

## About NAF

NAF is a national nonprofit organization that brings together education, business, and community leaders to ensure high school students are college, career, and future ready. For over 40 years, NAF has partnered with high schools in historically underresourced communities to enhance school systems by implementing NAF academies – small, focused learning communities within traditional public high schools themed around growing industries, including engineering, finance, health sciences, hospitality & tourism, and information technology.

NAF academies connect the classroom to the workplace by integrating career-focused curricula and hands-on, industry-guided learning projects into the traditional high school experience. With a rigorous program of study and a progressive continuum of work-based learning activities designed to build career awareness, exploration, and preparation, students gain the skills and knowledge needed to make informed choices and be successful in their future careers. NAF promotes open enrollment in our career academies, allowing students of all backgrounds and capabilities to participate and helping to address systemic, educational, and professional barriers faced by marginalized populations.

The NAF career academy design is replicable, sustainable, and cost-effective, and because it integrates within public schools, supports lasting systemic reform and equity nationwide. NAF has grown from one NAF Academy of Finance in New York City to hundreds of academies across the country and supports programs of study that are aligned with the National Career Clusters Framework. During the 2022-23 school year, more than 112,000 students attended over 600 NAF academies across 35 states and territories. In 2022, NAF academies reported 99% of seniors graduated with 88% of graduates planning to go to college.

### Topic Area 1: Definitions

*1c. Would sector partnerships benefit from the development of a consensus for other common definitions or key program components? What other consensus-driven common definitions have been developed by sector partnerships?*

A key program component in any sector partnership should be the inclusion of public secondary education representatives in the planning and implementation of workforce development strategies.

Public secondary education institutions play a critical role in preparing youth for future success through initiatives like career and technical education programs, access to local colleges, and work-based learning opportunities with employers. As a principal public institution that teens attend before becoming adults, the secondary education system plays an invaluable role in empowering the next generation for success in the workforce.

By engaging representatives from public secondary education, sector partnerships can ensure their efforts are aligned with local and state education efforts and can facilitate their engagement with future talent at an optimal time. Engaging with high schools and their students gives businesses the opportunity to inform what is being taught in the classroom, ensuring students are

introduced to the most relevant, sector-specific knowledge and skills; it also allows businesses to help shape their future workforce from an early stage by providing students with hands-on, work-based learning opportunities.

Studies have found that young people who explore career options, take part in work-based learning activities, and build professional networks while in high school are better prepared to enter and excel in the workforce from an earlier age. It is particularly beneficial for students to explore career opportunities while enrolled in the public education system so that they have a better understanding of their interests before pursuing and paying for increasingly costly post-secondary education.

## **Topic Area 2: Partnership Roles and Requirements**

*2a. Who are the local and regional partners necessary to support an effective regional sector partnership?*

NAF has decades of experience building public-private partnerships to address workforce needs by preparing high school students for growing industries and promising careers. To be effective, local and regional partners must include a mix of **public** – such as secondary education, post-secondary education, and workforce development boards/other public workforce initiatives; **private** – such as business representatives, chambers of commerce, and industry associations, and **non-profit** entities– such as NAF or other intermediary organizations that have unique expertise and ability to implement successful sector partnership strategies.

Below are several local and regional partnership examples from across the NAF network that illustrate best practices in developing, expanding, and sustaining partnerships (as related to questions *2e – 2k*).

- **Washington, DC**

In the District of Columbia, there is a dedicated ecosystem of public, private, and nonprofit partners working together to solve local workforce development needs. Five DC school districts operate 39 NAF academies, which enroll nearly 4,400 students and are served by several industry-specific advisory boards aligned with the National Career Clusters. These advisory boards work with all NAF academies and other CTE programs aligned with their industry to provide work-based learning and mentorship opportunities to students across the district. When one industry board cannot meet the needs of all the academies it serves, it is a best practice for another industry advisory board to open up its work-based learning opportunities to students from another industry theme, allowing students to explore even more career opportunities and ensuring more students are able to gain these valuable experiences.

The Office of the State Superintendent of Education (similar to a state department of education) has two departments, Career and Technical Education and Industry Engagement, dedicated to and supporting workforce development programs across the district, including NAF academies, and ensuring DC students are connected to local workforce development opportunities. Each industry advisory board is assigned an OSSE

Industry Engagement staff member to support their work with academies – helping to facilitate the relationship between public and private. NAF has found this type of intermediary, often times in the form of a “Work-Based Learning Coordinator,” “Career Development Coordinator,” “Career Navigator,” or other designated title, to be a critical component of successful public-private partnerships.

Jackson-Reed High School in DC, which houses seven NAF academies, was recently spotlighted for its impressive efforts to make workforce training opportunities more attractive and accessible to its students. You can read more [here](#).

- **Porterville, CA**

As a rural community experiencing high unemployment rates, Porterville, California embarked on a mission to improve college and career readiness for its students by opening a new high school in 2007 designed to incorporate a career academy program of study. Funding for the school was allocated from a California state grant, and engineering and performing arts were identified as the two career strands that would meet economic trends and student needs. The search for experience in implementing career education at the high school level led the district to NAF.

[This case study](#) offers an in-depth look at how a rural school district used the NAF educational design to create wide-scale reform to make a difference for its students, local businesses, and the community at large. These outcomes can be replicated in communities small and large, with similar and unique challenges. This case study provides an example of how public-private partnership have the power to transform school systems, strengthen communities, and build a skilled workforce.

- **Miami, FL**

Miami-Dade County maintains a strong foundation for public-private partnerships that prepare high school students for the workforce. The local education agency, Miami-Dade County Public Schools, includes a Department of Career & Technical Education that manages the district’s CTE programs, including its 78 NAF academies, which serve over 22,000 students annually. Each NAF academy is supported by a member from the Department of CTE, helping to facilitate relationships between the school-based academies and the districts’ network of industry-based advisory boards. The industry advisory boards – comprised of business leaders, post-secondary representatives, and members from local workforce development boards – serve all CTE programs across the district aligned with their specific industry. As with all NAF advisory boards, these district-wide boards develop a strategic plan by which the partners can track progress and hold each other, and the overall initiative, accountable and measure what is working and where modifications need to be made. Another best practice, to ensure the boards are fairly serving all the academies for which they are associated, is that a NAF academy representative attends each industry advisory board meeting and provides an academy report, so members are aware of student progress and needs.

Another best practice is the annual NAF Mega Student Industry Conference. Over 1,500 students (approximately 25 students from each NAF academy) attend this conference,

which features a college & career fair, employers from different NAF themes, and industry-related workshop sessions, plus opportunities for students to interview for internships with industry partners. The goal is to expose students and teachers to in-demand topics and skills and connect employers with the local high school talent pipeline.

- **NAF STEM Advisory Committee**

Developed to address the growing role that science, technology, engineering, and mathematics play in the nation's economy, NAF's STEM Advisory Committee offers opportunities for top STEM leaders to exchange perspectives in order to better understand industry talent pipeline needs and attract a diverse population to their businesses. The Committee meets regularly to share major industry trends, inform NAF's approach to STEM-infused curriculum, work-based learning, advisory board development, college access, and professional development.

This multiple-sector group works well because its members endorse a clear, shared vision and are aligned around common goals and objectives. While members include representatives from competing companies, like Verizon & AT&T, they actively work together and commit expertise and resources to pursue a solution to their shared sector-specific workforce needs.

Like NAF advisory boards, the STEM Advisory Committee is successful because it has a strong foundational structure – making it easier for new members to fold in and for work to continue – and leverages member's passion and influence to create momentum around workforce development efforts. NAF has found that maintaining a robust, dedicated group of ambassadors is key to sustaining impactful public-private partnerships.

- **Verizon, a National Exemplar in Public-Private Partnership**

One such ambassador for NAF has been Verizon. Verizon has a long history of dedicating its fiscal and human resources to build a skilled, diverse talent pipeline, and we share a commitment to providing access to students and preparing the next generation of talent. Through shared efforts, NAF and Verizon aim to address the economic and social disparities that have marginalized too many students in this country, bringing NAF students and Verizon employees together to develop a pipeline of STEM talent.

Verizon and NAF have strategically opened Academies of Information Technology in historically underresourced communities like Washington D.C.; Miami, FL; Dallas, TX; Detroit, MI; and more. In addition to opening academies in these locations, Verizon employees work with academies across the country, volunteering on advisory boards and offering work-based learning opportunities to local academies. At the national level, Verizon employees participate in network-wide programming (reaching students across the country) and are represented on our Board of Directors and STEM Advisory Committee. For example, Verizon and Raytheon Technologies co-hosted a panel during Black History Month, where four Black Engineers shared their stories of overcoming social barriers, excelling professionally, and how they are defining their industries. Over

400 NAF students were in attendance and left with a greater understanding of STEM career opportunities STEM.

Recently, Verizon’s Chief Product Development Officer, Nicki Palmer, spoke at the National Pathways Summit about the important of such public-private partnerships. She said, *“Technical leaders in companies know if they can’t meet their talent needs, they can’t meet their business goals. This a change. It’s a change we are seeing at Verizon, and in a lot of companies. I am a technical leader – I was a CTO – now my job is to think about talent. Not in place of HR – but with HR and with a deep understanding of the business and the talent we need. When we think about our needs and who can help a company likes our at scale, we go to NAF. That is what NAF does, in 600 academies throughout the United States, with over 100,000 students in academies today. We have leaned-in by providing internships, working with advisory boards and educators. It’s tough for us at Verizon to keep up with the changing technical landscape. How do we expect schools and educators to keep up? It really requires a deep partnership.”*

Verizon is just one of dozens of corporate partners at the national level, and thousands at the local level, that recognize and have seen the benefits of partnering with secondary education and nonprofit organizations like NAF who are dedicated to preparing its high school students for college, career, and future success.

### **Topic Area 3: Promising Practices for Employer Engagement and Workforce Development**

*3f. How have sector strategies built in pathways for new entrants to the workforce, particularly youth? Are specific career and technical education strategies being used to support the transition from secondary to post-secondary education and training models? If so, are there specific challenges to this approach? Are there unique partners that must be included?*

NAF academies are open-enrollment programs within traditional public high schools that partner with local and national employer partners to prepare students for careers in various sectors – including engineering, finance, health sciences, hospitality & tourism, information technology, and other regional workforce sectors – through rigorous, industry-specific curricula and work-based learning.

NAF academies are supported by advisory boards that provide an essential bridge between schools and the workplace. Business and community leaders volunteer on local advisory boards to play an active role in developing their future workforce by shaping talent in high school. Advisory board members collaborate with educators to inform curricula and help organize work-based learning activities, giving students the opportunity to build relationships with mentors early and learn from successful adults. Business and community leaders invest time in these efforts because they recognize the importance of engaging with their future talent early – starting at least in high school, if not earlier – and the necessity to make the connection between schools and the working world, whether it’s preparing students to enter existing jobs, encouraging entrepreneurial endeavors, or serving as a foundation for career opportunities after post-secondary education.

One example of a strategy to build pathways for youth into a targeted industry is Raytheon's partnership with NAF in Puerto Rico. In 2020, Raytheon and NAF began a partnership to expand NAF Academies of Engineering to Puerto Rico, as well as other communities across the US, creating opportunities for youth – particularly those from underresourced and marginalized communities – to explore and prepare for careers in the growing field of engineering. These academies – the first of which opened at Benito Cerezo High School and Elvira Colon High School, which are located close to Raytheon's Pratt & Whitney and Collins Aerospace Systems facilities – are exposing generations of students in Puerto Rico to STEM classes, mentorships, and paid internships, bringing to life what a future career in engineering and technology can look like. Through the partnership, Raytheon and NAF are bringing professional engineering expertise into the classroom and ensuring that these students are career ready. By partnering with NAF, along with the Puerto Rico Department of Education, to implement this programming, Raytheon is benefiting from the inclusion of secondary education in sector strategies to meet critical, local workforce needs.

## **Topic Area 5: Resources**

*5a. What financial resources are already broadly available within the targeted region to support the sector strategy—e.g., Pell grants for education/training, WIOA state or local funds or other WIOA resources, Registered Apprenticeship Program funding/incentives, state-appropriated funding, or others?*

- **Michigan State Appropriation for NAF Academies of Health Sciences**

NAF worked with the Michigan state legislature to identify a solution to the state's health care workforce shortage. The result was an appropriation in HB 5523, a bipartisan bill focused on COVID safety measures and health care sector support, designating \$250,000 of American Rescue Funds for a grant opportunity in which Michigan public school districts can apply for funding to open NAF Academies of Health Sciences. In February 2022, HB 5523 was signed into law by Governor Whitmer, and the NAF grant opportunity is currently open for Michigan school districts to apply for funds. [Linked here](#) is a two-page issue brief providing more information about this innovative deployment of federal relief funds to address the critical health care workforce needs starting in high school.

- **Federal Appropriation for Work-Based Learning Coordinators**

Federal funding, specifically allocated to support local work-based learning coordinators, could play an essential role in ensuring that high school students, particularly those in underresourced communities, have access to life-changing work-based learning opportunities. To that end, we recommend that the Department initiate and fund a five-year demonstration program to support full-time, work-based learning coordinators in underserved communities with an already proven track record for secondary career and technical education. Work-based learning coordinators conduct outreach, engagement, recruitment and coordination of work-based learning activities, including, but not limited to, paid internships or pre-apprenticeships for high school students, with local community employers, especially with in-demand industries of information technology, health sciences, and engineering. The work-based learning coordinators could be employed by

the local education agency, local workforce development board or local workforce development agency, a group of employers, or a consortium of eligible entities. We recommend the program include an evaluation component that would include reviewing the types of work-based learning opportunities completed, demographics of participating students, and students' postsecondary career plan, as well as a national assessment of all pilot programs, once complete.

- **The Strengthening Career and Technical Education for the 21st Century Act (Perkins V)**

Perkins V provides funding and support for career and technical education programs in high schools, community colleges, and other postsecondary institutions and is designed to help students gain the skills and knowledge they need to succeed in the workforce and to promote greater collaboration between educators and employers. High schools across the country use Perkins V funds to launch and sustain NAF career academies, and therefore

*5b. With the available financial resources, are there limitations or challenges in terms of uses of such funds?*

- **The Strengthening Career and Technical Education for the 21st Century Act (Perkins V)**

Unfortunately, the federal funding provided for career and technical education through Perkins V currently cannot be used to pay CTE program participants for their work, which severely limits the resources available to support local work-based learning opportunities for high school students. We strongly recommend this restriction be lifted.

*5c. Are there key areas of work where funding support is most beneficial? Are these areas currently supported by existing funding streams?*

Funding paid work-based learning experiences for high school students is essential and must be provided, as it produces a significant return on investment. Unfortunately, currently there are no funds directly available for this invaluable experience. We strongly recommend that the Department work with Congress to advance policies, programs, and funding that would specifically support the provision of paid, work-based learning opportunities to high school students from underresourced communities.

## **Topic Area 7: Advancing Equity**

*7a. What are the most promising approaches to engage employers to increase hiring and retention and improve employment outcomes for historically marginalized and underrepresented populations, such as women, people of color, individuals with disabilities, and other historically underrepresented populations?*

More and more employers are recognizing the value of hiring and retaining a diverse and inclusive workforce; this requires a different recruitment strategy to ensure an array of candidates. Partnering with secondary education to engage with high school students is a promising approach for reaching, training, and recruiting diverse talent.

Providing paid, work-based learning opportunities to high school students from historically marginalized and underrepresented communities offers employers an opportunity to expand their candidate pool and provides their potential future employees with valuable, real-world experience working in their sector. The employers that partner with NAF have reported that, as they have participated in diversifying their future workforce through work-based learning, they have seen tangible, positive results in their enterprises and in relation to current employee satisfaction from volunteer/mentorship activities.

*7b. What are effective sector-based strategies in addressing issues of equity, including increasing representation of historically marginalized populations within the identified sector(s) through improved hiring, retention, and advancement in high-quality jobs?*

Work-based learning has positive, proven impacts on young people's educational and employment outcomes and is a critical lever in addressing systemic racial and economic inequities. Students in NAF academies, who participate in a continuum of work-based learning activities, are more likely to graduate on-time than their peers who are not involved with career academies. NAF has an overall positive effect on all students but is particularly impactful for those at-risk of not graduating—with full, four-year program participation in a high-quality career academy, these students were ten percentage points more likely to graduate on-time than their non-NAF counterparts. Black and Hispanic students attending NAF academies also are shown to have higher high school graduation rates.<sup>ii</sup> Students who graduated from a career academy **amassed 11% more total earnings each year** over the eight years following high school than those who did not attend a career academy. Youth who drop out of high school can expect to earn \$10,000 less annually compared to high school graduates.<sup>i,ii</sup> During the 2022-23 school year, more than 112,000 students attended 604 NAF academies across 35 states and territories. NAF academies reported 99% of the seniors graduated with 88% of graduates planning to go to college.

*7e. How have the inputs from historically marginalized and underrepresented populations been taken into consideration when designing a program to serve them? What are effective approaches for soliciting input from marginalized and underrepresented populations?*

NAF employs several methods for gathering input and incorporating program participant feedback into the NAF academy program. The majority of participants (81%) in the NAF academy program are young people from marginalized and/or underrepresented populations.

### Youth Participatory Action Research (YPAR)

Participatory Action Research (PAR) is a research approach that emphasizes participation and action by members of communities affected by said research. In PAR, representatives from the affected community lead in framing the research questions, the research design and methods, and the modes of analysis of such research projects. Youth Participatory Action Research (YPAR) is a similar approach focused on incorporating the voices and expertise of young people. This research approach serves to amplify the voices of the marginalized or underrepresented, but it also establishes a culture that opens the door to the co-creation of solutions.



Youth researchers in grades 10-12 at Wenonah High School in Birmingham, AL, volunteered to participate in a six-month pilot of PAR facilitated by NAF— knowing only that they would work together with adults to improve conditions around an issue they would identify. These students were motivated by that opportunity and eager to add their voices to efforts to improve their esteemed school. The youth researchers and their NAF academy leader met weekly to select and refine the issue(s) they wanted to address, collaborate with allies and experts, collect and organize data from their peers and staff, make meaning of the data, and co-create and present recommendations to school and district leaders for discussion.

The PAR journey with these youth researchers was rich in discovery of new insights, skills, and expression for all stakeholders (including the adults) and benefitted from a shared commitment to the experience (from leaders, staff, allies, and youth), and a willingness to be flexible – accommodating necessary shifts in planning and timelines, based on the needs of the group.

Overall, the investment was minimal compared to the benefits borne of this experience. The youth researchers' learnings and recommendations were well-received by school leaders and reinforced the need for new programming and practices that were being considered for implementation. They also helped to influence plans to establish a student-led advisory group for school leadership that will hold space for youth contributions in the school's organizational and decision-making processes. The youth researchers completing the PAR pilot reflected on the following benefits of their experiences:

- Increased understanding and awareness of how processes operate in their school/district
- Developed new research skills (creating surveys, classifying, and analyzing data)
- Improved collaboration with peers and adults
- Gained an awareness and appreciation for their voices and taking pride in the difference they can make for themselves and others, when they communicate what they need

Youth PAR is not limited to the youth engagement project described above. It can be applied to any class, school, community, civic, or public health issue of shared interest and that is identified for reinvention by the group most impacted (students). A PAR project should include these components: youth-identified issue; use and analysis of data, partnership with adult allies and key deciders, and an agreed upon action(s) and/or next steps.

Visit [NAF's PAR Toolkit](#) for more information and take a look at the resources for introducing Youth Participatory Action Research to school communities.

### NAF's Outcomes-Driven Work-Based Learning Approach

Work-based learning is a proven, effective strategy for introducing students to the world of work and preparing young people with the skills and knowledge necessary to meet the demands of an evolving economy. For over 40 years, NAF has supported its network of career academies in implementing high-quality work-based learning for high school students. After several years of increasing our collaborative efforts with experts in youth development and social capital and building upon decades of research and practice in the field, NAF is refining our approach to

work-based learning to one that is outcomes-driven, deploying new tools and resources to help capture and measure the impact of student participation in work-based learning and ensure a more level playing field for all students. We are currently piloting two tools to measure and strengthen work-based learning programming:

- The **Work-Based Learning Participation Tracker** is an online tool that allows career academies to log work-based learning activities and record student participation. This tool allows them to easily see participation by demographics, grade levels, and at the individual student level, allowing them to ensure student progress and note and address any inequities.
- The **Work-Based Learning Impact Tracker** asks each student to complete a reflection survey after each work-based learning activity, reflecting on how these activities are impacting their career readiness and decision-making, while also serving as a way for them to see their own progress over time throughout their academy experience. Educators can use this data to customize work-based learning activities in alignment with their students' interests and assess the impact of these activities individually and collectively over time.

### NAF Student Survey

The annual NAF Student Survey is a vital part of the organization's continuous improvement process and is designed to elevate student voice to impact NAF academy programming and design. The driving purpose of this annual survey is to gather feedback directly from NAF students about their academy experiences and how it can be improved. Academy educators inform their students about this opportunity to make their voices heard and the survey available through our online platform each spring. The survey is 100% voluntary. The results of the student survey are anonymized and shared back with academy students and staff via reports at the academy, district, and national levels. The survey is brief and takes approximately 15 minutes to complete.

Results from the student survey are analyzed and used to create a comprehensive report that provides high-level trends and recommendations for NAF academy teams to consider, based on the feedback and input provided by NAF students across the country. When survey results are shared, they are always presented in an aggregated form. Individual student responses that could be used to determine a student's identity are never reported to NAF staff or NAF educators. This practice allows for a safe, private, and effective feedback loop from NAF students to NAF and their academy educators to better develop and enhance current services and practices offered, based on needs and preferences of the students we serve. All data collected from NAF students is kept on NAF's secure data servers, which only members of NAF's Research and Technology team have access to.

The current version of the NAF Student Survey consists of seven survey sections and asks NAF students to rate their experiences and attitudes on topics, such as: Culturally responsive practices at the academy • Student identity, beliefs, and mindset about their academic abilities • Student attitudes towards school and self, advanced courses, and family history • Attitudes towards work-based learning • Impact of the NAF academy • Networking and social capital.

## Topic Area 8: Measuring Success

*8d. Are there specific performance measures that would work best to meaningfully assess the impact of a sector strategy on the participants served by it? Are there qualitative measures as well as quantitative ones?*

NAF is undertaking an in-depth analysis of factors shaping the short-, medium-, and long-term outcomes of NAF alumni that have successfully completed a career pathway program. This line of work will implement multiple methods of data collection and analysis and is being performed in collaboration with a leader in the career academy field, the American Institutes for Research (AIR). This work will further substantiate ways that NAF and other philanthropic organizations can better invest in today's young people and support the creation of better college and career pathways, specifically for students from historically underserved communities. This work is also innovative in that it will provide insight regarding best practices for students and employer stakeholders to achieve their long-term goals.

This work intends to probe new possibilities for tracking NAF alumni after high school graduation using a three-pronged approach. This three-pronged approach to data collection will provide a robust and overlapping picture of NAF Alumni experiences after high school and investigate the impact of a career academy program like NAF. The three data sources instrumental to this work include:

1. **Postsecondary Enrollment, Persistence, and Degree/Certification Verification Data.** Data acquired from the National Student Clearinghouse, an entity that collects degree earning data from over 95% of the colleges and universities throughout the country and constitutes the single largest publicly available degree earning verification service available today, will allow NAF to examine the postsecondary landscape for our alumni and compare that enrollment with national trends.
2. **Qualitative and Quantitative Impact Metrics through the NAF Alumni Survey.** The creation and dissemination of the NAF Alumni Survey will allow NAF to systematically gather quantitative and qualitative metrics on NAF academy alumni experiences after high school. The items in this survey will elucidate the journey that is typical for NAF alumni after high school and gather metrics on how participation in a NAF program facilitated their transition to either college and/or a high-skilled, high wage career. These impact metrics include but are not limited to:
  - The number of professional connections acquired while enrolled in a NAF academy
  - Whether their NAF academy helped them attain their current employment
  - If alum use skills they learned in a NAF academy in their daily lives
  - If their academy prepared them for the world of work
  - If their academy prepared them for college
  - If their academy helped them explore potential careers

3. **Career and Labor Market Outcomes.** NAF is also examining alumni wage and employment data in coordination with select state agencies. We have already been in contact with select state agencies, such as the Florida Department of Education, the NC School Works System (NCSW), and the Texas Education Research Center (ERC) to propose a data match with our alumni to attain labor and wage statistics. This will allow for an analysis of the types of career fields NAF alumni pursue and their wage earnings in comparison to national trends.

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<sup>i</sup> Kemple, J. J., & Willner, C. J. (2008). Career Academies Long-Term Impacts on Labor Market Outcomes.,. mdrc.

<sup>ii</sup> ICF. (2017). Transforming the American High School Experience: NAF's Cohort's Graduation Rates from 2011-2015, 2017.