovery in a manner that best suits them. Students participating in self-directed learning exercise a high degree of choice in the learning experience, which gives them a strong sense of ownership over —and agency in— their career exploration. Key elements of this model are self-paced digital tools and learning resources (digital work is carried out individually, but not in isolation), as well as distributed resources to supplement curriculum.

Example: At Sutton Middle School in Massachusetts, 8th-graders participated in exploratory, 45-day mini-electives in such areas as 3D Modeling and Printing, Sports Engineering (in collaboration with the Gym teacher), Green Engineering, and Helper Engineering. Electives helped to build deeper connections for students between the otherwise-distinct areas of academic life. The electives also gave students the opportunity to develop new skills such as coding, 3D modeling, circuit design, prototyping, determining a product's price, logo development, package design, and public speaking, while exposing them to fields such as engineering, business, marketing, and entrepreneurship. Speaking to the value of the program, Sutton educators reported that "students were thrilled to have some choice!"[11]

STEM/STEAM Expansion

A lacking awareness of careers that fall under the umbrella of Science, Technology, Engineering and Mathematics (STEM) fields —and of the requisite skills needed to pursue them— has contributed to national underperformance in STEM at a time when we can ill-afford to lose momentum in this area. To combat this, expansion programming seeks to expand students' understanding of STEM beyond the "obvious" topics and into new and cross-curricular areas, while explaining how these topics connect to career paths. Students who participate in STEM expansion programming have a higher degree of engagement in their STEM classes, but also across other subjects.

Example: At Miscoe Hill Middle School in Mendon-Upton, Massachusetts, school leadership launched an Inspired Innovation Space (IIC), designed to serve as a hub of entrepreneurial experimentation and as a makerspace for students learning about STEM concepts. After some initial hurdles with logistics, the school opted to reframe the center as an Open Lab, in which teachers could bring classes and that students could use on an ad hoc basis for things like video recording, 3D printing or other STEM related class project work. While the school continues to adjust their vision for how the center will be best used to serve the needs of students, Miscoe educators wrote that, "In the big picture, we believe that the open lab provides the largest possibility for impact as compared to a single course."[12] Those who participated in the grant programs at this school were 15-25% more likely to practice creativity, iterative problem-solving, and to work on real-world issues in their schoolwork than their non-participating peers.

What We Know & Have Learned

1 Middle school is the right time to start.

Counselors and teachers agree that middle school is a critical time to begin self-discovery and career exploration activities as defined above, in order to pre-empt the "crunch time" effect of high school when student stressors and peer pressures are high and when the efficacy of these activities may be impacted by extraneous variables. Among middle school students themselves, 87% are interested in ways to match specific skills and interests with potential careers, and 85% are interested in ways to learn the requirements for the careers they are interested in.

High school is too late to allow for ample discovery, experiences, and time to fail safely. In fact, a majority of college students indicate that they wish they had considered and explored more careers and fields of study before enrolling in college, highlighting the "square peg in round hole" phenomenon that tends to occur in the school setting, given the limited access to real-world career information. A majority of college students cite that they "would have really benefited from more career exploration opportunities in middle or high school."[13] Furthermore, 69% of current high school students[14] and 66% of high school graduates[15] feel they would have benefitted from more career exploration in middle or high school.

Within the entire grade level framework, it is the middle grades in which students are most receptive to positive career development interventions. In other words, students at this age are neither too young (caught up in the very basics of instruction and the development of social skills) nor too old (distracted and pressured) to begin discovery activities. Among middle school students, career exploration programming can not only boost student confidence and engagement, but also help with overall academic growth and foster the development of "21st century skills" like decision making and critical thinking.[16]

2 Exploration helps kids build in-demand skills.

Data from the grants program validates something that may not come as a big surprise to most educators: students who participate in self-discovery and career exploration activities through structured programs are 20% more likely to report having had the opportunity to learn about their personal skills and interests than those who do not. In particular, that includes having real opportunities to learn about and practice skills that are in-demand in the workplace, like creativity and problem solving (+20%).

Students in grantee programs were 20% more likely to learn about and practice in-demand workplace skills like creativity and problem-solving than those who did not participate.[17]

3 Exploration encourages kids to engage with school.

Comparing the same students from the beginning of the school year to the end, we saw a measured increase in student engagement across all courses, and significant improvements in class engagements overall.

56% of career exploration participants in the grant schools reported that they feel their school now gives them opportunities to learn about their unique skills and interests.

There was also a 5% increase in students reporting that what they learn in school is interesting. And some 56% of career exploration participants in the grant schools reported that they feel their school now gives them opportunities to learn about their unique skills and interests. Increased engagement leads to an increase in student confidence, as well as perceptions of control over their future, personal agency in decision-making, and a feeling of being supported by a school that is committed to their individual growth and development.[18]

4 Exploration helps kids enjoy school.

Among the biggest challenges teachers (particularly those working with students from underserved demographics) face is that, frankly, many students don't find school engaging. Our grantee school data shows that students who participated in two full years of programming were 39% more satisfied with their school year overall than those who did not participate, and 78% of students reported that they enjoyed the school year. Also, there is a 7% increase in those who say that the statement "I like what I'm learning" describes them "a lot" across all grantee schools from 2020 to 2021.

5 Exploration helps kids think about and plan for their future.

Critically, exploration activities give students the self-awareness, resources, and framework to begin planning for the future and the motivation to build a personalized plan that connects learning to work. Our grant-related research shows that students at grantee schools who participated in two years of exploration programming are more likely to report that they plan to take classes related to a future career path and related to preparing for college. And compared to students at the same schools who did not participate in grant programming, participating students were 20% less nervous about their future.

Of career exploration participants, 60% report that they know how to search for a career that is a good fit for their skills and interests, and 65% agree that the skills they learned will help them in the future.

6 Exploration helps kids feel more connected.

Career exploration activities and self-discovery carried out in a vacuum are very likely to end at the school's exit door. In that regard, mentorship and interpersonal guidance are among the most critical components of any exploration program, as they help to bring learning to life for students, and offer them access to a real-world network of opportunity.

At the conclusion of the program, we observed that students who participated in two years of exploration activities were more likely to report being able to identify an appropriate mentor for their interests and plans.

7 Digital tools enhance the landscape.

Educators are increasingly exploring ways in which they can give students more ownership of their learning by using digital tools and spaces to augment the teaching and learning environment. (This type of independent, digitally driven work is often at the heart of the student-directed model.) Lessons, activities, and platforms that leverage student interests and choice can create experiences that are engaging and meaningful for kids. (For instance, innovative challenges, such as the national 'Solve Together' Contest for middle school students, enable middle school classrooms to tackle real-world problems on a digital platform. This competition featured 189 total submissions from 23 schools across 12 states nationwide. Also, virtual meet-a-professional events, such as Engage Summer Series, provide insightful career exploration opportunities that enable students to connect with professionals who share lessons learned while navigating their pathway, and provide advice for learners who may be interested in pursuing a similar career. After the inaugural event in 2020, 97 percent of student participants reported learning something new during the series and one in four said they had gained new interest in a profession they may have not considered before.)

The Takeaway

As substantial as the uncertainty crisis facing American students may be, there is an even greater opportunity for transformation and to instill in students a much greater degree of certainty about self, career, and passion. Today's kids deserve and need opportunities to explore, experiment, safely fail, learn resilience, and develop transferable skills that will serve them well in both a career and in life.

Each of the five modalities we have outlined for exploration and discovery holds vast promise for transforming the learning landscape, whether conducted in isolation, or (most promisingly) when conducted in an interconnected way and as part of a discovery continuum that lasts throughout the school experience. These five models are not only proven to drive student engagement, participation, achievement, and awareness, but also to overcome institutional challenges posed by full schedules and competing curriculum demands. In other words, with relatively little burden on educators and by tapping into existing resources and a community of influencers, these modalities can deliver maximum impact in the classroom and improve students' chances for academic and post-school success.

Many of the most impactful opportunities —as demonstrated by the grants initiative— can occur within the confines of the school experience or through a community-based afterschool program. Yet, for maximum efficacy, the impact of this work should be amplified and supported by digital-first, informal, career-connected, and community-based initiatives that take place outside of school. With digital competency and fluency increasingly expected by the wider working world, the importance of digital tools and resources for middle- and high-schoolers can't be overstated. And, critically, today's kids demand digital-first experiences, because their opinions and worldview are largely shaped by online spaces. Giving kids digital career exploration opportunities not only allows them greater access to career information than can be gained in the classroom alone, but also offers them the opportunity to build and flex vital digital skills.

To learn more about integrating one or more of these areas of programming into your school, download our practical playbook for educators, written in conjunction with the Association for Middle Level Education (AMLE): Career Exploration in the Middle Grades.

About American Student Assistance (ASA)

American Student Assistance® (ASA) is a national nonprofit committed to helping students know themselves, know their options, and make informed decisions to achieve their education and career goals. ASA believes students should have access to career-connected learning, starting in middle school, so they can develop a plan for their future. ASA fulfills its mission by providing digital-first resources directly to students and support for educators and intermediaries.

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