On-ramp to Postsecondary Transitions

Response to CFDA 84.411C

Submitted by:
Jobs for the Future, Inc.; 50 Milk Street, 17th Floor; Boston, MA 02109

Date:
July 21, 2022

PROJECT NARRATIVE

TABLE OF CONTENTS

INTRODUCTION

The On-ramp to Postsecondary Transitions (OPT) project, led by Jobs for the Future (JFF), in partnership with Colorado Succeeds (CS), with NORC as the evaluator, will develop, implement, and test the feasibility of an entrepreneurial, field-initiated, evidence-based, and innovative model that builds on proven dual enrollment (DE) strategies and develops a promising new strategy to improve educational attainment and achievement, particularly in the domain of college and career readiness (CCR), for high-need high school (HS) students (defined as low-income students, students of color, disengaged youth, and/or students most impacted by the COVID-19 pandemic) across the state of Colorado (CO). OPT is a groundbreaking model that builds an on-ramp to early HS graduation and successful postsecondary transitions through the design and implementation of: 1) strategic DE courses that accelerate academic achievement and attainment and lead to postsecondary degrees and credentials aligned to labor-market demand ("strategic DE"); 2) high-quality work-based learning (WBL) that bolsters high-need students' academic achievement while preparing them for good jobs; 3) a college and career navigation course (CCNC) that supports students in planning for an accelerated path to HS graduation and a successful transition into postsecondary education; and 4) a continuum of comprehensive services (CCS) that supports high-need students in accessing and successfully completing OPT. JFF and CS will provide a cohort of HSs with technical assistance (TA) and funding to implement OPT. NORC's evaluation will test whether OPT successfully improves achievement and attainment—including CCR, progress to HS graduation, and postsecondary enrollment—for high-need students. OPT will generate a suite of tools, resources, and publications to help the field replicate and adapt the model.

OPT addresses *Absolute Priority 1—Demonstrates a Rationale (AP1); Absolute Priority 4— Field-Initiated Innovations—Meeting Student Social, Emotional, and Academic Needs*

(AP4); Competitive Preference Priority 1—Promoting Equity in Student Access to Educational Resources and Opportunities (CPP1); and Competitive Preference Priority 2—Addressing the Impact of COVID-19 on Students, Educators, and Faculty (CPP2). OPT increases access, especially for high-need students, to DE, which allows HS students to earn HS and college credits simultaneously.[1] *DE meets and exceeds the evidence requirement for AP1[2]* (see sections A and B.3.) *OPT will address AP4 by developing and implementing an entrepreneurial, evidence-based, field-initiated innovation* that focuses on high-need and underserved students, improves their achievement and attainment, and supports their social, emotional, academic, and career development by creating an on-ramp to successful postsecondary transitions that brings together four evidence-based interventions: strategic DE, WBL, a CCNC, and a CCS (see sections A, B.1., and B.3.). *OPT will address CPP1 by leveraging DE, WBL, and a CCNC* to promote education equity and adequacy in resources and opportunity for underserved HS students and prepare them for college, career, and civic life through advanced courses and programs (DE and a CCNC), WBL, and high-quality career and technical education (CTE) courses, pathways, and industry-recognized credentials that are integrated into the curriculum (see sections A and B.3.). *Through its focus on re-engaging and supporting the students most impacted by COVID-19, OPT will address CPP2 by*: 1) conducting community asset mapping, including assessing student disengagement and needed supports; and 2) using evidence-based instructional approaches and supports to expand access to rigorous coursework and content in HS through its focus on expanded DE for high-need students (see sections A, B.1., and B.3.).

A. SIGNIFICANCE

OPT will develop and demonstrate an innovative on-ramp model, a promising new strategy that builds on four existing evidence-based strategies—DE, WBL, college and career navigation

supports, and the provision of a CCS—for improving achievement and attainment for high-need students. OPT will also leverage CO's Path4Ward (P4W) initiative, which provides funding for postsecondary education, including workforce training, to high-need students who graduate from HS early. By braiding these strategies, OPT addresses three of our most urgent educational problems: 1) low levels of educational attainment exacerbated by the deep inequities in access to, and high-need students' engagement and success in, high-quality DE and WBL that increase CCR; 2) the lack of college and career navigation supports needed to help high-need students to successfully navigate postsecondary transitions and pathways to good jobs; and 3) the effects of the COVID-19 pandemic, which threaten the education and career prospects of millions of young people and have led to increased rates of youth disconnection. (See section B.3.)

Dual Enrollment. The What Works Clearinghouse (WWC) evidence base is unassailable: DE is one of the most powerful interventions to improve educational outcomes, especially for high-need students. Based on a February 2017 What Works Clearinghouse (WWC) Intervention Report, there is a medium to large extent of evidence showing the positive effects of DE across a range of student outcome domains in HS and postsecondary education, including college access, enrollment, and degree attainment; credit accumulation; HS completion; and HS general academic achievement.[3] *DE and OPT therefore meet the requirement to demonstrate a rationale for AP1—and in fact exceed it to meet the definition of strong evidence under 34 CFR 77.1.* Through its focus on expanding equitable access to DE, particularly for high-need and underserved students, *OPT will address CPP1 and CPP2 and help students, including those most impacted by the pandemic, meet challenging, college-level academic content standards.* OPT will increase the number of high-need students who are able to access and succeed in high-quality DE and build the capacity of schools to offer strategic DE. While the evidence for the positive effects of DE is strong[4], research on the effects of strategic DE aligned

to pathways is just beginning to emerge,[5] and OPT will contribute to knowledge of these effects, especially for high-need students. Educators have consistently struggled to design and implement strategic DE due to the time commitment required and the complexity of identifying appropriate courses and promising credentials. Schools and colleges often offer DE courses based solely on factors such as instructor availability or student interest rather than deliberately planning sequenced DE offerings. These "random acts of DE" exacerbate equity gaps, as high-need students often require additional support to navigate their course-taking options and see how courses align with postsecondary credentials and their career aspirations.[6] Strategic DE builds on existing DE strategies by ensuring that courses are sequenced, aligned to pathways, and designed to maximize students' choices and options without contributing to tracking or remedial courses. Strategic DE encompasses two types of DE courses: 1) "door-opener" courses, core academic courses (e.g., college math and English) that are required by the highest quantity of credentials within a pathway; and 2) "accelerator" courses, technical courses that are part of pathways that lead to promising credentials, i.e., postsecondary credentials aligned with high-wage, high-demand occupations that provide opportunities for growth within an industry.[7]

Work-Based Learning. Evidence demonstrates that WBL positively affects postsecondary enrollment[8] and supports the development of skills sought by employers, leading to improved job quality.[9] Recent graduates with relevant work experience are more likely to be employed full-time, engaged at work, and advanced into skilled occupations than those who only work or attend school.[10] However, educators often lack clear information about how to structure high-quality WBL aligned with pathways and struggle to engage enough employers to offer WBL at scale and make it accessible to all students. OPT will leverage widespread local district policies granting high school credit for WBL, thus ensuring that WBL participation does not slow progress to graduation, and will build the capacity of schools to design high-quality WBL and

engage employers, including by leveraging state incentives for employer participation in WBL.[11]

The project addresses AP4 through this focus on WBL, which will support all students—inclusive with regard to race, ethnicity, culture, language, and disability status and including underserved students—to engage in real-world, hands-on learning that takes place in supportive, positive, identity-safe, and inclusive workplace settings, is aligned with related classroom instruction, and allows students to apply their knowledge and skills, strengthen their employability skills, and explore possible careers.

College and Career Navigation Course. OPT will develop a CCNC that prepares students, especially high-need students, for the demands of college-level coursework while also providing career navigation supports that help students understand their career options and associated educational requirements. The CCNC will combine college and career advising and navigation strategies in new ways while building on existing strategies for so-called "College 101" courses and a workplace culture and navigation course that is usually taught at the postsecondary level. The CCNC will include three main content areas: 1) college introduction, which will incorporate academic content alongside "student success skills" (e.g., college course-taking expectations, navigation of college systems, motivation, time and stress management, study techniques, and problem-solving) and provide students with opportunities to practice both, drawing on research demonstrating the long-term efficacy of this approach and its effectiveness in boosting educational attainment[12]; 2) an ethnographic approach to exploring the world of work—adapted for a secondary audience from a postsecondary model—that provides students with analytic tools for assessing career options and builds their agency in entering and navigating the labor market[13]; and 3) early career navigation content. OPT will build on existing DE strategies to support schools in developing a CCNC that may offer college credit, further accelerating students' progress to HS graduation by extending DE to 9th grade (rather than waiting until 11th

or 12th grade as is typical) and support students' early planning for postsecondary education. ***The CCNC will contribute to OPT's strategy for addressing AP4, CPP1, and CPP2.***

<u>*Continuum of Comprehensive Services.*</u> ***OPT will address CPP2 by implementing strategies to engage and re-engage students at risk of disconnection or off-track to graduation, and those already disconnected, due to the COVID-19 pandemic and will address AP4 by fostering cross-sector partnerships to provide these students with access to a CCS*** that supports their social, emotional, mental health, and academic needs, including college and career advising and navigation supports and wraparound services related to needs such as transportation, childcare, housing, and nutrition. While schools often attempt to offer supportive services to students, OPT will build on existing support strategies by fostering partnerships, including across government agencies, schools, community-based organizations (CBOs), and postsecondary institutions, to provide a CCS that is supported by multiple community partners and inclusive with regard to race, ethnicity, culture, language, and disability status. Research demonstrates that this collaborative approach to CCS provision supports students' social-emotional learning and academic achievement, while providing a return to society of $3 for every $1 invested.[14]

<u>*Path4Ward.*</u> OPT leverages and builds on CO's innovative P4W initiative, which provides low-income HS students with a financial incentive for early HS graduation and reduces financial barriers to postsecondary education. P4W has the potential to help CO use public dollars more efficiently: Schools receive only a fraction of the funding for students who have graduated early, and the remaining amount is invested in students' postsecondary education rather than in an extraneous one or two semesters of HS.[15] Schools are encouraged to direct their share of P4W funding towards academic counseling and support for P4W students. P4W is currently operating in a subset of schools within the state, which also receive TA provided by CS. TA includes: 1) building awareness of P4W among school and district leaders, counselors, and other staff; and 2)

supports for students and families, including 1:1 coaching and planning for postsecondary transitions. OPT will position more students to take advantage of P4W by building on existing TA strategies to go beyond planning and awareness and create an on-ramp to early HS graduation. OPT will use CO as a testing ground for an innovative combination of DE, WBL, a CCNC, a CCS, and a state-provided early graduation incentive that will inform policy and practice in the areas of HS completion, postsecondary transitions, and CCR.

B. QUALITY OF THE PROJECT DESIGN

B.1. Conceptual Framework. OPT's conceptual framework will yield an innovative approach to improving student outcomes, especially for high-need students, by leveraging the expertise and state and national networks of the OPT partners to combine strategic DE, WBL, a novel CCNC, and a CCS to accelerate learning and serve as an on-ramp to P4W. Our logic model (see Appendix G) depicts how our multi-pronged approach to supporting OPT schools will: 1) develop the innovative OPT on-ramp model and provide schools with TA, resources, and tools to implement it; 2) support schools to work with government and community partners to effectively support high-need students to succeed in OPT programs; and 3) support state and national replication and adaptation of OPT.

Developing and implementing the OPT model. OPT will support HS in strategically incorporating a CCNC, DE, and WBL along a program of study that spans secondary-to-postsecondary education and leads to an industry-recognized credential. This will strengthen the ability of P4W to support CCR and reduce costs for postsecondary education, particularly for high-need students who have historically enrolled in and completed postsecondary programs at lower rates. The OPT partners will select 40 HSs using a competitive request-for-proposal (RFP) process open to all P4W districts, encompassing urban, suburban, and rural areas, with a preference for those serving a large proportion of high-need students. Selecting HSs from the

cohort already implementing P4W and receiving TA from CS provides assurance that they will be well positioned to implement OPT. For purposes of the evaluation, 20 of the 40 selected HSs will be randomly assigned to the treatment group and receive funding, TA, and tools, while 20 will be randomly assigned to the control group and receive a stipend to support data collection.

JFF and CS will create a suite of tools and resources to support implementation, including: 1) an ***OPT Blueprint*** that identifies key design principles, quality indicators, and implementation milestones for OPT's core educational interventions (CCNC, strategic DE, and high-quality WBL) and will be continuously updated to capture best practices and lessons from OPT implementation; 2) ***OPT implementation action plans*** that provide schools with a roadmap to implementation, including a strategic DE implementation tracker; 3) a ***strategic DE program of study map*** that outlines a sequence of DE courses that lead to promising credentials and will be created by JFF for each OPT HS based on labor market data and research on locally available HS and postsecondary programs of study and credentials; 4) ***guidance on CCNC*** that supports schools to develop course learning objectives, adapt existing advisory periods, and identify opportunities to offer CCNCs as DE courses; 5) ***student- and family-facing communication and marketing materials*** that build awareness of postsecondary and career options as well as the benefits of the OPT model and how it will position students to take advantage of the P4W funding opportunity; and 6) a ***WBL Toolkit*** that supports integration of WBL into programs of study and includes resources related to employer engagement, a WBL continuum template aligned to pathways, and WBL competencies. To build the capacity of schools and support them in effectively deploying these resources, OPT partners will provide ***high-quality TA*** through individual and peer learning opportunities, including: 1) ***individual site visits*** in Years 2-4; 2) ***monthly 1:1 coaching calls*** throughout the project to assist schools in planning and to provide customized training on key design principles; and 3) ***virtual learning events*** that bring together

OPT schools three times per year for problem solving and deep dives into content.

Serving high-need students with a CCS. OPT will foster community partnerships across K-12, postsecondary, employers, CBOs, and government agencies to build a CCS that supports high-need students and their families, including those most impacted by the COVID-19 pandemic, and supports student engagement and re-engagement, thereby providing accelerated options to this population and providing on-ramps to postsecondary success. ***OPT partners will address CPP2 by conducting community asset mapping and a student disengagement assessment*** to identify the services available and how to leverage these services within each community, the extent to which students have become disengaged from learning due to the pandemic or other circumstances, and the number of disengaged students. The maps and assessment will lead to key recommendations on fostering community partnerships, creating a CCS, and deploying reengagement strategies. OPT partners will support schools to facilitate meetings that engage partners from across organizations and sectors to implement the asset mapping recommendations. JFF and CS will provide TA on topics that include creating inclusive environments to support high-need students, CCS implementation, building a continuum of academic supports across K-12 and postsecondary, and partnership development.

Dissemination to support replication and adaptation. OPT partners will document promising practices and lessons learned to support the adaptive integration of OPT into varied contexts nationwide and will develop a comprehensive ***dissemination plan*** by Year 3 that leverages each partner's communications expertise and extensive state and national networks and reach to share broadly. The OPT resources described above will be publicly posted on both the JFF and CS websites, and, in addition, the OPT partners will create and disseminate ***two publications*** that will document challenges and successes of implementation, highlight impact results, and offer examples of OPT in action in the field. OPT partners will showcase the project and the related

tools and resources in at least *two relevant national conferences* and through *three OPT*
webinars open to a national audience.

B.2. Measurable Goals, Objectives, and Outcomes. Through our conceptual framework, the
OPT partners will pursue 4 goals that support measurably improved outcomes. OPT partners will
establish a baseline to measure progress over the 5-year grant period, as reflected in the goals,
objectives, and outcomes below. The objectives are measurable; metrics aligned to the outcomes
and objectives are in the Project Objectives and Performance Measures Information form.

Goal 1. Expand the number of schools creating OPT opportunities. *Objectives:* **1)** Increase
the number of schools incentivizing early HS completion combined with strategic DE, WBL,
CCS, and CCNC; **2)** Increase students' and families' understanding of DE and WBL. *Outcomes:*
1) OPT is implemented in diverse school settings, including urban, suburban, and rural areas; **2)**
High-need students and their families have greater awareness of the benefits of DE and WBL.

Goal 2. Implement a CCNC, strategic DE aligned to promising postsecondary credentials,
and high-quality WBL aligned with labor-market demand. *Objectives:* **3)** Provide, via a
CCNC, foundational knowledge and skills for CCR; **4)** Increase the number of strategic DE
courses offered; **5)** Increase the number of students who enroll in and successfully complete DE;
6) Increase the number of students participating in high-quality WBL experiences; **7)** Increase
attendance rates and accelerate the time to HS graduation; **8)** Increase college-going rates and
career outcomes; **9)** Create opportunities for OPT schools to learn from evidence-based practices
and from each other. *Outcomes:* **3)** OPT fosters CCR and success for high-need students; **4)**
High-need students are enrolling and succeeding in strategic DE courses that propel them to
promising postsecondary credentials; **5)** More students graduate HS with at least 12 college
credits earned; **6)** High-need students experience real-world, hands-on learning that is aligned to
classroom instruction; **7)** High-need students complete HS with the skills and knowledge to enter

and succeed in postsecondary programs of study; **8)** High-need students pursue and succeed in high-wage, high-demand college degrees and enter the workforce; **9)** OPT schools consistently use evidence-based practices to implement DE, WBL, CCS, and CCNC.

Goal 3. Foster cross-sector partnerships to provide high-need students with a CCS.

Objectives: **10)** Map community assets and provide a CCS to address the needs of high-need students; **11)** Increase the availability of, and student participation in, academic and career advising; **12)** Increase the capacity of OPT schools to build strategic partnerships with postsecondary institutions, employers, and community partners to design and implement OPT.

Outcomes: **10)** High-need students have access to engaging and supportive learning environments, wraparound services, and career navigation supports; **11)** High-need students are supported by a system of adult mentors to propel them through HS completion; **12)** High-need students have improved social, emotional, academic, and career development.

Goal 4. Disseminate promising practices and lessons learned to a national audience.

Objectives: **13)** Document and share how OPT improves academic achievement, CCR, and engagement for high-need students. *Outcomes:* **13)** OPT inspires and informs the development of strategies that combine early HS graduation incentives, DE, WBL, CCS, and CCNC.

B.3. Addressing Needs of Target Population

To address existing inequities in achievement, attainment, and career outcomes, the OPT target population is high-need students in CO, especially students from low-income households, students of color, disengaged youth, and students most affected by the COVID-19 pandemic. Through a set of evidence-based strategies to boost achievement and attainment for high-need students, OPT addresses three pressing and interconnected challenges: 1) Americans' educational attainment has failed to keep pace with workforce and economic needs, an issue exacerbated by deep inequities along racial and ethnic lines; 2) many young Americans lack the

knowledge and supports necessary to successfully navigate educational pathways to good jobs (defined as jobs paying $35,000+ a year for workers younger than 45 and $45,000+ per year for workers over 45)[16]; and 3) the COVID-19 pandemic has increased both disparities in education and career outcomes and rates of youth disconnection.

A lack of educational attainment limits young people's career prospects and access to good jobs. By 2018, over 80% of good jobs required an associate's degree or higher.[17] Research shows that, nationally, 60% postsecondary attainment is needed by 2025 to meet U.S. workforce needs. We are not on track to meet that goal.[18] While overall postsecondary attainment in CO outpaces the U.S. rate—though still falls short of projected workforce needs—deep disparities by race and ethnicity exist. 39.7% of Black Coloradans hold an associate's degree or higher, 30.9% of Native American residents do, and 25.1% percent of Latinx residents do; the rate for white residents is 59.1%.[19] The COVID-19 pandemic led to declines in college enrollment: As of spring 2022, enrollment had declined by 4.1% over the last year and 3.5% the year prior, for a total loss of nearly 1.3M students in postsecondary institutions since spring 2020.[20] Similarly, in 2021, HS graduation rates dipped in at least 28 states.[21] In CO, after a decade of steady gains, the HS graduation rate dropped by 0.2% in 2021.[22] The data reveal stark inequities: while CO's 2021 HS graduation rate for white students actually increased by 0.6 percentage points to 86.6%, it declined by 0.6 points to 76% for Black students, by 1.2 points to 74.2% for Latinx students, and by 2.2 to 64.5% for Native American students.[23] The dropout rates for Black and Latinx students were more than twice, and the rate for Native American students nearly three times, the rate for white students.[24] DE boosts educational attainment, but disproportionately few students of color in CO participate in DE. In 2019-20, 26.4% of Latinx students, 3.5% of Black students, and 0.5% of Native American students participated in DE, while 52.5% of white students did so.[25]

OPT addresses AP1, AP4, CPP1, and CPP2 by incorporating DE and WBL, both proven

strategies for improving educational attainment for high-need students, and builds the capacity of schools to ensure high-need students can access and succeed in these critical interventions. DE's power to improve HS and postsecondary achievement and attainment are well documented (see section A), and research shows that the positive impact of DE on college access and completion is greatest for low-income students and students underrepresented in higher education.[26] Evidence also suggests that the monetary benefits to students and the public of DE models like early college high schools outweigh the costs, signaling a positive return on investment that is critical for low-income households and people of color.[27] When students participate in meaningful WBL experiences, they not only have higher rates of HS and college completion, but also transition to postsecondary education with a clearer idea of the careers and relevant programs of study they want to pursue. WBL positively affects HS completion and postsecondary enrollment.[28] High-need students who participated in early work experience were 4.4% more likely to graduate from HS on time and 2.5% less likely to drop out,[29] and students who completed a WBL program entered college at double the rate of non-participating students.[30] WBL is a powerful youth engagement strategy that enhances positive adolescent development by cultivating students' social and communication skills, self-awareness, self-confidence, and positive attitudes about the future.[31] Research has demonstrated how WBL supports social capital development and the building of professional networks by high-need students.[32] Professional social capital plays a critical role in career readiness, navigation, and success, setting students up for labor market success by opening doors and serving as a source of information about and access to new career opportunities. It is also a critical element of equitable economic advancement.[33] OPT's approach to employer engagement will include supporting employers to build inclusive, equitable environments for WBL.

While overall postsecondary attainment is critical to career success, too many high-need

students are unfamiliar with their options and struggle to navigate pathways to postsecondary attainment and good jobs.[34] These challenges are especially acute for youth—especially women—of color: 62% of young white men and 50% of young white women in the U.S. have good jobs, as compared to 39% and 32%, respectively, of young Black men and women, and 36% and 29% of young Latinx men and women.[35] Research shows that three key interventions are critical to addressing these challenges: 1) improved college affordability; 2) WBL; and 3) career navigation supports.[36] OPT incorporates all three. First, DE makes postsecondary education more affordable by accelerating time to degree completion[37], thus reducing tuition costs. OPT will also increase the number of high-need students eligible for P4W, which defrays postsecondary education costs for low-income students while allowing them to get a head start on careers and earn up to an additional year of income in their lifetimes. Second, as noted above, WBL is a core component of OPT; it also supports career navigation by providing participants with exposure to the world of work and opportunities to learn about a variety of careers. Third, the CCNC will ensure that all 9th-graders have access to career navigation supports from the beginning of HS, while the CCS will provide additional career navigation supports, including for students most impacted by the COVID-19 pandemic, by fostering partnerships with employers.

The pandemic has compounded educational inequities. School closures, lost instructional time, and other disruptions led to disconnection, learning loss, and reduced academic achievement; these effects were magnified for students experiencing poverty and for Black and Latinx students.[38] In addition, the U.S. Surgeon General has issued an advisory focused on the youth mental health crisis exposed and exacerbated by the pandemic.[39] Nationally, rates of youth disconnection, particularly for youth of color, increased with the pandemic.[40] In CO, high-need students in rural areas have also been hard hit, as the pandemic slashed the travel and tourism on which many of CO's rural economies rely while compounding issues of access to basic services

like transportation and broadband that are essential to accessing education. As described in sections A and B.1, *OPT will address these challenges and CPP2* by assessing youth disconnection and implementing a CCS that supports access and success for high-need students.

C. QUALITY OF THE PROJECT PERSONNEL

C.1. Commitment to Equitable Hiring. The OPT partners are committed to equitable and inclusive recruitment practices that seek and encourage applications from members of groups traditionally underrepresented in professions essential to our work. **JFF's** robust Talent Acquisition function, in partnership with others across JFF's People & Culture Unit, guide the organization's recruitment strategy and practices. These include use of web-based posting platforms, job boards, and networks known to reach or engage a diverse range of active and passive job seekers, particularly members of populations historically underrepresented due to their race, color, national origin, gender, age, or disabilities; eliminating degree preferences from job postings to attract applicants based on their capabilities and experience; and diligently describing jobs in clear language to reduce barriers and bias. Through a recent period of significant growth, these practices, and others, have contributed to greater overall diversity of finalist candidate pools and new hires. For example, as of May 2022, 55% of JFF's new, full-time hires identify as people of color. **CS** "commits to the principles of equal opportunity and places the utmost value on diversity." Its board of directors has adopted this non-discrimination statement, and CS ensures these values are named in job descriptions and seeks diverse candidates by promoting opportunities through numerous channels. CS reflects and/or includes and compensates the voices of the populations it serves, particularly students and families furthest from opportunity. **NORC** is an affirmative action, equal opportunity employer that values and actively seeks diversity in the workforce and evaluates qualified applicants without regard to race, color, religion, sex, national origin, disability, veteran status, and other legally

protected characteristics. NORC's Diversity, Racial Equity, and Inclusion Scholars Program

expands the pipeline of historically underrepresented populations in social science research.

C.2. Personnel Qualifications. Each OPT partner organization will deploy a team of experts

highly qualified for their roles in executing OPT's goals and objectives. Below is a description of

each team member's key responsibilities, with their organizational title and areas of expertise in

parentheses. Further details on personnel qualifications are in the résumés in Appendix B.

JFF team. ███████████████ (Associate Director; DE, WBL, career navigation) will serve

as the *Project Director*, provide oversight for all OPT activities and milestones, manage partner

relationships, provide TA, and lead the creation of deliverables, including the competitive RFP,

OPT Blueprint, and the WBL Toolkit. ███████████ (Sr. Director; DE, WBL, CTE,

CCR) will be a member of the *Project Leadership* team, work in partnership with the Project

Director on overall project leadership and management, provide TA, oversee deliverables, and

serve as the primary advisor for day-to-day OPT implementation leadership. ████████████

(Program Manager; DE, pathways, college access and success) and ████████████ (Program

Manager; DE, early college, EIR implementation) will serve as *Project Managers*, provide TA,

and manage grant activities and timelines. ████████ will lead the student disengagement

assessment and CCNC guidance and supports, and ██████ will lead program of study mapping

and OPT action plans. ████████████ (Director; DE, Project Director for 3 EIR awards), and

████████████ (VP; DE, CCR) will serve as *Senior Advisors* and provide guidance on all TA,

implementation, and documentation strategies.

CS team. ████████████ (Chief of Staff; employer engagement, coalition-building) and

████████████ (Director of Strategic Partnerships; P4W lead, TA) will be members of the

OPT *Project Leadership* team. ██████ will provide overall project oversight, including vision,

strategy, budget, and staff management, for all TA and deliverables. ██████ will provide overall

project management for all CS-led and -supported activities and deliverables, including virtual

learning events and convenings. ████████ (Senior Manager of Strategic Partnerships; cross-

sector partnerships, TA, WBL) will provide TA to schools, particularly for employer

engagement and WBL, and lead site visits. ████████ (Manager of Communications;

dissemination strategies) will support documentation and dissemination.

NORC team. ████████████ (Sr. Research Scientist; postsecondary transitions and

success, mixed-methods research) will serve as the *Principal Investigator* and a member of the

Project Leadership team and lead the implementation study. ████████ (Principal Research

Scientist; RCT, CCR) will lead the impact study for the OPT project.

D. QUALITY OF THE MANAGEMENT PLAN

The OPT partners are an exceptionally qualified team of subject matter experts representing

organizations that are leaders in the fields of DE, WBL, career navigation, and postsecondary

transitions. *JFF*, a national nonprofit and recognized leader in DE, WBL, CTE, CCR, and

pathways with significant experience leading EIR awards and other federal grants and contracts,

will manage and oversee the project and lead TA delivery and documentation and dissemination

of OPT best practices. JFF leads and provides TA to multiple related national networks and

initiatives, including: 1) Pathways to Prosperity, which has supported the design and scale in

nearly 30 states of pathways that improve CCR and include DE, WBL, and career navigation as

core components; 2) the Center for Apprenticeship and WBL; and 3) the College in High School

Alliance, a national coalition that advocates for DE. **CS**, which will lead community asset

mapping and development of student-facing communications materials and support TA delivery,

is a CO-based nonprofit with expertise in career-connected learning and cross-sector partnership

development. CS leads statewide TA to HSs implementing P4W and the Homegrown Talent

Initiative, which supports career-connected learning for HS students in rural communities

statewide. **NORC**, the independent evaluator, is one of the largest social science research organizations in the U.S. with extensive experience designing and conducting large-scale evaluations that produce rigorous and relevant results. NORC has conducted numerous evaluations of educational programs designed to improve student outcomes related to the transition to college and career, with a focus on low-income and first-generation students. The organizational chart (Appendix J) shows the OPT partners' reporting relationships. Table 1 shows responsibilities for leading and supporting OPT milestones and activities, as well as the timeline and associated objectives (O) and performance measures (PM); section C.2. identifies the individual staff members leading work on OPT activities and milestones.

Table 1. Milestones, Timeline (by Year and Quarter), and Responsibilities

OPT Milestones	Timeline	Lead, Support	Os and PMs Met
Goal 1. Expand the number of schools creating OPT opportunities			
Design OPT Blueprint	Y1/Q1-3	**JFF**	O.1.; PM.1
Select schools and award funding	Y1/Q3-4	**JFF,** CS	
Create marketing and communications tools	Y1/Q3-4	**CS**	O.2.; PM.2a-2b
Goal 2. Implement a CCNC, strategic DE aligned to promising postsecondary credentials, and high-quality WBL options aligned with labor-market demand			
Develop CCNC guidance and supports	Y1/Q3-4	**JFF**	O.3.; PM.3a-3b
Map programs of study for each school	Y2/Q1-2	**JFF**	O.4-5.; PM.4a-5b
Create WBL Toolkit	Y2/Q1-2	**JFF,** CS	O.6.; PM.6a-6b
Develop OPT action plans with schools	Y2/Q1-2	**JFF,** CS	O.7-8.; PM.7a-8a
Coach schools to implement OPT	Y2-5/Q1-4	**JFF,** CS	

Visit individual sites	Y2-4/Q3-4	**CS,** JFF	jff.org
Host 3 OPT learning events per year	Y2-5/Q2	**JFF,** CS	O.9.; PM.9a-9c
Goal 3. Foster cross-sector partnerships to provide high-need students with a CCS			
Map community assets and plan CCS	Y2/Q1-4	**CS,** JFF	O.10-11.; PM.10a-
Assess student disengagement	Y2-4/Q2	**JFF**	11a
Facilitate annual cross-sector meetings	Y2-4/Q4	**CS,** JFF	O.12.; PM.12a-12b
Goal 4. Disseminate promising practices and lessons learned to a national audience			
Develop an OPT dissemination plan	Y3/Q1	**JFF,** CS	O.13.; PM.13a-13c
Document OPT in 2 publications	Y3-5/Q1-4	**JFF,** CS	
Present at 2 national conferences	Y4-5/Q1-4	**JFF,** CS	
Host 3 national webinars	Y4-5/Q1-4	**JFF,** CS	
Project Management			
Develop and manage project plans	Y1-5/Q1-4	**JFF**	
Hold bi-weekly TA team meetings	Y1-5/Q1-4	**JFF,** CS, NORC	
Hold monthly leadership team meetings	Y1-5/Q1-4	**JFF,** CS, NORC	
Share and post OPT tools on websites	Y2-5/Q1-4	**JFF,** CS	
Share formative evaluation findings	Y3-5/Q1	**NORC**	
Share summative evaluation findings	Y3-5/Q1	**NORC**	

E. QUALITY OF THE PROJECT EVALUATION

NORC will conduct a rigorous, independent evaluation of OPT that will 1) provide formative feedback to guide OPT development; 2) measure the extent to which OPT is implemented as intended; and 3) estimate the impact of OPT on student CCR outcomes. The implementation study will support continuous improvement to refine OPT components and produce measures of

fidelity of implementation. The impact study will use a rigorous cluster randomized controlled trial (RCT) designed to meet WWC standards without reservations. The evaluation will address the nine research questions (Table 2) aligned with the OPT logic model (Appendix G). The timing of data collection is included in Appendix J.

Table 2. Research Questions and Data Sources

Type	Research Question (RQ)	Data Sources
Confirmatory	1. What is the effect of OPT on students' CCR?	National Student Clearinghouse (NSC) data; administrative data (AD); student survey (SS)
	2. ... on students' HS and college credit attainment?	SS; AD
	3. ... on students' eligibility for accelerated HS graduation?	AD; SS
	4. ... on students' postsecondary enrollment and participation in training programs?	NSC data; SS
Moderation	5. To what extent do student characteristics moderate the effect of OPT on student outcomes?	AD
Implementation	6. What are the core components of OPT?	Staff and OPT coaches interviews; staff survey; SS; student focus group
	7. To what extent is OPT implemented as intended?	
	8. What factors help or hinder the implementation of OPT?	
Mediation	9. To what extent do OPT components mediate the effect of OPT on student outcomes?	AD

E.1. Production of Evidence that Meets What Works Clearinghouse Standards

NORC will conduct a rigorous cluster RCT in which schools will be randomly assigned to

treatment and control conditions. The impact study will address research questions (RQ) 1-4,

examining the effect of OPT on CCR, HS and college credit attainment, accelerated paths to HS

graduation, and postsecondary enrollment and participation in training programs (Table 3). All

measures meet WWC face validity and reliability requirements and will be collected from both

treatment and control schools during the same data collection windows.

Table 3. Impact Evaluation Outcomes by Research Question and WWC Domain

WWC Domain by RQ	Outcome
RQ1. CCR	
College Readiness	Applying to college; applying for financial aid; completing college requirements in HS, including DE participation and credits
Persistence in HS	Secondary school enrollment status
School Attendance	Secondary school attendance
HS Completion	HS diploma or a recognized equivalent
RQ2. HS and college credit attainment	
Progressing in School (HS)	HS credits earned
RQ3. Accelerated paths to HS graduation	
HS Completion	HS diploma/credential timing
RQ4. Postsecondary enrollment and participation in training programs	
College enrollment	Applying to college; enrolling in college; number of admitted institutions; completion of an industry-recognized credential, certificate, or license

NORC will randomly assign one cohort of 40 schools in the fall of 2023 to the treatment or

control condition to enable development, training, and coaching activities for the treatment

schools to begin in spring 2024. Control schools will continue with business as usual activities in spring 2024. Consenting schools will have a 50% chance of being assigned to either condition. After assignment, NORC will assess the equivalence of the treatment and control schools using measures of students' socioeconomic status and prior achievement (8th-grade English Language Arts state standardized test scores). If there are differences of 0.25 standard deviations (SD) or larger between treatment and control groups at the time of randomization, we will perform rerandomization to improve covariate balance and decrease bias due to random imbalances[41].

Both overall and differential attrition are expected to be low. Schools will be recruited from the pool of schools implementing P4W that have a demonstrated interest in improving CCR outcomes. The data for the impact study will be obtained primarily through administrative records: measures of secondary school outcomes, demographic and background characteristics, and school-level characteristics from districts; measures of outcomes after secondary school will be obtained from the NSC. For other data, we will schedule the OPT data collection to provide multiple participation opportunities and offer a $30 incentive to students for focus group participation. This approach will allow NORC to perform an Intent-to-Treat (ITT) analysis in which students will be included in the analysis based on original assignment, regardless of receipt of OPT treatment, to estimate the effects of the OPT project on the outcomes of interest. Although attrition is expected to be low, NORC will verify the equivalence of the treatment and control groups at baseline for each analytic sample using measures of students' socioeconomic status and prior achievement. To increase precision, the analytic models will include all student baseline covariates. NORC will use multiple imputation to address missing data.

NORC will use a two-level hierarchical linear model (HLM), with students nested within schools, to estimate the effects of OPT on student outcomes. Within the two-level HLM framework, the ITT effect can be estimated by:

Level 1 (student): $Y_{ij} = \beta_{0j} + \beta_{1j}X_{ij} + \varepsilon_{ij}$

Level 2 (school): $\beta_{0j} = \gamma_{00} + \gamma_{01}T + \gamma_{02}W_j + u_{0j}$

$$\beta_{1j} = \gamma_{10}$$

where Y_{ij} is the outcome of interest for student i in school j; T is an indicator for the OPT treatment; and ε_{ij} and u_{0j} are normally-distributed errors with mean 0. The parameter estimate, γ_{01}, provides a covariate-adjusted estimate of the effect of the T. Hypothesis tests for these estimates will determine if the component has a statistically significant impact on the given outcome. A standardized effect size will be calculated by dividing the impact estimate by the pooled SD derived from the unadjusted sample SDs for the outcome in the treatment and control groups. For both binary and continuous outcomes, the model yields unbiased estimates of the intervention impact. The covariates, X_{ij}, including background characteristics of students and their prior academic outcomes, will be assessed for inclusion in the model using backward elimination. The school indicators in W_j will be included in the model regardless of coefficient significance.

To explore the extent to which student characteristics moderate the effect of OPT on student outcomes (RQ5), we will include subgroup-by-treatment effect interaction terms in the impact regression models. To estimate the effects for subgroup Z_{ij} that is one of the X_{ij} covariates, we add $\delta\, TZ_{ij}$ to the model, where the subgroup variable is interacted with the treatment condition. In this model, the δ measures variation in impact for the subgroup. We can then conduct a standard t-test to determine if the difference is statistically significant. Because testing multiple hypotheses increases the likelihood of identifying spurious relationships, we will follow the WWC's convention in adjusting the hypotheses tests' critical p-values within a domain using, for example, the Benjamini-Hochberg (1995) adjustment.

The minimum detectable effect size (MDES) for the student outcomes analyses is 0.195. This MDES assumes an average of 60 high-need students in grade 9 per school in each of the 20 treatment and 20 comparison schools, that 5% of the variation in student outcomes is between schools, that student prior achievement and background covariates account for 50% of the student-level variation in outcomes, and that school characteristics explain 25% of the variation in between-school variation.

E.2. Performance Feedback and Assessment of Progress

NORC will provide timely feedback on evaluation activities, program implementation, and progress toward achieving project objectives. NORC will meet at least monthly with OPT leadership to discuss progress on evaluation activities, including obtaining data use agreements, developing data collection protocols, IRB activities, conducting qualitative data collection, and cleaning and analyzing implementation and outcome data. The discussion will also raise any challenges that have been encountered and identify potential solutions. Additionally, NORC will hold an annual virtual summer meeting with OPT leadership to provide formative feedback collected from the prior school year. Feedback obtained from surveys, interviews, and focus groups can be used to inform discussions on possible changes in program implementation in the upcoming year. NORC will create mid-implementation reports in Year 4 for each participating school summarizing school-specific findings from the qualitative data collections and descriptive student analyses. Each year, NORC will also develop an evaluation brief that documents information on implementation and provides interim findings from the impact, moderator, and mediator analyses, as appropriate. Finally, NORC will support OPT in assessing progress toward achieving project goals and objectives by assisting with the construction and analysis of performance measures required for their annual performance report.

E.3. Articulation of Components, Mediators, Outcomes, and Measurable Threshold

NORC will assess OPT project implementation across schools and districts to confirm the core components and investigate the extent to which OPT is implemented as intended. OPT supports, training, and coaching aid schools in implementing the project and we will investigate how the frequency of activities and quality of implementation mediate the impact of OPT. The logic model (Appendix G) includes mediators, outcomes, and the key components: (1) TA participation, (2) CCNC, (3) strategic DE, (4) WBL, and (5) CCS. Appendix J indicates the preliminary threshold for each component. NORC will collaborate with the OPT partners to finalize the measurable threshold for adequate implementation and develop an appropriate index. All schools implementing OPT will be included in the implementation evaluation.

NORC will use a combination of program records and primary data to determine if OPT is implemented as intended and for formative feedback. During each implementation year, we will collect data on the key components through the staff survey and site visits, which will include interviews with OPT coaches and school staff, and student focus groups with up to 10 students (excluding Year 4). For all training and coaching sessions, OPT project staff will share attendance records and records such as date and topics. NORC will also collect data on factors that help or hinder implementation during site visits though the staff interviews and student focus groups, which will provide information on contextual factors and students' engagement. NORC will share initial summaries as soon as possible and findings from the site visits annually to support continuous improvement of OPT.

NORC will explore the extent to which OPT components mediate the effect of the project on students' CCR, credit attainment, accelerated paths to HS graduation, and postsecondary enrollment. We will use multilevel modeling procedures outlined in Krull & MacKinnon (2001) to identify which program components are related to student outcomes if the impact study finds statistically significant effects.[42]

F. PROJECT NARRATIVE REFERENCES

[1] In addition to general dual enrollment (DE) programs, Colorado offers a DE model referred to in the state as "Concurrent Enrollment" that requires that courses be: 1) taught by postsecondary faculty; 2) transferrable to any institution of higher education in the state; and 3) offered at no cost to students. Early college high school and P-TECH programs are considered Concurrent Enrollment. (For more information, see:

https://highered.colorado.gov/Publications/Reports/Enrollment/FY2020/2020_Concurrent_Enrollment_July_2021.pdf) DE courses offered as part of the OPT model may be either dual or concurrent enrollment; however, schools will be encouraged to expand concurrent over dual enrollment models. References to DE throughout this proposal encompass both.

[2] What Works Clearinghouse. *Transition to College Intervention Report: Dual Enrollment Programs* (Institute of Education Sciences, U.S. Department of Education, 2017).

https://ies.ed.gov/ncee/wwc/Docs/InterventionReports/wwc_dual_enrollment_022817.pdf; Andrea Berger et al. *Early College, Early Success: Early College High School Initiative Impact Study* (American Institutes for Research, 2013).

https://www.air.org/sites/default/files/downloads/report/ECHSI_Impact_Study_Report_Final1_0.pdf; Julie A Edmunds et al. "Smoothing the Transition to Postsecondary Education: The Impact of the Early College Model," *Journal of Research on Educational Effectiveness* (2015).

http://dx.doi.org/10.1080/19345747.2016.1191574.

[3] What Works Clearinghouse. *Transition to College Intervention Report: Dual Enrollment Programs.*

[4] What Works Clearinghouse, *Transition to College Intervention Report: Dual Enrollment Programs*.

[5] Michelle Dixon and Rachel Rosen. O*n Ramp to College: Dual Enrollment Impacts from the Evaluation of New York City's P-TECH 9-14 Schools. (*New York: MDRC, 2022). See also the WWC review of this study at https://ies.ed.gov/ncee/wwc/Study/89818.); "University of North Carolina at Greensboro: The Evaluation of Career and College Promise," Career and Technical Education Research Network, n.d., accessed June 13, 2022,

https://cteresearchnetwork.org/research/evaluation-career-and-college-promise.

[6] John Fink et al. "From 'Random Acts' and 'Programs of Privilege' to Dual Enrollment Equity Pathways," *The Mixed Methods Blog,* Community College Research Center, Teachers College, Columbia University, April 4, 2022, https://ccrc.tc.columbia.edu/easyblog/introducing-dual-enrollment-equity-pathways.html

[7] Leah Moschella and Julia di Bonaventura. *Promising Credentials: Aligning Dual Enrollment with Health Care Labor Market Needs.* (Boston, MA: Jobs for the Future, 2018). https://jfforg-prod-new.s3.amazonaws.com/media/documents/GL_Rockford_HS_Promising_Credentials_FINAL.pdf

[8] Center for Advanced Research and Technology (CART). *A Model for Success: CART's Linked Learning Program Increases College Enrollment* (Center for Advanced Research and Technology, 2011). https://irvine-dot-org.s3.amazonaws.com/documents/60/attachments/cart_findings_report_final.pdf?1416865594

[9] Martha Ross et al, *Pathways to High-Quality Jobs for Young Adults* (Washington, DC: The Brookings Institution and Child Trends, 2018), https://www.brookings.edu/research/pathways-to-high-quality-jobs-for-young-adults/.

[10] Sean Seymour and Julie Ray. "Useful Internships Improve Grads' Chance of Full-Time Work," *Gallup,* November 20, 2014. https://news.gallup.com/poll/179516/useful-internships-improve-grads-chances-full-time-work.aspx;

Anthony P. Carnevale et al. *Learning While Earning: The New Normal* (Washington, DC: Georgetown University Center on Education and the Workforce,

2015). https://cew.georgetown.edu/wp-content/uploads/Working-Learners-Report.pdf

[11] For more information on WBL incentives in Colorado, see Senate Bill 22-140 (https://leg.colorado.gov/bills/sb22-140). Students may also earn postsecondary credit for WBL that they participate in as part of OPT. In 2020, CO passed legislation that allows students to earn postsecondary credit by demonstrating competencies gained through WBL, including WBL that they participated in while in HS. See: https://coloradosucceeds.org/college-credit-for-work-experience-changes-the-game/.

[12] Melinda Mechur Karp et al, "Revising a College 101 Course for Sustained Impact: Early Outcomes," *Community College Journal of Research and Practice* 41, no. 1 (2017): 42-55, https://doi.org/10.1080/10668926.2016.1152929.

[13] Mary Gatta and Nancy Hofftman, *Putting Vocation at the Center of the Curriculum: The Student experience in CUNY's Ethnographies of Work Course* (Boston, MA: Jobs for the Future, 2018), https://jfforg-prod-new.s3.amazonaws.com/media/documents/Vocation_at_Center_of_Curriculum_FINAL.pdf.

[14] A. Brooks Bowden and Joan Wasser Gish, "Small investments for big gains: Transforming wraparound services into an engine of opportunity," *Brown Center Chalkboard*, Brookings, April 26, 2021, https://www.brookings.edu/blog/brown-center-chalkboard/2021/04/26/small-investments-for-big-gains-transforming-wraparound-services-into-an-engine-of-opportunity/.

[15] P4W provides low-income students a financial incentive of the greater of 75% of the FY 2021-22 average state share of per-pupil revenue or $3,500 if they graduate high school within 3 years (or, if they graduate before the second semester of their fourth year, the greater of 45% or $2,000). Schools, in turn, receive 25% of the average state funding allocation for each student, and they are encouraged to direct this funding towards academic counseling and support for P4W students.

[16] Anthony P. Carnevale et al. *The Uncertain Pathway from Youth to a Good Job: How Limits to Educational Affordability, Work-Based Learning, and Career Counseling Impede Progress toward Good Jobs* (Washington, DC: Georgetown University Center on Education and the Workforce, 2022). https://cew.georgetown.edu/pathway.

[17] Anthony P. Carnevale et al. *Three Educational Pathways to Good Jobs: High School, Middle Skills, and Bachelor's Degree* (Washington, DC: Georgetown University Center on Education and the Workforce, 2018). https://cew.georgetown.edu/wp-content/uploads/3ways-FR.pdf.

[18] Lumina Foundation. *A Stronger Nation: Learning Beyond High School Builds American Talent* (Lumina Foundation, 2022). https://www.luminafoundation.org/stronger-nation/report/#/progress.

[19] "We are tracking Colorado's progress," *A Stronger Nation: Learning Beyond High School Builds American Talent,* Lumina Foundation, 2022, https://www.luminafoundation.org/stronger-nation/report/#/progress/state/CO.

[20] "Spring 2022 Current Term Enrollment Estimates. National Student Clearinghouse Research Center," National Student Clearinghouse Research Center, May 26, 2022, accessed July 17, 2022, https://nscresearchcenter.org/current-term-enrollment-estimates/.

[21] Matt Barnum, Kalyn Belsha, and Thomas Wilburn, "Graduation rates dip across U.S. as pandemic stalls progress," *Chalkbeat*, January 24, 2022,

https://www.chalkbeat.org/2022/1/24/22895461/2021-graduation-rates-decrease-pandemic;

https://www.twincities.com/2022/03/30/mn-high-school-graduation-rate-falls-breaking-12-year-run/; AnnMarie Hilton and Rory Linnane, "In the first full school year during the COVID-19 pandemic, more students were chronically absent and graduation rates down," *Milwaukee Journal Sentinel*, March 9, 2022,

https://www.jsonline.com/story/news/education/2022/03/09/wisconsin-high-school-graduation-rate-decreases-during-covid-pandemic/9425384002/.

[22] "Colorado's four-year graduation rate dips for first time in a decade," *Colorado Department of Education*, January 11, 2022,

https://www.cde.state.co.us/communications/graddropout22newsrelease.

[23] Colorado Department of Education, "Colorado's four-year graduation rate dips for the first time in a decade."

[24] Colorado Department of Education, "Colorado's four-year graduation rate dips for the first time in a decade."

[25] Colorado Department of Higher Education and Colorado Department of Education, *Pathway to Affordability: Annual Report on Dual and Concurrent Enrollment in Colorado,* July 2021, https://highered.colorado.gov/Publications/Reports/Enrollment/FY2020/2020_Concurrent_Enrollment_July_2021.pdf.

[26] College in High School Alliance. *College in High School Programs: What the Research Says* (Washington, DC: College in High School Alliance, n.d.).

https://static1.squarespace.com/static/589d0f90ff7c507ac483988e/t/60c3c093333d28054f70e5db/1623441555926/Advocacy+-+What+the+Research+Says+About+College+in+High+School+Programs.pdf.

[27] Drew Atchison et al. *The Costs and Benefits of Early College High* Schools (Washington, DC: American Institutes for Research, 2019). https://www.air.org/sites/default/files/2021-07/Costs-Benefits-Early-College-High-Schools-508-report-Dec-2019.pdf.

[28] M. Felicity Rogers-Chapman and Linda Darling-Hammond. *Preparing 21st Century Citizens: The Role of Work-Based Learning in Linked Learning* (Palo Alto, CA: Stanford Center for Opportunity Policy in Education, 2013). https://edpolicy.stanford.edu/library/publications/983.

[29] Alicia Sasser Modestino and Richard Paulsen, "School's Out: How Summer Youth Employment Programs Impact Academic Outcomes," *Education Finance and Policy*, 2022: 1-54. https://doi.org/10.1162/edfp_a_00371.

[30] Center for Advanced Research and Technology (CART). 2011. *A Model for Success: CART's Linked Learning Program Increases College Enrollment.* https://irvine-dot-org.s3.amazonaws.com/documents/60/attachments/cart_findings_report_final.pdf?1416865594

[31] Laura H. Lippman et al. *Key "Soft Skills" That Foster Youth Workforce Success: Workforce*

Connections: Toward a Consensus Across Fields (USAID, Child Trends, and FHI 360,

2015). https://www.childtrends.org/wp-content/uploads/2015/06/2015-24WFCSoftSkills1.pdf.

[32] Carnevale et al, *The Uncertain Pathway from Youth to a Good Job.*

[33] "Building Professional Social Capital for Black Learners and Workers," Jobs for the Future,

2022, accessed June 13, 2022, https://info.jff.org/socialcapital;

Peter Scales, Ashley Boat, and Kent Pekel. *Defining and Measuring Social Capital for Young*

People: A Practical Review of the Literature on Resource-Full Relationships. (Search Institute,

2020). https://www.search-institute.org/wp-content/uploads/2020/05/SOCAP-Lit-

Review.pdf?__hstc=75443661.7906b386ac8f03766566eee0b4b32964.1655206128619.1655206

128619.1655206128619.1&__hssc=75443661.1.1655206128619&__hsfp=3504568010;

 "Innovator Spotlight: Julia Freeland Fisher Explains How to Make Social Capital Work for

Excluded Communities," Strada Education Network, November 15, 2019, accessed June 15,

2022, https://stradaeducation.org/adult-learners/innovator-spotlight-julia-freeland-fisher-

explains-how-to-make-social-capital-work-for-excluded-communities-2/.

[34] Anthony P. Carnevale, Stephen J. Rose, and Ban Cheah, *The College Payoff: Education,*

Occupations, Lifetime Earnings (Washington, DC: Georgetown University Center on Education

and the Workforce, 2021). https://cew.georgetown.edu/cew-reports/the-college-

payoff/#resources.

[35] Carnevale et al. *The Uncertain Pathway from Youth to a Good Job*.

[36] Carnevale et al. *The Uncertain Pathway from Youth to a Good Job*.

[37] John Fink, Davis Jenkins, and Takeshi Yanagiura. *What Happens to Students Who Take*

Community College "Dual Enrollment" Courses in High School (New York: Community

College Research Center, Teachers College, Columbia University and National Student Clearinghouse Research Center, 2017). https://ccrc.tc.columbia.edu/media/k2/attachments/what-happens-community-college-dual-enrollment-students.pdf.

[38] Thomas Kane. "Kids Are Far, Far Behind in School," *The Atlantic*, May 22, 2022. https://www.theatlantic.com/ideas/archive/2022/05/schools-learning-loss-remote-covid-education/629938/. See also: Megan Kuhfeld, James Soland, and Karyn Lewis. "Test Score Patterns Across Three COVID-19-impacted School Years," *EdWorkingPaper*, 22-52 (2022): Annenberg Institute at Brown University. https://doi.org/10.26300/ga82-6v47.

[39] "U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic," U.S. Department of Health and Human Services (press release), 2021. https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html.

[40] Kristen Lewis, *A Disrupted Year: How the Arrival of COVID-19 Affected Youth Disconnection* (New York: Measure of America, Social Science Research Council, 2022). https://measureofamerica.org/youth-disconnection-2022/.

[41] Kari Lock Morgan and Donald B. Rubin, "Rerandomization to improve covariate balance in experiments," *The Annals of Statistics* 40, no. 2 (April 2012): 1263-1282, https://doi.org/10.1214/12-AOS1008.

[42] Jennifer L. Krull and David P. MacKinnon, "Multilevel modeling of individual and group level mediated effects," *Multivariate Behavioral Research* 36, no. 2 (April 2001): 249-277, https://doi.org/10.1207/S15327906MBR3602_06.