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Aligning Guided Pathways
to
Strong Workforce Outcomes

Data Workbook

Laramie County Community College
May 2021

As the COVID-19 pandemic exacerbates students' economic hardships, community colleges must continue their efforts to reform their practices and policies so that more students succeed—especially the students from low-income backgrounds and students of color who need efficient paths to degrees and credentials of value now more than ever.

Please complete this workbook by reviewing the data and responding to the reflection questions to prepare for discussions on how these factors influence your student success and equity goals.

ASA research

1. Regional Population

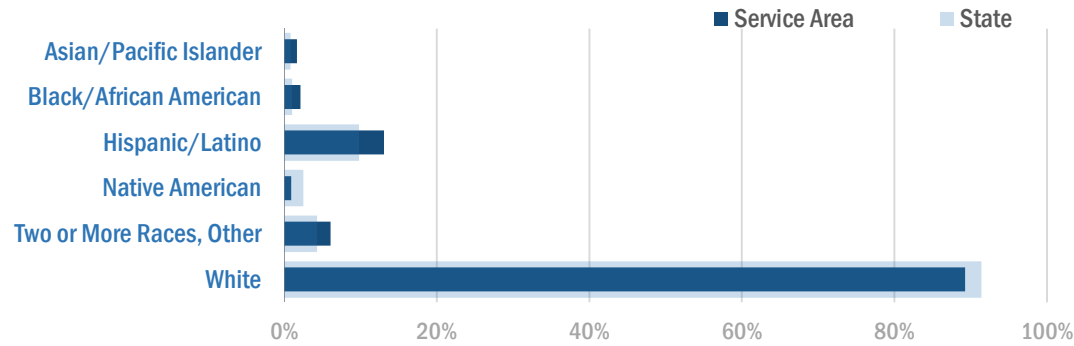## Figure 1. Distribution of population by race/ethnicity

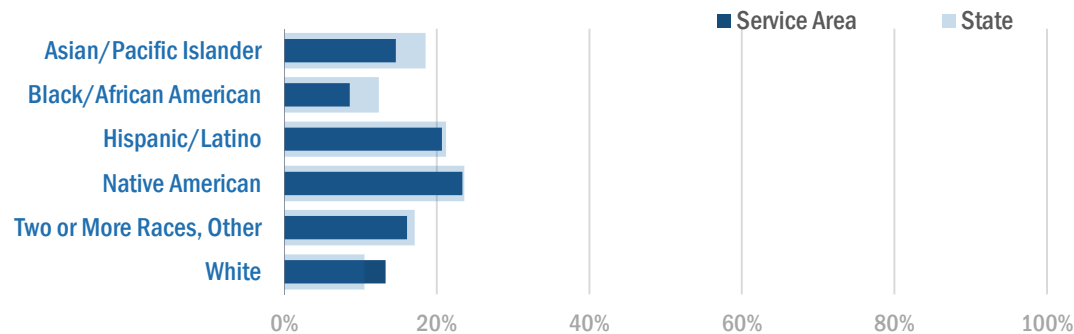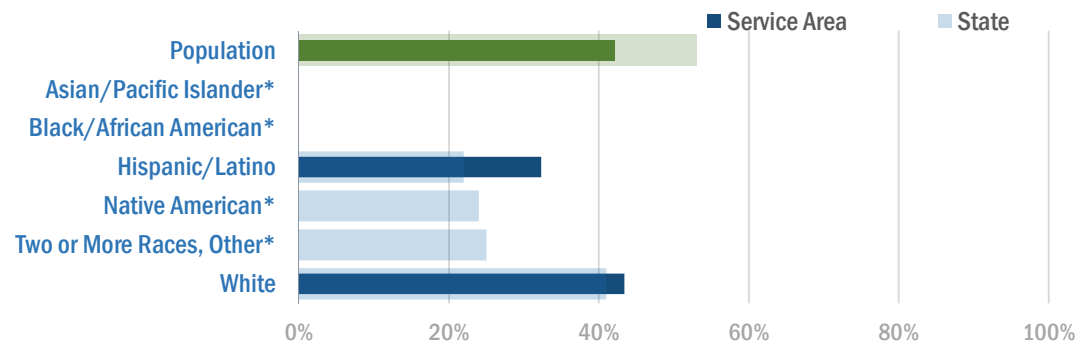## Figure 2. Percent of population living in poverty

Figure 3. Percent of population with an associate degree or higher

*Missing values are a result of missing data and do not indicate a value of 0%.

Questions
Figure 1: What does the population look like in your service area?

Figure 2: How do poverty rates differ between racial and ethnic groups in your service area?

Figure 3: Who is being underserved in higher education in your service area? Consider how groups are being served as compared to the population as a whole.
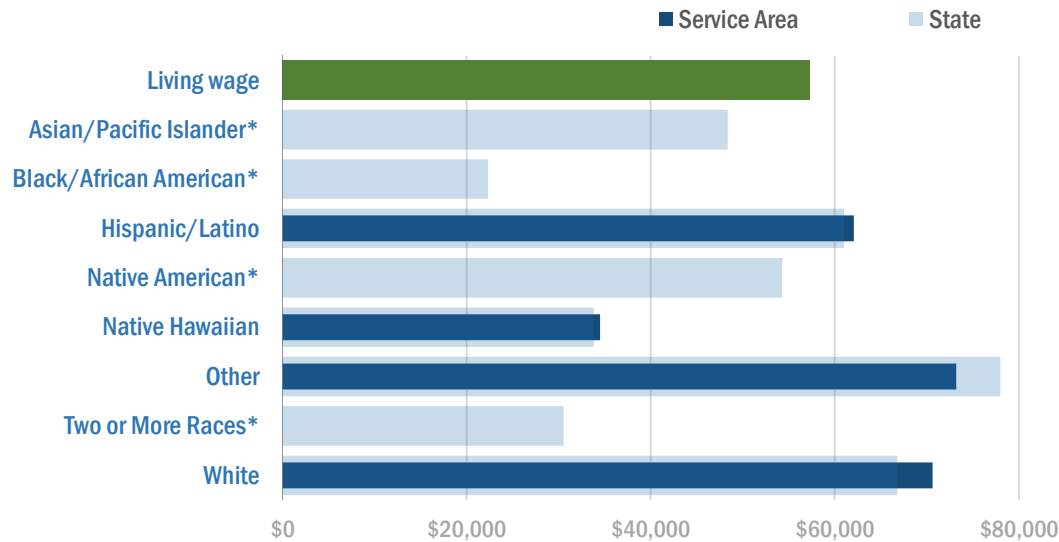
Synthesis Questions: What relationships do you see between race, poverty, and educational attainment?

What further information might explain why some populations have lower educational attainment than others, and what information can inform solutions to those inequities?

1. Regional Population, Continued

Figure 4. Median household income

*Missing values are a result of missing data and do not indicate a value of $0.

■ Service Area ■ State

- Living wage
- Asian/Pacific Islander*
- Black/African American*
- Hispanic/Latino
- Native American*
- Native Hawaiian
- Other
- Two or More Races*
- White

$0 $20,000 $40,000 $60,000 $80,000

Service area population =   131,023

Notes
- See the Notes page for the service area definition.
- Individuals of Hispanic/Latino origin belonging to any racial group, are classified as Hispanic/Latino.
- The percentage of the population living in poverty is defined as those with family incomes below 100% of the federal poverty threshold—an annual income of $25,750 for a family of four in 2019.
- Educational attainment reflects adults over the age of 25.
- Median household income represents income earned in the past 12 months at the time of survey.
- A living wage is a wage which provides necessities for one adult and one child without relying on public assistance. See the Notes page for the living wage in the state.
- Census estimates for some counties and some race/ethnicities are not available, especially in the 1-year estimates, and cannot be reported.
- Sources: Population distribution and poverty: U.S. Census Bureau's American Community Survey, 2018, 5-Year Estimates; Educational attainment and median income: U.S. Census Bureau's American Community Survey, 2019, 1-Year Estimates; MIT Wage calculator.

Questions, Continued

Figure 4: How does household income differ by population within your service area? How does your service area compare to the state as a whole? How do those income levels compare to the living wage for the state?

Synthesis Questions: Consider all data presented in Section 1. What patterns do you see by population?

Consider all the data from this section. What are some implications for your college's policies and practices, particularly in how the college connects people in its service area to education and good job opportunities?

The data presented thus far are from 2019. What changes might you expect to see in the data on this and prior pages as a result of COVID-19? What are the implications for your short-term efforts to connect populations to education and good job opportunities?

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2. THE REGIONAL LABOR MARKET

Figure 1. Ten Largest Occupations

Occupation	Median Annual Earnings: 2019	# Jobs: 2019	Change, # Jobs: 2016 - 2019	Typical Entry-Level Education
Retail Salespersons	$27,159	11,210	-3%	None
Fast Food and Counter Workers	$25,611	10,154	5%	None
Cashiers	$26,546	7,586	-1%	None
Registered Nurses	$74,780	6,356	12%	Bachelor's
Heavy and Tractor-Trailer Truck Drivers	$50,079	6,354	23%	Some PSE
Office Clerks, General	$38,530	6,244	-7%	High school
Waiters and Waitresses	$25,023	6,198	7%	None
Postsecondary Teachers	$69,396	5,689	-1%	PhD/Professional
Stockers and Order Fillers	$32,008	5,326	22%	High school
Customer Service Representatives	$32,423	5,277	16%	High school

Earnings are above a living wage.

Figure 2. Ten Largest Industries

Industry Name	Total Jobs: 2019	Change, # Jobs: 2016 - 2019
Colleges, Universities, and Professional Schools (State Gover	18,533	11%
Elementary and Secondary Schools (Local Government)	16,351	1%
Local Government, Excluding Education and Hospitals	14,963	7%
Full-Service Restaurants	13,487	3%
Limited-Service Restaurants	12,263	9%
Support Activities for Oil and Gas Operations	7,750	65%
State Government, Excluding Education and Hospitals	6,721	5%
Warehouse Clubs and Supercenters	5,049	3%
Federal Government, Civilian, Excluding Postal Service	4,971	-1%
Offices of Physicians (except Mental Health Specialists)	4,707	7%

Questions

Figure 1: Within the ten largest occupations in your service area, which require an associate degree only? Which require a bachelor's degree or higher? Which of those jobs have annual earnings above a living wage? Has the number of jobs in higher-wage occupations been growing or shrinking in the period identified here?

Figure 2: How have the number of jobs in your service area's largest industries changed in the period identified here?

Synthesis Question: What areas for further inquiry have emerged? Note that the next several figures will provide some information on job posting changes during COVID-19.

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2. THE REGIONAL LABOR MARKET, Continued

Figure 3. Occupations with largest percent increase or decrease in job postings during the COVID-19 pandemic

Occupation	Job Postings		
	Jan 2020	Nov 2020	Percent Change
Laborers and Freight, Stock, and Material Movers, Hand	152	354	133%
Passenger Vehicle Drivers, Except Bus Drivers, Transit and Inte	64	140	119%
Software Developers and Software Quality Assurance Analysts	509	984	93%
Family Medicine Physicians	81	144	78%
Registered Nurses	1,254	2,002	60%
Sales Representatives of Services, Except Advertising, Insuran	207	122	-41%
Childcare Workers	553	316	-43%
Janitors and Cleaners, Except Maids and Housekeeping Clean	207	116	-44%
Secretaries and Administrative Assistants, Except Legal, Med	287	149	-48%
Bus and Truck Mechanics and Diesel Engine Specialists	315	145	-54%

Figure 4. Occupations with largest postings in January 2020 and increase or decrease in job postings during the COVID-19 pandemic

Occupation	Job Postings		
	Jan 2020	Nov 2020	Percent Change
Heavy and Tractor-Trailer Truck Drivers	2,403	2,871	19%
Registered Nurses	1,254	2,002	60%
Retail Salespersons	949	772	-19%
First-Line Supervisors of Retail Sales Workers	784	628	-20%
Customer Service Representatives	753	533	-29%
Home Health and Personal Care Aides	574	460	-20%
Childcare Workers	553	316	-43%
Postsecondary Teachers	520	323	-38%
Software Developers and Software Quality Assurance Analysts	509	984	93%
Maintenance and Repair Workers, General	500	337	-33%

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2. THE REGIONAL LABOR MARKET, Continued

Figure 5. Top 10 occupations with highest unemployment rates, December 2020

Occupation	# Unemployed	% Unemployed
Construction and Extraction Occupations	5,276	18%
Food Preparation and Serving Related Occupations	3,345	12%
Management Occupations	2,638	9%
Sales and Related Occupations	2,443	8%
Production Occupations	2,278	8%
Office and Administrative Support Occupations	2,169	8%
Transportation and Material Moving Occupations	2,164	8%
Installation, Maintenance, and Repair Occupations	1,163	4%
Building and Grounds Cleaning and Maintenance Occupations	1,054	4%
Healthcare Support Occupations	794	3%

Notes
- Job posting data excludes occupations with fewer than 100 job postings in November 2020.
- Occupations are classified by the federal SOC code.
- All data reflect the service area.
- Source: EMSI; Job posting data primarily gathered from online job boards.

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3. ALIGNMENT TO THE REGIONAL LABOR MARKET

Figure 1. Top 20 degree programs at the college and available related jobs and earnings

Program Name	Percentage of Total Completions: 2019-20	Change in Related Jobs: 2016-2019	Average Entry-Level Earnings: Related Jobs	Average Earnings, 2019: Related Jobs
Total Number of Completions	757			
Registered Nursing/Registered Nurse	10%		None related	
Licensed Practical/Vocational Nurse Training	7%	2%	$41,513	$54,294
Business Administration And Management, General	5%		None related	
Welding Technology/Welder	4%	12%	$33,536	$48,698
Psychology, General	4%		None related	
Automobile/Automotive Mechanics Technology/Technicia	4%		None related	
Health And Wellness, General	3%	126%	$28,867	$41,925
Accounting	3%	-77%	$25,463	$29,266
Social Sciences, General	3%		None related	
Diesel Mechanics Technology/Technician	3%	9%	$40,101	$57,489
Elementary Education And Teaching	3%		None related	
Agricultural Business And Management, General	3%	2%	$43,702	$58,225
Education, General	3%		None related	
Physical Therapy Technician/Assistant	2%	15%	$37,078	$56,712
Emergency Medical Technology/Technician (Emt Paramed	2%		None related	
Computer Programming/Programmer, General	2%	1%	$52,580	$76,482
Dental Hygiene/Hygienist	2%	6%	$67,505	$81,557
Medical Office Assistant/Specialist	2%	-7%	$28,085	$36,718
Equestrian/Equine Studies	2%	67%	$30,030	$31,282
Computer Installation And Repair Technology/Technician	2%	-20%	$41,913	$64,684

Earnings are above a living wage.

Notes
- A living wage is that which provides necessities for 1 adult + 1 child without relying on public assistance. See "Notes" for living wages.
- College programs mapped to occupations using U.S. Department of Education, 2010 Classification of Instructional Program (CIP) to SOC crosswalk. Program completions include certificates, associate, and bachelor's degrees. U.S. Dept. of Education CIP Code descriptions used for program names.
- Earnings for jobs that require less than a bachelor's degree. "None related" reflects no match between the program CIP code and job SOC code. Data reflect the service area.
- Source: Job data, EMSI; 2019-20 Completions data provided by the college; MIT Living Wage Calculator.

Questions
Figure 1: Consider the top 20 degree programs at your college by number of completions. Which of these put students on a path to related jobs with earnings above a living wage? Which programs put students on a path to good jobs that are growing in number? Declining in number?

Figure 1: Consider the number of students that complete a general studies/liberal arts degree. What implications does that have for how your college approaches its transfer pathways? What are the implications for how you monitor students' progression along those pathways?

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Figure 2. Top 20 growth living-wage occupations, and number of awards conferred

Occupation	Median Annual Earnings: 2019	# Jobs: 2019	Change, # Jobs: 2016 - 2019	# Awards: Related Programs, 2019-20	Typical Entry-Level Education Required
Magnetic Resonance ImagingTechnologists	$81,261	114	90%	.	Associate's
Physicians, All Other; andOphthalmologists, Except Pediatric	$236,312	811	83%	.	PhD/Professional
Purchasing Managers	$136,831	103	81%	.	Bachelor's
Landscape Architects	$83,832	109	63%	.	Bachelor's
Lodging Managers	$80,267	185	59%	.	High School
Web Developers and Digital InterfaceDesigners	$65,472	440	57%	.	Associate's
Air Traffic Controllers	$106,204	182	56%	.	Associate's
Nurse Practitioners	$113,055	387	55%	.	Master's
Diagnostic Medical Sonographers	$78,799	160	48%	7	Associate's
Statisticians	$78,736	115	47%	6	Master's
First-Line Supervisors of Transportationand Material Moving	$61,471	1,299	46%	.	High School
Occupational Health and Safety Specialists	$78,671	310	44%	.	Bachelor's
Medical Scientists, Except Epidemiologists	$59,050	384	39%	.	PhD/Professional
Transportation, Storage, and DistributionManagers	$107,804	168	38%	.	High School
Market Research Analysts and MarketingSpecialists	$62,436	1,773	37%	.	Bachelor's
Electrical and Electronics Repairers,Commercial and Industr	$65,852	569	37%	13	Some PSE
Wellhead Pumpers	$74,998	328	36%	.	High School
Sales Managers	$127,668	404	36%	.	Bachelor's
Clinical, Counseling, and SchoolPsychologists	$90,499	360	35%	.	PhD/Professional
Dietitians and Nutritionists	$58,300	133	34%	.	Bachelor's

Notes
- Occupations grouped by the detailed, six-digit federal Standard Occupation Code (SOC). Awards conferred were mapped to occupations using the U.S. Department of Education, 2010 Classification of Instructional Program (CIP) to SOC crosswalk.
- Completions include certificates, associate and bachelor's degrees.
- Earnings are reported for jobs, regardless of minimum education level required.
- Data reflect the service area.
- An educational program can match to more than one occupation; as such, completions data may be matched to and reported for more than job.
- A living wage provides necessities for one adult and one child without relying on public assistance. See Notes for the living wage by state.
- Source: Job data, EMSI; 2019-20 Program completions data provided by the college; MIT Living Wage Calculator.

Questions

Figure 2: For which of the top 20 high-growth, living-wage occupations is the college awarding related credentials? How does the credential the college awards relate to the typical education required to enter these occupations? Where are there opportunities for stronger alignment between your college's program offerings and high-growth, living-wage jobs?

Synthesis Questions: Consider all the data that you reviewed in Section 3. What are your overall takeaways about your current program offerings and alignment to needs in the region and living wages for students? Are your conclusions different for your workforce/CTE offerings and your pre-transfer offerings? Where have further areas for inquiry emerged?

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4. EQUITY IN PROGRAM ALIGNMENT TO WORKFORCE

Program Completions, 2019-20

Figure 1. Number of completions

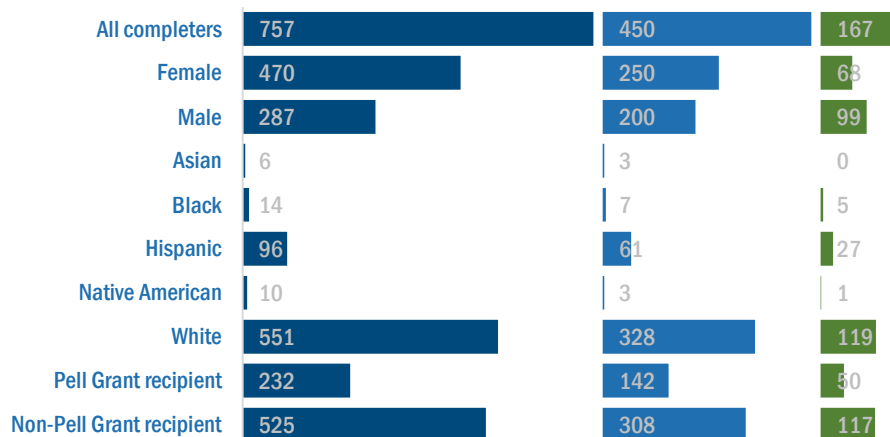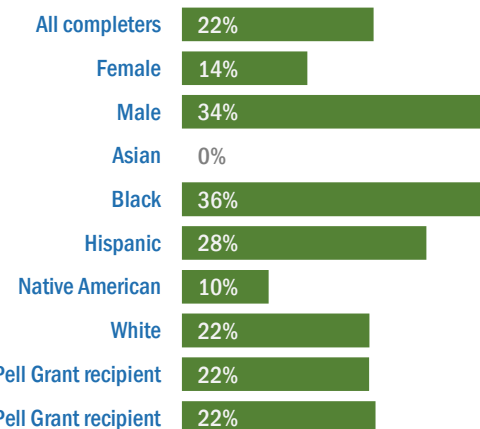|			
All completers	757	450	167
Female	470	250	63
Male	287	200	99
Asian	6	3	0
Black	14	7	5
Hispanic	96	61	27
Native American	10	3	1
White	551	328	119
Pell Grant recipient	232	142	50
Non-Pell Grant recipient	525	308	117

Figure 2. Of all completions, percent linked to jobs requiring less than a bachelor's degree that lead to a living wage

All completers	22%
Female	14%
Male	34%
Asian	0%
Black	36%
Hispanic	28%
Native American	10%
White	22%
Pell Grant recipient	22%
Non-Pell Grant recipient	22%

Program completions.   Completions linked to a job requiring less than a bachelor's degree.   Completions linked to jobs requiring less than a bachelor's degree that lead to a living wage.

Questions

Figures 1 & 2: Overall, what proportion of your students complete programs linked to jobs that require less than a bachelor's? What percentage of overall completions are linked to jobs that require less than a bachelor's and lead to a living wage?

Figure 2: What patterns do you see—across gender, race/ethnicity, and income—among students who complete programs that align with jobs that require less than a bachelor's degree and lead to a living wage? How do these data compare to the demographic information in Section 1? Where are there gaps? Why might this be?

Synthesis Question: These figures consider only students who *complete.* What if you considered all students who *enter* the institution? Do you think additional gaps might emerge in who graduates with the potential to earn a living wage? How might you explore those data?

Notes
- Awards conferred were mapped to occupations using the U.S. Department of Education, 2010 Classification of Instructional Program (CIP) to SOC crosswalk.
- A living wage provides necessities for one adult and one child without relying on public assistance. See Notes for the living wage by state.
- Missing data by race, ethnicity, or Pell Grant status may result in the overall average not equating to the average of the detail.
- Source: Job data, EMSI; 2019-20 Program completion and demographic data provided by the college; MIT Living Wage Calculator.

5. EQUITY ACROSS PROGRAM PATHWAYS

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College Enrollment

Figure 1. Enrollment by workforce/transfer categories & student characteristics, Fall 2020

	Undecided, Unknown, Other	Transfer/Unstructured	Transfer/Structured	Workforce/Low	Workforce/Medium	Workforce/High
All students	40%	21%	22%	6%	8%	3%
Pell Grant recipient	48%	18%	19%	6%	8%	2%
Non-Pell Grant recipient	16%	31%	31%	8%	10%	4%
Asian/Pacific Islander	50%	22%	13%	7%	6%	3%
Black	25%	29%	30%	3%	9%	4%
Hispanic	33%	25%	28%	5%	6%	3%
Native American	37%	27%	22%	0%	10%	4%
White	36%	22%	22%	7%	10%	3%

Legend: Undecided, Unknown, Other | Transfer/Unstructured | Transfer/Structured | Workforce/Low | Workforce/Medium | Workforce/High

Figure 2. Total enrollment, Fall 2019 & Fall 2020
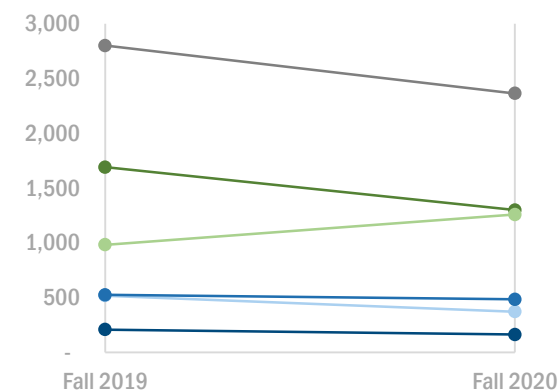
Questions

Figure 1: Among those in workforce/CTE programs, what level of wages (high, medium, or low) are most likely? Least?

Figure 1: What disparities by race/ethnicity and income level do you notice in these data? Are disparities similar or different in transfer versus workforce/CTE programs? In high/medium versus low wage CTE? What equity concerns do these data raise?

Figure 2: Consider how these data points have changed during COVID-19 by looking at the enrollment comparisons between Fall '19 and Fall '20. What trends or changes do you see?

Synthesis Question: Consider this set of data with respect to your regional population data in Section 1. What are the data saying? What are the implications for the college?

Notes
• Total college enrollment—including students with any degree intent, new and continuing, and dual enrollment student—reported by type of program using methodology developed by CCRC.
• Source: 2019-20 Program enrollment and completions data provided by the college.

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6. Next Steps

After reviewing this full data set, what big takeaways do you have about the alignment of your program offerings to the regional labor market and the populations your college serves? How do these takeaways relate specifically to your workforce/CTE programs? To your pre-transfer programs?

In future sessions this week and in our follow-up workshop in the fall, we will be discussing how community colleges utilize strategies and practices in three focus areas—onboarding students and advising into programs, feedback loops, and work-based learning—to help them move the needle on equitable labor market outcomes. Considering what you read in the Workforce Playbook and how your team assessed your college on the self-assessment tool, what next steps do you believe the college needs to take to address the gaps you observed in the data? Start brainstorming ideas now—you will have more time in the next session to dive deeply into these ideas and plan for action.

Notes

Living Wage, by State

State	Living Wage
Colorado	$71,365
Hawaii	$80,226
Maryland	$72,259
Michigan	$64,792
North Carolina	$62,587
New Jersey	$74,734
New York	$74,880
Ohio	$59,446
Oklahoma	$58,718
Pennsylvania	$57,346
Rhode Island	$63,710
Tennessee	$54,704
Wyoming	$57,262

Notes
• A living wage is a wage which provides necessities for one adult and one child without relying on public assistance.

Service and Employment Areas, by Institution

Institution	State	Counties: Service Area	Additional Counties: Job Seekers
Arapahoe Community College	CO	Douglas, Arapahoe Portion Elbert	Denver, Jefferson
Borough of Manhattan Community College	NY	New York, Bronx, Kings, Queens, Richmond	Westchester, Nassau
Cleveland State Community College	TN	Bradley, McMinn, Meigs, Monroe, Polk	Tennessee: Hamilton, Loudoun, Blount, Knox, Rhea Georgia: Catoosa, Whitfield
Columbus State Community College	OH	Franklin, Union, Madison, Delaware	Logan, Morrow, Marion, Knox, Licking, Fairfield, Pickaway
Community College of Philadelphia	PA	Philadelphia	Pennsylvania: Montgomery, Bucks, Chester, Delaware New Jersey: Camden
Community College of Rhode Island	RI	Bristol, Kent, Newport, Providence, and Washington	Massachusetts: Barnstable, Berkshire, Bristol, Dukes, Essex, Franklin, Hampden, Hampshire, Middlesex, Nantucket, Norfolk, Plymouth, Suffolk, Worcester Connecticut: Windham, New London
County College of Morris	NJ	Morris	Essex, Raritan, Warren and Sussex

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Notes, Continued

Service and Employment Areas, by Institution, Continued

Institution	State	Counties: Service Area	Additional Counties: Job Seekers
Front Range Community College	CO	Adams, Broomfield, Boulder, Larimer Partial Jefferson and Weld	Denver
Henry Ford College	MI	Wayne	Macomb, Oakland, Washtenaw
Honolulu Community College	HI	Honolulu	
Lansing Community College	MI	Ingham, Eaton, Livingston Partial Shiawassee and Clinton	Barry Partial Washtenaw, Jackson
Laramie County Community College	WY	Laramie, Albany	Weld Colorado: Larimer
Lorain County Community College	OH	Lorain	Erie, Huron, Richland, Ashland, Wayne, Stark, Lorain, Cuyahoga, Medina, Ashtabula, Trumbull, Mahoning, Columbiana, Lake, Geauga, Portage, Summit, Tuscawarus
Mohawk Valley Community College	NY	Oneida, Madison	
Monroe Community College	NY	Monroe, Genesee, Livingston, Ontario, Orleans, Seneca, Wayne, Wyoming, Yates	
Prince George's Community College	MD	Prince George's	
Rockland Community College	NY	Rockland	Westchester, Orange, Bergen, New York
Stanly Community College	NC	Stanly	Mecklenburg, Cabarrus, Rowan, Union, Randolph, Davidson
Tulsa Community College	OK	Creek, Okmulgee, Osage, Pawnee, Tulsa, Wagoner	Oklahoma: Oklahoma, Payne, Rogers, Washington
Western Wyoming Community College	WY	Carbon, Lincoln, Sublette, Sweetwater and Uinta	
Zane State College	OH	Muskingum, Guernsey, Noble	Licking, Perry, Morgan, Coshocton

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