CCRC COMMUNITY COLLEGE RESEARCH CENTER

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Rethinking Dual Credit As an Onramp to **Talent Strong Texas Pathways**

Davis Jenkins Maggie Fay

Leading Talent Strong Texas Pathways April 12, 2023 **Dallas**, Texas





Texas employers in many industries are seeking diverse talent to fill entry-level career-path jobs. These jobs pay living-wages and benefits to start and provide opportunities for career advancement through on-the-job learning and employersupported training and education.

Entry-level, career-path jobs typically require at least an AAS, if not a baccalaureate degree.



Source: TPEIR, https://www.texaseducationinfo.org/ViewReport.aspx



Most Texas community college graduates are earning credentials associated with less than a living wage two years after completion.

Earnings Levels of Awards by Race and Gender

IPEDS Awards & College Scorecard Data

76,080 awards conferred in 2020-21 State: Texas, Institution: All



Texas grads with AAs in liberal/general studies—the most common degree awarded by TX colleges—are on average not earning living wages two years later.



earned \$51,000 on avg. two years later

CCRC

Transfer AAs are valuable only if students can apply their credits toward a BA **in their major field of interest**...

...Yet too many Texas community college students lose credits when they transfer.

Excess Credits and Years to Complete a Degree at Public Institutions in Texas

Excess semester credit hours attempted



Source: Texas Higher Education Coordinating Board, 2021 THECB Almanac. <u>https://reportcenter.highered.texas.gov/agency-publication/almanac/2021-texas-public-higher-education-almanac/</u>.

Years to degree





Where is the greatest opportunity to build talent for Texas?

Educational Attainment of Persons Age 25 Years and Older by Race/Ethnicity, Texas, 2015



Source: Texas Association of State Senior College and University Business Officers, 2021. https://demographics.texas.gov/Resources/Presentations/OSD/2021/2021_01_26_TexasAssociationofStateSeniorCollegeandUniversity.pdf.

| | | Bachelor, | | | | | |
|------|---------|-----------------|--|--|--|--|--|
| | 15.0% | Graduate, | | | | | |
| 5.9% | | Professional | | | | | |
| | 24.0% | Degree | | | | | |
| | | Some College or | | | | | |
| | | Associate | | | | | |
| | 27.5% | Degree | | | | | |
| | | High School or | | | | | |
| | | Equivelant | | | | | |
| | 33.6% | | | | | | |
| | | Less than High | | | | | |
| A | II Othe | School | | | | | |



Too many Texas students from underrepresented groups are lost in the transition from high school to college. Fixing that leaky pipeline would substantially increase the supply of talent for Texas's future (and build new enrollments for colleges).

Texas Student Pipeline by Race/Ethnicity, Transition Rates from 8th Grade to College Completion





Guided Pathways early adopter colleges are partnering with employers, K-12 schools and universities to build cross-sector education pathways for students from under-represented communities to advance upward mobility and talent development for their communities.

Using Guided Pathways to Build Cross-Sector Pathways Partnerships

October 2021









Colleges are working with employers and universities to **ensure** programs lead to career-path employment or transfer in a major, and with K-12 schools to **motivate** and prepare students from underrepresented groups to pursue postsecondary careerpathway programs after high school.

Cross-Sector Pathways

Employers, Universities, and K-12 Schools

Facilitated by internal changes, community colleges build stronger connections with employers, universities, and K-12 schools to break down barriers students face.



The creation of pathways between community colleges and partners in other sectors completes the cross-sector pathways approach.



Innovations in employer partnerships improve programs of study that lead to family-supporting jobs that are in demand in the region, and they oreate opportunities for experiential learning.



Employers & Workforce Intermediaries

Innovative Cross-Sector Practices

Strategies for Relationship

6 Future Directions



Cross-Sector Pathways Versus the Status Quo

The aim of these partnerships is to reach out to underrepresented students on a large scale and **enrich their experience** in ways that enhance learning and *motivate* and support them across their entire educational journey especially at key transition points between sectors.

The cross-sector pathways approach aims to affect the entirety of the student's journey.

In the following, we consider how Jada's experiences are shaped by two different educational approaches—the conventional "siloed" approach and the regional cross-sector pathways approach.



Meet Jada

Jada is 18 years old and will be the first person in her family to attend college. She has some different career interests, but she's not sure what direction she should go in. She thinks going to college will help her build a good future for herself, but she's also uncertain about what to expect.



CCRC | WestEd 12

Jada's Experience

CCRC | WestEd 14

The Cross-Sector Pathways Approach

Jada's cross-sector pathways experience is characterized by greater support to help her understand, plan, and succeed in college and career. There is greater guidance as she transitions from one sector to the next.



High School

- · Learns about careers and colleges in high school courses and through outreach events by community colleges
- Takes dual enrollment courses that align with her interests and provide an on-ramp to a program of study
- Has opportunities to speak with faculty and staff in a field of interest at the community college



- Participates in onboarding that focuses on exploring options and choosing a program aligned to her interests and goals Participates in advising that is
- field-specific and focused on developing and updating a fullprogram educational plan Learns about careers and op-
- tions for transfer Gets hands-on experience in her
- field through experiential learning embedded in her program
- · Creates a clear plan to transfer



Universit

- Transfers with junior standing in her major and is on track to graduate in a timely fashion
- Knows departments and services that are available to support transfer students
- Uses college and employer connections to secure experiential learning opportunities (service learning, internships, apprenticeships, cooperative education) that increase her employment prospects after

graduation



- · Feels prepared to begin her career due to her coursework and experiential learning opportunities
- Has connections with faculty and employers that can help inform her future plans for career or education





The growth of dual credit in Texas creates an opportunity to build onramps to postsecondary career pathways for students from underrepresented groups.



Community Colleges

Expansion of dual credit in Texas concentrated at community colleges.

Dual credit makes up a growing proportion of Texas community college enrollment.

| 30% | | | | | | | | | | | | | | | |
|------|------|------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0070 | | | | | | | | | | | | | | | |
| 25% | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 20% | | | | | | | | | | | | | | | |
| 15% | | | | | | | | | | | | | | | 14% |
| 1070 | | | | | | | | | 110/ | 12% | 13% | 12% | 12% | 13% | |
| 10% | | | | | | | | 10% | 11% | | | | | | |
| | | | E 0/ | 5% | 6% | 7% | 7% | | | | | | | | |
| 5% | 3% | 4% | 5% | | | | | | | | | | | | |
| 00/ | | | | | | | | | | | | | | | |
| U 70 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |

Source: CCRC analysis THECB Dual Credit Data, showing the percent of Fall Enrollment from dual credit



2014 2015 2016 2017 2018 2019 2020



As Dual credit has grown, it has better reflected TX's racial/ ethnic diversity, but there is still room for improvement.



Source: CCRC analysis THECB Dual Credit Data, TEA Enrollment, https://rptsvr1.tea.texas.gov/adhocrpt/adste.html.



CCRC

Former Texas DC students increasingly do well in college after high school, but more could be earning degrees.

■ FTIC (post-HS), with Prior DC ■ FTIC, No Prior DC

Completion Rates among Former DC Students who Enrolled at Any TX Public College or University Post-HS



Source: CCRC analysis of THECB Dual Credit Data.

CCRC

Research Evidence on the Benefits of HS Dual Enrollment

- Accumulation of descriptive and quasiexperimental evidence for dual enrollment, stronger experimental evidence on effects of ECHS & P-TECHs
- ✓ WWC Report: Positive effects of taking college courses in HS include stronger HS grades, more HS completion, more college enrollment, more credit accumulation, more degree completion.
- Yet, substantial state and institutional variation in post-HS college outcomes among former DE students



What is Dual Enrollment?

In dual enrollment (DE), high school students a the assignments that would normally be complet they are given a final grade on a college transcript college degree. Dual enrollment programs differ f Baccalaureate programs in that students take coll college-level content.

DE programs vary widely in terms of how many ourses take place (on college or high school ca or high school teachers who qualify as college ad

The most recent national data (2002-2003) sho opportunities and that 800,000 high school st school year

Why Dual Enrollment?

Colleges and school districts have begun to emb college attendance and persistence among stude college. Participation in DE can help these stud realistic idea of what college requires and giving the added benefit of potentially reducing the co credit and shortening time to a degree.

Dual enrollment programs may be nefit instit and high schools an opportunity to come toget urriculum alignment. Colleges and high schoo lual enrollment and often go on to jointly desig services that better prepare students for college

Who Benefits from Dual En n some places, dual enrollment programs o the national and state focus has moved toward r

and middle-achieving students. Nevertheless, s ninimum GPA for students to participate. fectiveness

esearch³

Dual Enrollm am Description

Dual enrollment programs all courses and earn college cred Such programs, also referred t grams, are designed to boost especially for students typicall tion. Dual enrollment programs and degree attainment via at I high school students to expe prepare for the social and acad having the additional supports this may reduce the need for c students who accumulate coll more likely to attain a college programs offer discounted or cost of college and may incre status students who can atter

The What Works Clearinghou enroliment programs that both to College topic area and me studies meet WWC group de three studies meet WWC grou Together, these studies include the United States

The WWC considers the exte student outcome domains-d pleting high school, and gen for dual enrollment programs t readiness, attendance (high so WWC group design standards vention report does not report tiveness Summary on p. 6 for I

Dual enrollment programs we access and enrollment, credit school), with a medium to larg dance (high school) domains

al Enrollment Programs Feb

What Happens to Students Who Take Community **College "Dual Enrollment" Courses in High School?**

U.S. DEPARTMENT OF EDUC

Ies Institut



September 2017

CCRC COMMUNITY COLLEGE RESEARCH CENTER

NATIONAL STUDENT CLEARINGHOUSE RESEARCH CENTER

John Fink Community College Research Center Teachers College, Columbia University

Davis Jenkins Community College Research Center Teachers College, Columbia University

Takeshi Yanagiura Community College Research Center Teachers College, Columbia University

CCRC

Recent quasi-experimental studies highlight the potential of DC course-taking for increasing equity in college success.

- Dual Enrollment can benefit students who are falling behind in HS (Lee & Villarreal, 2022)
- Dual Enrollment math can boost Black & Hispanic student entrance and persistence in STEM (Minaya, 2021)

JOURNAL OF EDUCATION FOR STUDENTS PLACED AT RISK (JESPAR) https://doi.org/10.1080/10824669.2022.2100994

Enrollment Courses?

Han Bum Lee^a and Michael U. Villarreal^b

^aUrban Education Institute, University of Texas at San Antonio; ^bDep and Policy Studies, University of Texas at San Antonio

ABSTRACT

This study examined the effect of dual enrollment (DE) on enrollment and degree completion for students with lowe academic achievement who attended public high schools in We employed a propensity score matching method to reduce tion bias arising from DE participation and supplemented the a with a bounds test. The results showed that DE students we dicted to have a higher likelihood of entering college imme after high school by 20 percentage points and completing a within four and eight years of high school graduation by 7 percentage points, respectively, compared to similar studen did not take DE courses. This evidence suggested that DE pro contributed to a reduction in educational inequities in college and degree attainment for students at risk of academic fail the other hand, students who were racial or ethnic minoriti students from low-income families were not only less likely ticipate in DE programs but were also predicted to have participation effects on college degree attainment than their terparts, stressing the need for higher education institution partnering school districts to provide more robust support to underserved students for participating in DE programs and a successful transition into college.

Dual enrollment (DE) programs, also known as dual cre provide high school students with an opportunity to t simultaneously earn high school and college credits (Barne of the programs claim that DE participation can i) in and confidence in ability to complete college-level cours (Attewell, Heil, & Reisel, 2012); ii) offer an opportunity of academic and career courses, enabling to expand st particular fields of interest; iii) expose students to colleg making college familiar (Karp, 2012); iv) reduce the fina ing college degree by earning college credits while in Hughes, Jeong, & Bailey, 2007), and v) signal to colleg and will be successful in college (Hoffman, Vargas, & Sa

CONTACT Han Bum Lee 🖾 hanbum.lee@utsa.edu 💽 Urban Education Ins 501 W. Cesar Chavez Blvd., San Antonio, TX 78207, USA © 2022 Taylor & Francis Group, LLC

Routledge Taylor & Francis Group

Check for updates

Should Students Falling Behind in School Take Dual



TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Can Dual Enrollment Algebra Reduce Racial/Ethnic Gaps in Early **STEM Outcomes? Evidence from Florida**

Summary Research Report

Veronica Minaya

February 2021

Address correspondence to:

Veronica Minava Senior Research Associate Community College Research Center Teachers College, Columbia University 525 W. 120th St., Box 174 New York, NY 10027 212-678-3091 Email: vmm2122@tc.columbia.edu

Funding for this study was provided by the Bill & Melinda Gates Foundation. The findings and conclusions contained within are those of the author and do not necessarily reflect positions or policies of the foundation.

- Students who earn AAs through ECHSs often not able to apply credits to their desired major.
- P-TECHs do prepare for career-path employment, and Texas is growing them, but there are only 30K Texas P-TECH students currently and most students don't want to earn associate in high school.
- Most DC in Texas is "random acts" coursetaking with limited advising, which is not well designed to help guide and prepare students without clear college plans to pursue a career-pathway program after high school.

Texas ECHS Transfer Credit Loss

Transfer credits

accepted toward

BA

Texas Early College High School Students: Transfer Credits Accepted toward BA





What can be learned from high schools and colleges that are more effective in serving students of color through dual enrollment?

aspeninstitute

CCRC

The Dual Enrollment Playbook

A Guide to Equitable Acceleration for Students

Source: CCRC. October 2020. https://ccrc.tc.columbia.edu/publications/dual-enrollment-playbook-equitable-acceleration.html.







DE Playbook Resources

Highlights from the Dual Enrollment Playbook: A Guide to Equitable Acceleration for Students

A Guide to Getting Started for Institutional Leaders

Tool for Evaluating Equitable Practices at Community Colleges

Tool for Evaluating Equitable Practices at High Schools

CCRC

DEEP: Extending Guided Pathways to Dual Enrollment with an Outcome and Equity Focus



Entry into baccalaureate major at four-year (FY) institution

CC transfer program aligned to FY major

Workforce program aligned to high-wage/high-demand career

From 'Random Acts' and 'Programs of Privilege' to DEEP

| Programs of Privilege, Random Acts | Dual Enrollmen |
|---|--|
| DE courses <i>made available</i> to students who are already "college-bound" | Active outreach and support families starting in middle s |
| Focus is mainly on strengthening students' academic preparedness for college | Focus also on building <i>moti</i> explore interests and begin programs and careers in a f |
| Colleges and schools mainly emphasize <i>general</i> education courses | Colleges and schools introd postsecondary pathways th |
| Focus on achievement of <i>academic content</i> standards | Added focus on helping stud learners through active tea |
| | High school career technica |

High school career technical education focused mainly on *immediate post-HS employment*

High school career technical education students readily able to *apply HS CTE credits toward college degree programs* in highopportunity fields

nt Equity Pathways (DEEP)

rt for underrepresented students and school

ivation for college by helping students to develop a plan tied to college field of interest

luce students to high-opportunity rough *program foundation courses*

dents become *confident college* ching/learning

Extending Guided Pathways Practices to Dual Credit



DEEP focuses on Guided Pillars 1 & 2

DEEP lays the groundwork for Pillars 3 & 4

Ensure students are learning

Active & work-based learning with culturally responsive teaching aligned with careers & further education



Scaling DEEP in Florida and Texas: Project Summary

Implementation Study 1.

- What do DEEP practices look like across different institutional contexts?
- 2. Costs and Incentives Study
 - What are the costs, incentives, and disincentives for K-12 and college leaders to invest in and adopt DEEP practices?

3. Metrics Study

• What metrics and data tools can best catalyze and inform DEEP reforms?

This project will generate a variate of practitioner-facing workshops, including practitioner guides and data tools.



Field Research Site Selection Methodology

- Use student unit record data to identify "high performing" partnerships. 1)
- Focus on effective partnerships with Title 1 comprehensive and technical 2) high schools.
- 3) Select 3 high-performing partnerships representing diverse institutional contexts and populations.





CCRC

Field Research

Texas DE partnerships:

- Lee College (2 schools)
- Navarro College (2 schools)
- San Jacinto College (1 school)

Florida DE partnerships:

- Chipola College (1 school)
- **Tallahassee Community College** (1 school)
- Miami-Dade College (4 campuses, 5 schools)

| Number of Participants | Stakeholder Group |
|------------------------|-------------------|
| College stakeholders | 98 |
| K-12 stakeholders | 71 |
| DE students | 120 |
| Total participants | 291 |













Welcome COLUMBIA UNIVERSITY Community College Research Center!

CCRC

Texas Field Research Sites



Key Takeaways from Implementation Field Research

Across the colleges, we saw promising practices that together can 1) transform "random acts" DC into an onramp career-path programs after high school.

- Outreach
 - Prioritizing underserved schools and students; educating students, parents, school leaders starting early Ο on, removing eligibility barriers
- Alignment
 - Mapping HS academies to college AS and pre-major transfer programs; clear and efficient transcripting of Ο credit
- Early Career/College Exploration, Advising, and Planning
 - Cross-training counselors; shared advising; advising students and parents on nuances of major-specific \bigcirc transfer; required education plans and checkpoint advising
- Instruction and Academic Support
 - Scaffolding of courses and instruction, structured support for online DE; intentional selection and Ο professional development for training; consistent quality control





Alignment of DC Courses to Degrees and Career Fields

Example program maps aligning DC offerings in HS academies to career-path degrees and credentials



Early Career/College Exploration, Advising, and Planning

| Manufac Business | turing & Industry E | Endorsemen | t | | | | CO | JRSES | | |
|---|---|---|--|--|---|--|--------------------------------|--|---|--|
| | | ***** | 9 ^t Gra | th ide |) | Introduction | to Welding | | | |
| WEID | |) | 10 Gra |) th ide |) | Welding I | | | | |
| (Dual Ci | redit) |) | 11 Gra | th Ide |) | Welding II (S | San Jacinto | College Cours | e) | |
| | | | 12 Gra | e th ide |) | Practicum in College OR Career Prep | i Manufacti aration I | uring @ San Jao | cinto | |
| CERTIFICATION/ | ASSOCIATE'S | BACHELOR'S | MASTER'S/ DOCTORAL | | occi | UPATIONS | MEDIAN WAGE | ANNUAL OPENINGS | % GROWTH | |
| LICENSE | DEGREE | DEGREE | PROFESSIONAL DEGREE | Wel | Welde | ers, Cutters, | | | | |
| Certified Welder or Welder Inspector | Welding Technology/ Welder | Welding Engineering Technology/ Technician | Welding Engineering Technology/ Technician | | Solderers, and Brazers Welding Soldering and Brazing Machine Setters, Operators and Tenders | | \$41,350 | 6,171 | 9% | |
| Machine Level 1 – CNC Milling: Programming Setup & Operations | Machine Shop Technology/ Assistant | Biomedical Technology/ Technician | Occupational Health and Industrial Hygiene | | | | \$40,040 | 280 | 9% | |
| Certified Welding | Operations | Operations | Operations | | | | | | | |
| Engineering | Management and Supervision | Management and Management and Supervision Supervision | | | WORK BASED LEARNING AND EXPANDED | | | | | |
| Certified Environmental, Safety, and Health Trainer | Occupational Safety and Health Technology/ Technician | Environmental Health | Environmental Health | 1 | Exploration Activities: Work SkillsUSA Activ Job s Appr | | | Work Based Le Activities: Job shadow a m Apprenticeship a business or indu | k Based Learning vities: shadow a machinist. renticeship at a local ness or industry American | |
| mation on postseco | ndary options for this p | program of study, visit | TXCTE.org. | | | | | Welding Society | | |
| of study focuses on t | the development and u | use of automatic and c maintain individual ma | omputer-controlled machin chines, and how to use ha | nes, te and-w | ools, a elding | ind robots that | perform wor | k on metal or plas t. | stic. Students | |
| The Manufacturing final products and manufacturing/pro Successful comple | g Career Cluster® focu related professional a poess engineering. eted of this program of | uses on planning, man nd technical support a i study will fulfill require | aging, and performing the ctivities such as productio | e proce on plar nd I <u>nd</u> i | essing nning a ustry <u>E</u> | of materials in and control, ma | ito intermedi aintenance, a | ate or and | | |

Safety, and Health



Instruction and Academic Support

Implementation Field Research: Key Takeaways

- 2) Career Title 1 schools have laid the groundwork for colleges to scale talent pathways on-ramps by embedding career-path program foundation courses and advising in high school career academies.
 - academy strategy is scalable, avoids tracking, and can help motivate students to pursue postsecondary education
 - Title 1 schools motivated to take this approach by need to attract students in • "open choice" policy environment
 - Students, families, communities, schools want "dual credit with a purpose"
 - Strong demand from rural schools to embed DC in CTE programs





Academies and CTE Pathways in Title 1 High Schools



Implementation Field Research: Key Takeaways

- Community colleges see benefits of rethinking dual credit as onramp 3) to career-path degree programs, but still mainly aspirational work in progress.
 - Most colleges have not extended guided pathways practices to DC offerings and students
 - Most academic DC still gen ed with little career and college exploration and • planning
 - Exceptions: San Jacinto and Paris Junior help DC students connect with program areas and develop individualized educational plans
 - Student experience with instructional quality varies; colleges and schools exploring • how to ensuring access to effective instruction



Implementation Field Research: Key Takeaways

We observed a shift in mindset across college and K-12 partners **4**) *implementing DEEP practices.*

- Shared vision of DC as tool for talent development and expanding college enrollment
- Change in DC focus from "random acts" course taking in AA in liberal/general studies degrees to on-ramp to AAS or structured pre-major bachelor's transfer programs in high-opportunity fields
- Requiring students to choose an endorsement in high school can be designed to help them explore interests and develop a sense of purpose
- Shifting mindsets about which students will be successful in DC
- High school grades and other evidence of motivation are better measures of readiness for DC than standardized tests





HB 8 Advanced Career Education Scholarships and 15-credit pathways would provide resources to expand DC on-ramps to talent pathways after high school.

Steps for Expanding DC Onramps to Texas Talent Pathways

- **Backward map college programs to high school** career academies/CTE programs and embed DC on-ramp courses in HS academy/CTE curriculum.
- Involve academic programs and advising/student services with DC staff to ensure that all DC students helped to explore interests, connect with people/programs and develop a post-high school education plan in a field of interest.
- Provide consistent quality control for DC instruction across modalities and locations to ensure a "light the fire" learning experience for DC students.
- Collaborate with K-12 schools to promote career pathways-focused DC onramps in high-opportunity fields to students, families and communities starting in elementary and middle school.
- Partner with K-12 schools to explore new ways to recruit, certify and train of academic and CTE DC instructors to teach DC onramp courses.



CCRC

DC Experience: TX Public High School Classes of 2019 & 2020

- Mix of DC course locations and modality throughout the state
- More online DC at rural colleges
- Course pass rates: Lowest for low-income students in online courses

| | All | Low income | Not low income |
|---------------------------------------|-------|---------------|-------------------|
| Overall DC Course Pass Rate | 89.9% | 86.8% | 91.9% |
| Location: College (DC Pass Rate) | 87.6% | 85.1% | 89.9% |
| Location: High School (DC Pass Rate) | 93.0% | 90.2% | 94.4% |
| Location: Other Place (DC Pass Rate) | 88.5% | 84.3% | 90.4% |
| Modality: Face-to-face (DC Pass Rate) | 90.8% | 87.8% | 93.0% |
| Modality: Hybrid: (DC Pass Rate) | 90.0% | 86.2% | 91.7% |
| Modality: Online (DC Pass Rate) | 87.2% | 83.2% | 89.3% |





TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Contact us for more information:

Maggie Fay, mf2812@tc.columbia.edu Davis Jenkins, pdj2102@.tc.columbia.edu



ccrc@columbia.edu



212.678.3091