Reengaging High School Students through Career Academies

When built around four key elements, academies deliver rigorous, relevant learning tied to students' career aspirations.

Edward C. Fletcher Jr.

Students who cannot connect their learning in school with their career aspirations are at higher risk of disengaging academically and socially, and disengagement and boredom are harbingers of dropping out of high school altogether. Particularly in more urban, economically disadvantaged communities, there still are many traditional, comprehensive schools that are labeled "dropout factories" because more than half their students stop attending and fail to graduate. In many of these urban settings, career academies have emerged as a prominent reform to increase student engagement.

Embedded in high schools across the nation, career academies are situated in a variety of settings, including comprehensive and magnet schools as well as career centers. An estimated 8,000-plus are in existence, serving over one million students.[1]

Initially formed to keep students from dropping out by preparing them to enter the workforce right out of high school, career academies have now extended their mission to preparing students to be both college and career ready. The academies' goal is to enhance students' engagement in school and improve their performance while exposing them to postsecondary education and work options.

Ingredients of Career Academies

Key components of these academies are their small learning communities, integrated college-preparatory and career-themed curricula, and partnerships with

corporate, community, and higher education stakeholders. Because they provide a college-preparatory curriculum within a particular field such as engineering, programs of study integrate academic and technical content to increase the rigor and relevancy of learning. By emphasizing partnerships, academies help ensure that students will participate in work-based learning such as internships and accelerated learning opportunities such as dual enrollment.

As schools and districts rushed to jump on the career academy bandwagon over the last few decades, the quality of implementation varied greatly. To address this issue, school networks such as NAF (formerly known as the National Academy Foundation) have sought to develop standards of practice. Founded in 1982, NAF provides curricular support, professional development, and technical assistance to a national network of high school career academies in five career themes: engineering, finance, health sciences, hospitality and tourism, and information technology.

Over 5,000 business professionals serve as mentors, engage NAF students in paid internships, and serve on local advisory boards. During the 2019–20 school year, over 120,000 students attended 620 NAF academies in 38 states, including the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. NAF academy students are 47 percent female and 53 percent male, and 80 percent of NAF academy students are ethnically and racially diverse. Sixty percent qualify for free or reduced-price lunch.

The NAF academy model comprises four core elements: a distinct approach to academy development and structure, integrated and industry-validated curricula, work-based learning experiences, and advisory boards. All four elements are designed to facilitate student engagement.

Academy Development and Structure. Small learning communities using student cohorts are integral to the model, as are career-themed and sequenced coursework, and career-themed guidance. Academies are organized as schools-within-schools or as whole-school/wall-to-wall programs, where all students in the school participate in the academy and where block scheduling is emphasized. The idea is to break large high schools into family-like units where students have the same teachers for four years and can form a close-knit, caring community.

In NAF academies, teachers receive instructional supports and technical assistance in using industry-validated curricula. With this structured support, teachers are able to form deep relationships with students while they make connections between their teaching practice and real-world applications.

Integrated and Industry-Validated Curricula. The integrated curriculum and instruction component promotes career and academic learning around a theme—business and finance, engineering, health sciences, hospitality and tourism, information technology. Project-based activities that apply core academic content are central to the curricula, which are developed with business and industry leaders within the respective fields of study. Because of the real-world nature of the content, students find relevancy and meaning in what they are learning. They become more engaged.

Teachers that integrate curriculum are connecting skills, themes, concepts, and topics across disciplines and between academic and technical content. They connect overarching theories and big ideas. There is some evidence that this approach leads to better academic outcomes as well. In one study of the integration of math in career and technical (CTE) education courses, a group of CTE teachers from five career areas worked with math teachers to design math-enhanced CTE lessons. There were math and CTE teachers in a control group as well. After 20 hours of math-enhanced instruction, CTE students in the experimental group scored significantly higher on two of three math assessments.[2]

Work-Based Learning. Career academies emphasize learning in specific occupational contexts to enhance the relevance of student experiences. When done well, students engage in progressive work-based learning experiences from 9th through 12th grades that are developmentally and age appropriate. Under the NAF model, work-based learning includes career awareness and exploration in 9th (e.g., field trips) and 10th (e.g., job shadowing) grades and experiential opportunities (e.g., industry certifications, paid internships) in 11th and 12th grades. Thus work-based learning enables students to apply what they know to real-world settings while exposing them to and preparing them for career paths they choose. Students

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report that these experiences, particularly internships, are the most memorable learning experiences of their K-12 years.

Advisory Board Engagement. Because they communicate beliefs and values and model positive behaviors, adults on advisory boards are an integral part of NAF academies. An advisory board comprises a diverse network of business and industry representatives, postsecondary institutions, parents, alumni, students, and community members. The board provides curriculum support, mentoring, guest speakers, field trips, job shadowing, internships, and fundraising for scholarships and student activities and organizations. It leverages a community's social capital to promote work-based learning and advance the goals of the academy more generally. Academy students benefit from increased engagement with adults who serve as role models in their desired fields.

Student Outcomes

But do these career academies deliver? Colleagues and I have studied the NAF career academies in particular and find that the model is a successful strategy to build student engagement and facilitate career pursuits. For example, my colleagues and I found higher levels of emotional engagement in academy students compared with a demographically matched group of students from a traditional comprehensive high school in the same district.[3]

In another study, Black students reported that their participation in career academies was the most meaningful aspect of their schooling and that the academy afforded them an opportunity to gain a greater sense of community and belonging, acquire hands-on training, and explore their academic and career interests.[4] In addition, participation in career academies increases student engagement, attendance, graduation rates, academic achievement, and long-term employment earnings.[5]

NAF academies also helped Black boys form engineering identities through their exposure in the academy to science, technology, engineering, and mathematics (STEM) and STEM role models and mentors, particularly Black male STEM professionals.[6] These professionals were sources of inspiration, cultural connection, and validation of students' ability to succeed in STEM college and career pathways. My colleagues and I also found that the intersectional identities of ethnicity/race and gender of these mentors contributed to Black males students' STEM identity formation and development.[7] The mentors engaged Black male students in transparent, candid discussions and shared their experiences of navigating STEM college and workplace environments.

Implications for State Boards

The central federal legislature on CTE, known in its current authorization as Perkins V, advances ambitious goals for CTE programs. According to Perkins V, a program of study is "a coordinated sequence of academic and technical content at the secondary and postsecondary level." However, few states are systematically monitoring whether career academies—a reform initiative that uses a program of study model—are indeed fulfilling Perkins V obligations to prepare students for college and careers.

Given the demonstrated benefits learners gain in small learning communities with integrated curricula, work-based learning, and advisory board engagement, it is imperative that state boards of education examine, detail, and clarify the language, expectations, and provisions of Perkins V to specify which types of these academy activities schools should adopt. More specifically, state boards could do the following:

- advocate for funding and incentives for developing career academies;
- emphasize the need for advisory boards that are representative of the ethnic and cultural backgrounds of the students they serve;
- require the implementation of work-based learning in high schools, where students benefit from career awareness, exploration, and experience in college and career pathways of their choosing;
- develop a data collection system that tracks the work-based learning activities that students participate in high schools across their states. Such systems should also track individual student participation to uncover potential inequities in participation and pay by career theme and individual differences (e.g., ethnic and racial background, gender, socioeconomic status). The system should also

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Edward C. Fletcher Jr. is Education and Human Ecology Distinguished Professor in the Workforce Development and Education program at The Ohio State University.

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[10]CSDE, "Catalog of Truancy Intervention Models" (March 2018).

[11]CSDE, "Full, Equal and Equitable Partnerships with Families: Connecticut's Definition and Framework for Family Engagement" (August 2018), chart 5.

[12]Steven Stemler et al., "An Evaluation of the Effectiveness of Home Visits for Re-Engaging Students Who Were Chronically Absent in the Era of Covid-19" (Center for Connecticut Education Research Collaboration, December 2022), https://www.attendanceworks.org/wp-content/uploads/2019/06/CCERC-Report-LEAP_01_24_2023_FINAL.pdf.

[13]Attendance Works, "Monitoring Data Matters Even More: A Review of State Attendance Data Policy and Practice in School Year 2022–23," policy brief (June 2023), https://www.attendanceworks.org/monitoring-data-matters-even-more-a-review-of-state-attendance-data-policy-and-practice-in-school-year-2022-23/. A table in this brief provides a look at attendance policies and practices in 50 states and the District of Columbia.

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track the community members who participate in the work-based learning experiences and the quality of the experiences through reflection forms, surveys, and evaluative rubrics so state leaders can readily evaluate the academic, employability, and technical skills students are gaining. ■

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[4]Edward Fletcher and E. Daniel Cox, "Exploring the Meaning African American Students Ascribe to Their Participation in High School Career Academies and the Challenges They Experience," *The High School Journal* 96, no. 1 (2012): 4–19.

[5]James J. Kemple, "Career Academies: Long-Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood" (New York: MDRC, June 2008).

[6]Edward C. Fletcher Jr. et al., "Equity Perspectives of School Stakeholders Regarding the Representation and Access of Black Male Students in an Academy of Engineering," *School Science and Mathematics* 123, no. 3 (2023); Jerrod Henderson et al., "Enhancing Engineering Identity among Boys of Color," *Journal of Pre-College Engineering Education Research* (J-PEER) 11, no. 2 (2021).

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academically. The policy intervention model we propose will ensure that preservice educators are trained before they enter the classroom and help in-service teachers gain new professional knowledge. ■

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[2]Office of the Surgeon General, "U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic," press release, December 7, 2021.

[3]CDC, ABES.

[4]Susan D. Hillis et al., "COVID-19–Associated Orphanhood and Caregiver Death in the United States," *Pediatrics* 148, no. 6 (2021).

[5]Christopher Blodgett and Jane D. Lanigan, "The Association between Adverse Childhood Experience (ACE) and School Success in Elementary School Children," *School Psychology Quarterly* 33, no. 1 (2018): 137–46.

[6]Nicole Reddig and Janet VanLone, "Preservice Teacher Preparation in Trauma-Informed Pedagogy: A Review of State Competencies," *Leadership and Policy in Schools* (April 25, 2022): 1–12.

[7]Tom Brunzell, Lea Waters, and Helen Stokes, "Trauma-Informed Teacher Wellbeing: Teacher Reflections within Trauma-Informed Positive Education," *Australian Journal of Teacher Education* 46, no. 5 (2021).

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[11]National Child Traumatic Stress Network, "Creating, Supporting, and Sustaining Trauma-Informed Schools: A System Framework" (2017), https://www.nctsn.org/sites/default/files/resources//creating_supporting_sustaining_trauma_informed_schools_a_systems_framework.pdf.

[12]See Pennsylvania Department of Education, "Framework for Social, Emotional, and Behavioral Wellness of PK-12 Students Endorsement Program Guidelines" (February 2018), https://www.education.pa.gov/Documents/Teachers-Administrators/Certification%20Preparation%20Programs/Specific%20Program%20Guidelines/Social%20Emotional%20and%20Behavioral%20Wellness%20of%20PK-12%20Students%20Endorsement.pdf.

[13]Shamblin, Graham, and Bianco, "Creating Trauma-Informed Schools for Rural Appalachia."